

**CONTINUOUS IMPROVEMENT IN THE LEANDER ISD:
A QUANTITATIVE AND QUALITATIVE ASSESSMENT OF CULTURE AND
CORE VALUES**

A Dissertation

by

JOE E. ROBINSON

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

August 2010

Major Subject: Educational Administration

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ABSTRACT

Continuous Improvement in the Leander ISD: A Quantitative and Qualitative
Assessment of Culture and Core Values. (August 2010)

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Chair of Advisory Committee: Dr. Bryan R. Cole

Many of today's schools are caught at the center of a perfect storm fueled by the pressures from a more demanding public, increased governmental accountability, warring political factions, shrinking resources, and new technologies and methodologies. Proponents of Quality Management/Continuous Improvement (QM/CI) have championed the philosophy for over two decades as a solution for addressing these kinds of pressures and systems problems. Unfortunately, QM/CI theory remains underdeveloped and subsequently often fails to align with or guide practice. Detert, Louis, and Schroeder propose that QM/CI theory is best explored through the organizational culture framework that borrows heavily from the work of Edgar Schein. According to Schein, organizational culture exists at the multiple levels of espoused values, material artifacts and creations, and underlying assumptions (deeply held organizational values that guide the norms of behavior). Detert and colleagues contend that there are "nine" core values

that define the efficacy of QM/CI in school cultures. To assess the viability of these values, as lived out in the Leander ISD, Leander, Texas, the study employed both quantitative and qualitative research methodologies, and was both confirmatory and exploratory in research intent. The Nine Core Values were examined through surveys, purposefully selected interviews, a review of the quality literature, on-site observations, and school documents, with the results triangulated to derive the findings and conclusions. Deeply and widely held values should be observable throughout the multiple levels of culture, expressed through espoused values, material artifacts and creations, and practices that reflect the norms of behavior.

The findings and conclusions suggest that the first eight of the Nine Core Values are lived out in the Leander ISD as identifiable norms of behavior: shared vision, outside stakeholder involvement in educational decision-making, long term commitment, continuous improvement, employee involvement in improving the school, collaboration, fact-based decision-making, and focusing on processes rather than people. The ninth Core Value, "Quality can be improved within existing resources", could not be corroborated across the methodological triangulations. The study also unearthed two additional Core Values, one associated with the organizational learning dimension of QM/CI, and a second incorporating the elimination of fear and blame.

DEDICATION

I dedicate this research in memory of my father, 2nd Lieutenant James Edward Robinson, who in service to his country paid the ultimate sacrifice, over Germany, on June 29, 1944. My father flew out of Rackheath US Station No. 145, approximately five miles NE of Norwich England and died on his 15th mission while serving as a bombardier aboard a B24 Liberator of the 467th Bomb Group. Although I never met or knew my father, his letters to my Mother revealed a passion for life, a “Gung Ho” spirit, a deep and abiding love of family and country, a sharp and at times disarming wit, and an indefatigable quest to improve his ‘lot in life’. His sacrifice along with 28,000 other Americans, are featured in the Roll of Honor Book located behind the high altar at the east end of the American Memorial Chapel of St. Paul’s Cathedral, London, England. This chapel was “funded by the British people to commemorate the members of the United States forces based in Britain, who gave their lives defending liberty during World War II” (<http://www.stpauls.co.uk/Cathedral-History/The-Chapels/American-Memorial-Chapel>).

ACKNOWLEDGEMENTS

Dissertations are most often authored by a lone researcher, tethered to a single university and nurtured along with guidance, encouragement, and support from many people along the way. The “many people”, in my case, consisted of dissertation committee members, other members of the EHD faculty and staff, an external peer de-briefer, the Leander ISD, and my immediate family members, without whom this study could not have been completed. However, the seeds for this dissertation were sown years before my entry into the Texas A&M graduate studies program.

My career followed a path not unlike many others, beginning as a teacher, then assistant principal, principal, and finally superintendent. During the last eight years (1992 -2000) of my public education career, and while serving as superintendent in the Floresville ISD, Floresville, Texas, I became interested in and involved with Quality Management. We observed significant improvement in teacher and student morale and in student academic performance after implementing various aspects of quality management. Unfortunately, our efforts were generally fragmented, and the study of the QM/CI Philosophy was limited to the central office and campus administrator ranks. The question that begged to be asked was, “If fragmented efforts could bring about the effects we were witnessing, then what would a full and system-wide implementation of QM yield?” Unfortunately, this question could not be fully answered because the

Quality Gurus and consultants were not in agreement as to how the art and science of teaching related to QM practice, how Quality Management should be implemented in educational settings, and which constructs were essential to the philosophy. After 30 years in the public education arena and 14 years in the Superintendency of the Floresville ISD, I chose to resign my post and redirect my efforts to finding answers to these questions. The next task was to select a university where I could best pursue the study of Quality Management.

The selection task was finalized on February 4, 2000, when after meeting with Dr. Bryan Cole I decided Texas A&M University provided the necessary support network for conducting a study on Quality Management. Dr. Cole was well-versed in QM theory and practice and willing to subsequently serve as the chairman of my dissertation committee. What I did not anticipate at the time was how complex and exhaustive the study would become. However, through Dr. Cole's wise counsel and guidance, often helping me to focus on "the task at hand" and redirecting me away from research angles that were unproductive, I was able to bring the study to a final, albeit lengthy, conclusion. How Dr. Cole managed to devote time to my interests, while serving on many other dissertation committees and numerous university wide committees, teaching, publishing, and consulting with both school districts and companies from here to China (literally) and many points between, represents a breadth of accomplishments difficult to fully comprehend but easy to appreciate.

Also serving as an original committee member is Professor Emeritus Dr. David Erlandson. Dr. Erlandson “opened my eyes and mind” to Naturalistic Inquiry in his EDAD 690C course during the fall of 2001. Without his patient and steadfast guidance, accommodative and encouraging spirit, and scholarly leadership, the study would have been just a shell of what eventually emerged.

Six years transpired from the point of committee formation forward to the conclusion of the study. During the interim, one of the original committee members accepted a position at another university, and another retired, and both subsequently believed they could no longer contribute meaningfully as committee members. Thankfully, Dr. Mario Torres and Dr. Lynn Burlbaw graciously accepted an invitation to serve on my committee. Serving on dissertation committees is yet another task faculty members volunteer for, and the time required for these endeavors adds yet another burden to what is already a crowded agenda. I greatly appreciate their understanding of my situation and gracious acceptance to serve on the committee.

There are several other individuals to whom I owe acknowledgement and appreciation. Along the way to completion of a dissertation are many procedural hurdles that must be cleared. Thanks to the Director of Academic Advising, Joyce Nelson, these obstacles were easily and propitiously cleared. Although Dr. Homer Tolson was not a member of my committee, he served an important role in guiding me through the quantitative framework and analysis for the study. Without his sage advice I would not have been able to develop and interpret the

quantitative data crucial for many of the triangulations that helped to anchor the study. I also owe a debt of gratitude to Mary Jo York for transcribing the interviews. From the transcriptions, I had a basis for deconstructing the interviews and providing first and second members' checks for the interview respondents. I also want to thank Dr. James Detert for providing peer-debriefing in the design of the survey. I consider it a rare privilege to have received input from one whom I consider to be a preeminent scholar of Quality Management, and whose previous work served as the springboard for this study.

I would also like to thank the Leander ISD for allowing me to conduct the study on their home turf. During the intense five months of the field study and subsequent visitations to the District's Continuous Improvement Conferences, I always felt welcomed, and all of the employees I met were gracious and accommodative. I had the opportunity to meet and commiserate with many District employees during my campus visits and at the February Conferences, and I value my experiences in the District, and at the conferences, as some of the most memorable and enjoyable of my professional career.

Last but not least are the contributions from my family. My Joy Evelyn, my life-long companion, best friend, and wife of 44 years, provided the encouragement, gentle nudging, and continual emotional support to endure the years of effort required for the study. Adding to the support were my daughter Jane Ellen and son Jay Evan who were figurative yell-leaders and ardent fans

from the beginning. Without my family's support the dissertation would have remained a dream, rather than a reality.

TABLE OF CONTENTS

	Page
ABSTRACT	iii
DEDICATION	v
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS.....	xi
LIST OF FIGURES	xvii
LIST OF TABLES	xviii
 CHAPTER	
I INTRODUCTION TO THE STUDY	1
Introduction to the Problem	1
Statement of the Problem	7
Purpose of the Study	9
Research Questions	9
Assumptions	10
Limitations.....	10
Definitions of Terms	10
Significance of the Study	13
II LITERATURE REVIEW	15
Organization of the Literature Review	15
Historical Review: Quality Ideals and Practices up to the Middle of the 20 th Century.....	17
The Emergence of Quality Management and the Impact on American Education: Societal Pressures, Formative Factors, and Contributory Events from the 1950s to the Present	36
The Forging of Quality Management: Contributions from Preeminent Gurus and the Quality Literature	48

CHAPTER	Page
The Forging of Quality Management: Contributions from Quality Certification and Awards-Granting Organizations	64
Ontological, Epistemological, and Methodological Foundations of Quality Management	73
Quality Management/Continuous Improvement as Viewed from the Culture Theory Tradition: Artifacts, Espoused Values, Beliefs and Underlying Assumptions	90
Summary.....	110
III RESEARCH METHODOLOGIES	112
Direction and Focus of the Research Design	112
Case Selection	114
Adoption of Qualitative and Empirical Anchors, and Associative Tools and Instrumentation	116
Case Study Approach.....	116
Institutional Review Board: Review and Approval	119
Quantitative Instrumentation and Protocols.....	120
Quantitative Fieldwork Preparation, Final Instrument Design, Acknowledged Caveats and Limitations	121
Methodological Triangulation.....	131
Naturalistic Inquiry: Methodological Attributions and Associative Field Preparations	132
Methodological Intent	138
Establishing Interview Focus and Instrument Design Regimen	140
IV ANALYSES AND FINDINGS	148
Methodology Overview	148
Quantitative Analysis	150
Quantitative Instrumentation.....	151
Descriptive Analyses and Measures of Central Tendencies	156
Inferential Statistical Analyses	181

CHAPTER	Page
Qualitative Analysis	216
Methodological Bridge	216
Instrumentation	218
Factors Influencing the Interview Environment and Entry into the Field	220
Coding Mechanisms, Clues, and Attributions	224
First Impressions	234
Research Question #1: “What Are the Espoused Values and Beliefs in the Leander ISD (TX) and to What Extent Are They Consistent with Detert’s Quality Management Core Values?”	235
Research Question #2: “How and to What Extent Are Practices in the Leander ISD (TX), Aligned with Detert’s Quality Management Core Values and the Philosophy of Continuous Improvement?”	283
Research Question # 3. “How Are Personal Experiences in the Leander ISD (TX) Reflective of, or Associated with, Detert’s Nine Core Values and the Philosophy of Continuous Improvement?”	383
Research Question #4: “How Are the Values, Beliefs and Underlying Assumptions of the Leander ISD (TX) That Sustain and Promote Detert’s Nine Core Values and the Philosophy of Continuous Improvement, Manifested through District Artifacts, Creations, and Processes?”	405
V DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS	474
Summative Discussion of Research Design	474
Section 1: Discussion of Findings, and Derivation of Conclusions by Research Question and Core Value ...	479
Research Question #1. “What Are the Espoused Values and Beliefs in the Leander ISD (TX) and to What Extent Are They Consistent with Detert’s Quality Management Core Values?”	479
Research Question #2. “How and to What Extent Are Practices in the Leander ISD (TX) Aligned with Detert’s Quality Management Core Vales and the Philosophy of Continuous Improvement?”	505

CHAPTER	Page
Research Question #3. “How Are Personal Experiences in the Leander ISD (TX) Reflective of or Associated with, Detert’s Nine Core Values and the Philosophy of Continuous Improvement?”	566
Research Question #4. “How Are the Values, Beliefs, and Underlying Assumptions of the Leander ISD (TX) That Sustain and Promote Detert’s Nine Core Values and the Philosophy of Continuous Improvement, Manifested through District Artifacts, Creations, and Processes?”	573
Section 2. Evaluation of Institutional Values through the Organizational Culture Framework: An Analysis of the Nine Core Values Proposed by Detert, Louis, and Schroeder (2001)	585
Core Value #1 Discussion and Conclusions: “A Shared Vision and Shared Goals among Faculty, Staff, and Administrators Are Critical for School Success.”	586
Core Value #2 Discussion and Conclusions: “Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders.”	593
Core Value #3 Discussion and Conclusions: “Improving Education Requires a Long-term Commitment.”	595
Core Value #4 Discussion and Conclusions: “A School Should Strive to Continually Improve Education.”	597
Core Value #5 Discussion and Conclusions: “Teachers (Employees) Should Be Active in Improving the Overall School Operation.”	598
Core Value #6 Discussion and Conclusions: “Collaboration Is Necessary for an Effective School.” ..	600
Core Value #7 Discussion and Conclusions: “Decision-making Should Rely on Factual Information.”	602

	Page
Core Value #8 Discussion and Conclusions: “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees.”	604
Core Value #9 Discussion and Conclusions: “Quality Can Be Improved within Existing Resources.”	608
Summative Analysis and Conclusions	614
Recommendations for Further Study	621
Closing Thoughts.....	627
REFERENCES	628
APPENDIX A1	655
APPENDIX A2	656
APPENDIX A3	657
APPENDIX A4	665
APPENDIX B1	667
APPENDIX B2	668
APPENDIX B3	669
APPENDIX B4	670
APPENDIX B5	671
APPENDIX B6	672
APPENDIX B7	673
APPENDIX B8	675
APPENDIX B9	676
APPENDIX B10	677

	Page
APPENDIX B11	678
APPENDIX B12	679
APPENDIX B13	680
APPENDIX B14	683
APPENDIX B15	688
APPENDIX B16	690
APPENDIX B17	691
APPENDIX B18	692
APPENDIX B19	693
APPENDIX B20	694
APPENDIX C1	695
APPENDIX C2	696
APPENDIX C3	697
APPENDIX C4	698
APPENDIX C5	699
APPENDIX C6	700
APPENDIX C7	701
APPENDIX C8	702
VITA	703

LIST OF FIGURES

FIGURE	Page
1	An Illustration of Some Early 20 th Century Management Philosophy Connections 31
2	Deming Cycle 53
3	Methodological Framework 149
4	Likert-type Scale Used for Assessing Presence of 'Core Value' 152
5	Summary Chart of Means: Administrators, Instructional, Support Function, Elementary, and Secondary Groups 167
6	Summary Chart of Standard Deviations: Administrators, Instructional, Support Function, Elementary, and Secondary Groups 170
7	Summary Chart of Means: By Gender and Years of In-District Experience 171
8	Summary Chart of Standard Deviations: By Gender and Years of In-District Experience 175
9	Visio Brainstorming Template: Sample Deconstruction Page of Interview Transcription 225
10	Interviews: Reporting Outline 228
11	Time Management Matrix (Covey, 1989) 317
12	The Leander ISD Learning Model 408
13	Common Elements: QM Core Concepts, Leander Way, & Nine Core Values 413
14	Continuum of Representation: Parents, Students, Community Groups, and Other Stakeholder Involvement in Educational Decision-Making 516

LIST OF TABLES

TABLE	Page
1 TQM Interpretive Perspectives	61
2 Other Quality Management Interpretive Perspectives	62
3 Frequency of Attributes from Selected Quality Management Articles	63
4 Core Principles/Concepts/Values	67
5 Baldrige Applications, 1988-2007	69
6 Core Concepts: Summary Analysis of Quality Management Core Concepts from the Literature, Preeminent Quality Gurus, and Certification/Award Granting Organizations	72
7 QM/TQM “Management Constructs” Surveys	88
8 Quality Core Values and Corresponding Opposites	98
9 Final Instrument Descriptors	123
10 Demographic Variables of Survey	128
11 Number of Surveys Analyzed by Demographic Profile	131
12 Attributes of Rationalistic Research and Naturalistic Inquiry	134
13 Survey Returns for Administrators.....	155
14 Descriptive Statistics for Core Value #1: Role of Vision	158
15 Descriptive Statistics for Core Value #2: Determination of Educational Needs	159
16 Descriptive Statistics for Core Value #3: Long versus Short-term Needs	160
17 Descriptive Statistics for Core Value #4: Managing Change	161

TABLE	Page
18 Descriptive Statistics for Core Value #5: Decision-making Involvement.....	162
19 Descriptive Statistics for Core Value #6: Collaboration and Autonomy	163
20 Descriptive Statistics for Core Value #7: Decision-making Environment.....	164
21 Descriptive Statistics for Core Value #8: The Source of Problems	165
22 Descriptive Statistics for Core Value #9: Results & Resources.....	166
23 Descriptive Statistics for 1 st and 2 nd Survey Distributions.....	176
24 Core Value Ranking by Means for Administrators, Randomized General Population List, and Distributions	177
25 Core Value Ranking by Means for Gender, Instruction, and Support Function.....	177
26 Core Value Ranking by Means for Experience.....	178
27 Core Value Ranking by Means for Campus Level Instruction	178
28 Case Processing Summary for Randomized General Employee List.....	182
29 Reliability Statistics.....	182
30 Case Processing Summary for Administrators List	183
31 Reliability Statistics for Administrators.....	183
32 Administrator List by Gender	188
33 Tests of Between-Subjects Effects of the Administrator Group by Gender	189
34 Between-Subjects Factors by Assignment for Administrator List ...	190

TABLE	Page
35 Tests of Between-Subjects Effects of the Administrator Group by Assignment: CO Administrators and Principals versus Assistant Principals.....	191
36 Between-Subjects Factors by Experience for Administrator List....	192
37 Tests of Between-Subjects Effects of the Administrator List by Experience	193
38 Between-Subjects Factors for Survey Distributions.....	194
39 Tests of Between-Subjects Effects for Two Randomized Survey Distributions Derived from the LISD General Population.....	195
40 Between-Subjects Factors for the Randomized General List by Gender	197
41 Tests of Between-Subjects Effects for the Randomized General List by Gender	198
42 Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Gender	198
43 Between-Subjects Factors for the Randomized General List by Service Function	199
44 Tests of Between-Subjects Effects for the Randomized General List by Service Function.....	200
45 Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Service Function	201
46 Between-Subjects Factors by Campus Assignment for the Randomized General List.....	203
47 Tests of Between-Subjects Effects for the Randomized General List by Campus Assignment: Elementary/Secondary.....	204

TABLE	Page
48 Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Campus Assignment: Elementary/Secondary	204
49 Between-Subjects Factors for Campus Assignment, Elementary and Middle School Instructional Groups: Core Value #7	205
50 Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Campus Assignment, Elementary and Middle School Instructional Groups: Core Value #7	206
51 Between-Subjects Factors for Campus Assignment, Elementary and High School Instructional Groups	206
52 Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Campus Assignment, Elementary and High School Instructional Groups: Core Value #7	207
53 Between-Subjects Factors for the Randomized General List by Experience	208
54 Tests of Between-Subjects Effects for the Randomized General List by Years of Experience Completed in District	208
55 Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Years of Experience Completed in District	209
56 Tests of Between-Subjects Effects for the Randomized General List by Years of Experience Completed in District: "8 or More Years" and "3-7 Years"	210
57 Tests of Between-Subjects Effects for the Randomized General List by Years of Experience Completed in District: "8 or More Years" and "0-2 Years"	210

TABLE	Page
58 Hypothesis Results for Randomized General List by Service Function (Instructional vs. Support Function Employees)	212
59 Hypothesis Results for Randomized Sample List by Educator Campus Assignment: Elementary vs. High School	212
60 Distribution Ranges by Gender and Mean Scores for Selected Qualitative Interviews: Randomized General Population.....	215
61 Selection Distribution Based on Experience.....	215
62 Core Value Descriptors and Corresponding Interview Questions ..	219
63 List of Respondents by Group.....	232
64 Relationships between the Leander Way and QM/CI Core Concepts	412
65 Process "Level of Freedom" Rating.....	447
66 Referenced Artifacts: Linkages and Patterns	468
67 Conceptual Differentiation of Continuous Improvement Training and Professional Development by Accumulated Knowledge or Years of District Experience	529
68 Core Value Means for Child Nutrition, Transportation, and Maintenance Services	534
69 Leander ISD Collaboration Efforts: As Examined through Primary Improvement Orientations and Span of Stakeholder Collaboration	548
70 Common QM/CI Values: As Reflected through Leander ISD Practice and Beliefs, and as Proposed by Detert, Louis, and Schroeder (2001)	620

CHAPTER I

INTRODUCTION TO THE STUDY

Cheshire Cat: "If you don't know where you are going, any path will take you there". As adapted from Alice's adventures in wonderland, Chapter 6 (Carroll, 1941).

Leonardo da Vinci: "Those who fall in love with practice without science are like a sailor who enters a ship without helm or compass, and who never can be certain whither he is going" (Randall, 1953, p. 200).

Introduction to the Problem

Quality Management, as manifested through an eclectic blend of philosophical constructs, principles, and practices, helped Japanese companies forge a path leading to world marketplace domination after World War II and compelling productivity and quality manufacturing performances during the 1980s (Dumaine, 1995; Detert, 2001). Credited for emphasizing the virtues of involved and visionary leadership and touted for promoting internal and external cooperation, ongoing employee training and learning, process management, continuous improvement, employee fulfillment, and customer satisfaction, it became a luring model and tempting pathway for sluggish-performing American

This dissertation follows the style of *The Journal of Educational Research*

businesses (Ahire, Golhar, & Waller, 1996; Boggs, 2004).

Much is written about Quality Management and during the last several decades the general concept donned a variety of monikers which are often used interchangeably in the management and business literature, e.g., Total Quality Management, Continuous Process Improvement, Quality First, Do it Right the First Time, Kaizen (the Japanese sibling to Continuous Improvement), Six Sigma, and Reengineering (Marton, 1997). From 1993 through 1996 alone, there were over 900 articles in relevant databases addressing one or more issues related to TQM (Ghobadian & Gallear, 1997). The range and quantity of articles became so profuse and the reported practices so diffuse, particularly during the early 1990s, that Watson and Korukonda referred to the Quality Management phenomenon as a 'dialectical' jungle (1995). Contributing to the confusing quagmire of news reports and journal articles spanning the past several decades, were contrasting assessments and a wide range of opinions regarding both the practical worth of the various manifestations of Quality Management and the true extent of adoption.

For many, quality management was nothing more than a fad or a "buzzword" (Ettorre, 1997; Gibson, Tesone, & Blackwell, 2003; Giroux, 2006). Peter Senge declared, "The TQM fad has pretty much come and gone, the "court is still out" on its longer-term impacts" (1990, p. xi). Peter Scholtes asserted that the philosophy moved past the 'fad phase' from 1985 to 1992 and "continues as smaller but slowly growing core groups who maintain the undiluted

principles developed by Deming, Juran, and Ishikawa” (Harmon, 1997, p. 9). Gibson & Tesone were in agreement and further proposed that management fads progress through a life cycle of discovery, wild acceptance, digestion, disillusionment, and ending with ‘hard core’ groups that continue to espouse and practice the philosophy (2001). Others were persuaded that the primary tenets of quality management, such as customer or client focus, continuous improvement, and teamwork, live on in successful corporations as permanent affirmations and have become more or less institutionalized in their respective cultures (Detert, et al, 2001).

In a more dismissive vetting, Giroux reported that Quality Management lost its influence by the end of the 20th century because: (1) there was a lingering disconnect between broadly applicable relevance and conceptual rigor (theory), (2) organizations failed to reconcile QM constructs with conflicting goals and trade-offs, and (3) the network of adherents was not strong or stable enough to ensure its continued adoption and proliferation (2006). Equally pessimistic was Harari’s condemnation alleging that within the US and across Europe, not more than a third of the TQM implementations achieved any tangible level of success (1993). Conversely, Kotter and Heskett’s eleven year study of 200 ‘blue-chip’ enterprises, indicated that companies following the principal tenets of TQM, particularly those related to serving the interests of customers, stakeholders, and employees, significantly outperformed those with a more limited strategic focus (1992). Representing yet another outlook, Maguad asserted that quality

management theory is still in the embryonic stages of development and that “it will probably take many more decades if not a whole century for this discipline to mature” (2006, p.201). Differing analyses and perspectives are strewn across the literature with no sure way of reckoning the current state of affairs with regard to the breadth and depth of adoption and long term utility, beyond suggestions that ‘Quality Management’ is a well-traveled philosophy that has assimilated into mainstream management practice and continues evolving into conceptually related variants (Goeke and Offodile, 2005).

While there is a tendency to associate quality management practice with the business community, Scholtes claimed “the most exciting progress in quality is being made in non-business service sectors” (Harmon, 1997, p. 9). This notion garnered agreement from Detert who opined, “the 1990’s and beyond appear to be the decades for QM (or its close cousins) in educational institutions” (Detert et al, 2001, p. 184). Regardless of these optimistic assessments for the future of Quality Management in education, there is little reason to believe these new endeavors will experience any greater success than that of the business and manufacturing sectors, absent guidance and influence from established theory. Sitkin, Sutcliffe, & Schroeder make the argument that much of what we have today with regard to Quality Management is little more than descriptions of practice and anecdotal stories (1994). According to Deming, for an organization to implement long term and effective practice, it must first have a foundation of theory from which to build knowledge (1994).

One approach to Quality Management theory development is to examine the paradigm through the organizational culture tradition.

Detert, Louis, and Schroeder suggest that organizations are best understood through the view of culture and underlying support values (2001). In order to link theory with practice there must be a common framework to describe the values that characterize Quality Management culture. In accordance, Detert, et al, suggest that there are nine core values that frame quality management culture and that any study of culture, be it quantitative or qualitative, is best crafted with this in mind (2001). In the 2001 study, Detert, et al, extrude “Nine Core Values” through a ‘three prong approach’. The derivation of the core values emerged from efforts to triangulate the (1) Baldrige Criteria with (2) Quality Management literature and (3) a NGT (Nominal Group Technique) analysis from a small group of experienced Quality Management practitioners (Detert et al, 2001). The results of Detert’s study suggest that an effective Quality Management school culture contains and promotes the following core values:

1. A shared vision and shared goals among faculty, staff and administrators are critical for school success.
2. Educational needs should be determined by parents, community groups, students, and all relevant stakeholders.
3. Improving education requires a long-term commitment.
4. A school should strive to continually improve education.
5. Teachers should be active in improving the overall school operation.
6. Collaboration is necessary for an effective school.
7. Decision-making should rely on factual information.
8. Quality problems are usually caused by sub-optimized systems and processes, not by teachers or other employee groups.
9. Quality can be improved with the existing resources. (Detert, et al, 2001, pp. 191-193)

These “Nine Core Values” are in essence, what Glaser and Strauss would refer to as ‘emergent’ propositions that beg for verification (2007). However, values alone cannot describe all of the subtleties and nuances of culture as there are multiple levels at which culture exists and is manifested in organizations (Hofstede, Neuijen, Ohayv, and Sanders, 1990). Schein contends these multiple levels of culture exist as artifacts, espoused values, and the tacit, basic underlying assumptions that are manifested as behavioral norms (1992). This study seeks to overlay the Nine Core Values across these multiple levels of culture, to determine if dependencies and correlations exist and if there is a discernable path between subsequent theory and practice.

This dissertation applies both qualitative and quantitative strands of research to examine Detert’s Nine Core Values, as observed within the confines of a public school system that has espoused the Continuous Improvement variant of quality management for over 15 years. These strands of research seek to understand the Quality Management paradigm through the culture theory framework as manifested in and through the espoused values, underlying assumptions, practices, lived-out employee experiences, and cultural artifacts of the Leander ISD, Leander, Texas. The quantitative strand consists of a researcher developed survey based on the Nine Core Values, and the qualitative strand borrows heavily from the case study approach. Cultural values and their associative dependencies, in the broader interpretive sense, lend

meaning and provide structure to the study of Quality Management Culture, and provide traction in the development of associative theory.

This study examines the Leander Independent School District, Leander, Texas, located approximately twenty miles northwest of Austin, the state's capitol. With 20,000 students, it is one of the largest Texas school districts to espouse the Continuous Improvement philosophy. In adhering to quality improvement principles, the Leander ISD established four goals or "non-negotiables" that serve the comprehensive mission of the District:

1. Eliminate the link between economic disadvantage and low achievement, while improving overall student performance;
2. Ensure that all students read at or above grade level;
3. Increase the percentage of students enrolling in and successfully completing our most challenging courses; and,
4. Accomplish the above while maintaining our district's culture of respect, trust, continuous improvement, and learning.

Although the first three goals may be examined as associative phenomenon, it is the fourth that drives the primary focus for this research.

Statement of the Problem

During the past two decades hundreds of schools around the country reported some form of improvement effort based on quality principles (Horine, et al, 1993; Weller, 1995; Hess & Gift, 2008), and preliminary systematic research on these implementation efforts indicate they were failing to achieve widespread acceptance possibly due to inconsistencies and conflict between traditional and Quality Management education cultures (Detert, Schroeder, & Cudeck., 2003).

The literature suggests that there are few quantitative or qualitative studies to reliably guide public schools in either implementing or evaluating the effectiveness of Quality Management (Detert et al, 2001). And while the literature supports the notion that organizational effectiveness is a function of the underlying support culture, the research to verify and quantify this assertion is in many instances methodologically weak and/or lacking in theory (Sitkin et al, 1994; Hackman & Wageman, 1995; Martin, 2002).

Detert's efforts to establish critical links between Quality Management culture and values in K-12 schools represents, for the most part and with few exceptions, a rather insular endeavor as the bulk of the studies he cites associating QM implementation with organization culture, come largely from the business and manufacturing sectors (Detert et al, 2003). Determining the factors that contribute to or distract from the organizational health of a Quality Management culture, is an enigmatic task given the premium the Leander ISD places on the philosophy of Continuous Improvement. And more generally, the task is just as burdensome for schools with similar philosophical orientations in their quest to monitor, adjust, and understand their own cultures in relation to Quality Management theory and practice.

Purpose of the Study

The purpose of the study is to examine the Leander ISD (TX), and assess how and to what extent the culture of the District is consistent with Detert's Quality Management Values as reflected in and through the espoused values, practices, personal experiences, and material artifacts that sustain and promote the philosophy of Continuous Improvement.

Research Questions

Four research questions were developed to address the purpose of the study:

1. What are the espoused values and beliefs in the Leander ISD (TX) and to what extent are they consistent with Detert's Quality Management Core Values?
2. How and to what extent are practices in the Leander ISD (TX), aligned with Detert's Quality Management Core Values and the philosophy of Continuous Improvement?
3. How are personal experiences in the Leander ISD (TX) reflective of or associated with, Detert's Nine Core Values and the philosophy of Continuous Improvement?
4. How are the values and beliefs of the Leander ISD (TX) that sustain and promote Detert's Nine Core Values and the philosophy of Continuous Improvement, manifested through material artifacts, creations, and processes?

Assumptions

Underlying these four questions is the following set of assumptions.

1. The respondents surveyed will understand the questionnaire instrument, have the ability to self-report, and will respond objectively and honestly.
2. The researcher rationally controls for bias in collecting and analyzing the data gathered through survey, observations, and interviews.
3. The interpretations emanating from this research will accurately reflect the actual perceptions intended by the participants.
4. The proposed methodologies produce information required for the research questions.

Limitations

The scope of this study is primarily a case study using survey, site and event observations, and interviews, and the data collection is limited to the Leander Independent School District, Leander, Texas. Case studies may not be generalizable to every instance or setting, but they can establish the cases relevant to a given situation (Guba, 1981). Interviews with selected district employees may not reflect the understandings and experiences of other district employees.

Definitions of Terms

The following terms are used throughout the study and will denote the stated meanings unless otherwise noted.

Artifact. Artifacts are “the material manifestations of what is learned” (Goodenough, 1981, p. 50). Artifacts include “all the phenomena that one sees, hears, and feels when one encounters a new group”...and, “the visible behavior of the group and the organizational processes into which such behavior is made routine” (Shein, 1992, p. 18).

Basic (Underlying) Assumptions. Basic assumptions are the beliefs of a group that are “so strongly held that members will find behavior based on any other premise inconceivable” (Schein, 1992, p. 22).

Case Study Research. The case study research paradigm is designed to address the “how” or “why” questions of a study, and is characteristically employed when the researcher has little control over behavioral events and “when the focus is centered around contemporary phenomenon within some real-life context” (Yin, 2003, p. 1).

Continuous Improvement. Continuous Improvement is the basis for quality management; the ongoing and never-ceasing improvement of products, services, or processes; “to reach ever higher levels of performance, every year out, by thinking systematically about the constant improvement of all processes that deliver value to the customers” (Marchese, 1993, p. 11).

Culture. “Culture is socially shared and transmitted knowledge, both existential and normative, symbolized in act and artifact” (Wilson, 1966, p. 51) “Culture is what one needs to know in order to meet the standards of others” (Goodenough, 1981, p.50). “Culture is a pattern of shared basic assumptions

that a group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to these problems” (Schein, 1992, p. 12).

Espoused Values. “Espoused values are the articulated, publicly announced principles and values that a group claims to be trying to achieve” (Schein, 1992, p. 9).

Process. A process is “a set of interrelated work activities characterized by a set of specific inputs and value added tasks that make up a procedure for a set of specific outputs” (Nelson & Daniels, 2007, p. 53). A process may also be viewed more simply as the transformation of inputs into outputs, both of which may appropriate resources from people, method, material, equipment, and environment (Scherkenbach, 1986).

Quality. “Quality” is a subjective term for which each person has his or her own definition. In technical usage, quality can mean the characteristics of a product or service that bear on its ability to satisfy stated or implied needs. Quality means having a high degree of excellence (Nelson & Daniels, 2007, p. 54). Quality experts either define quality as a fixed set of specifications (Level 1) or as products and/or services that satisfy customer expectations (Level 2) (Hoyer & Hoyer, 2001).

Quality Management. Quality Management is a set of philosophies that emphasizes customer-focus, continuous improvement, and teamwork (Detert et al, 2001).

System. A system is a network of interdependent components that work together to try to accomplish the aim of the system (Deming, 1994). The system for the purpose of this study is the Leander Independent School District.

Theory. Theory is “systematically organized knowledge applicable in a wide variety of circumstances; a system of assumptions, principles, and rules of procedure devised to analyze, predict, or otherwise explain the nature or behavior of specified phenomenon” (Costello, 1997, p. 1406).

TQM (Total Quality Management). TQM is a systems approach to optimizing product/service quality by focusing on meeting or exceeding the needs of the customer, by focusing on and optimizing system processes, instituting prevention rather than inspection, mobilizing the expertise of the workforce, basing decisions on facts and data, and supporting feedback and cross-functional system-wide communications (Jablonski, 1992).

Significance of the Study

Theory is essentially and inextricably linked to application and practice (Hoy & Miskel, 2001, Deming, 1994). “Without theory, one has no questions to ask. Hence without theory, there is no learning” (Deming, 1994, p. 103). Quality Management, as a paradigm of understanding and practice in public education,

is hampered by the scarcity of meaningful research to explicate and link theory to application.

This study will contribute to the growing body of knowledge regarding Quality Management theory and practice in the education arena, by determining if, and to what extent, Detert's Nine Core Values rationally connect with and explain the culture of a public school system that espouses the philosophy of Continuous Improvement. Absent theory to understand how Quality Management is lived out and manifested in and through the cultures of public schools, the philosophy risks fading into obscurity, a map with no scale or legend, leaving practitioners with little or no knowledge of its fundamental strengths or how it can most effectively benefit public education.

CHAPTER II

LITERATURE REVIEW

*Marcus Aurelius: "Look beneath the surface; let not the several quality of a thing nor its worth escape thee".
(Bartlett, 1914, p. 939)*

Organization of the Literature Review

The title of this dissertation is deceptive. At first reading, one might think the topic is just about one particular school district and its culture, and to some extent this would be an accurate albeit simplistic and highly understated assumption. Summarily, the complexities of education as philosophy, theory and process juxtaposed against those of cultural studies, culture theory, and organizational culture, suggest the assemblage of a lengthy tome that could easily overburden the resources of a lone researcher or graduate student working within a constrained timeline and limited budget. Scholars spend a lifetime negotiating an understanding of these topics, usually within the confines of single disciplines of study. But when the philosophy of "Continuous Improvement" and the field of Quality Management are included, along with the disciplines of management theory and practice, organizational theory and development, and human resource development, then the range of possibilities for research and scholarly discourse become legion and difficult to apprehend within a solitary framework. Add other possible impinging cognitions such as

philosophy, metaphysics, the social, behavioral, and biological sciences, complimentary and antagonist assessments of Quality Management philosophy and practice, and the possibilities for inquiry increase exponentially. While the selection of a 'case study' approach does allow for a more manageable approach, the expository path chosen for this dissertation is but one among many that could have been chosen to analyze and explain Quality Management philosophy, phenomena, and explication of relevant theory, as gleaned from the study of a single US school district that has espoused the philosophy continuously for over fifteen years.

To understand why and how a school district espouses a philosophy for such an extended period of time, one should first explore the contributing events, societal pressures, philosophical influences, and other significant factors that guide policy, decision-making processes, operations, and daily practice. It would be neglectful to present the 20th century quality movement in isolation from the broad historical contexts that illuminate its origins and development (Juran, 1995a) or to study an organization's culture without examining the underlying historical events and circumstances that influenced its formation (Hofstede et al, 1990).

The first section of the literature review examines the concept of 'quality', the ubiquity of the idea since antiquity, and an analysis of how Quality Management (QM) as nascent philosophy and practice emerged in management thought, and is followed by a subsequent section that illustrates how QM was

influenced by people, organizations, institutions, and events during the latter half of the 20th century. The third section explores the quality and management literature and the preeminent 'gurus' that contributed to the forging of the 20th century Quality Movement, followed by the fourth that analyzes the contributions and influences of quality certification and award-granting organizations. The fifth section focuses on the ontological, epistemological, and methodological attributions associated with the Quality Management philosophy and the sixth section explores Quality Management through the organizational culture framework and examines the relevance of values, beliefs, underlying assumptions, and artifacts that accompany this perspective. The next section examines research that intersects QM philosophy and practice, management theory and practice, public school education, and culture theory. Lastly, the chapter concludes with a short summary that explains the researcher's perspective regarding how the selected cognitions converge towards a common purpose.

Historical Review: Quality Ideals and Practices Up to the Middle of the 20th Century

The purpose of this section of the literature review is not to acknowledge the works of every management guru who may have tangentially influenced the development of Quality Management in the US during the early 20th century, but

rather to focus on select scholars and practitioners who generated ideas that have a more prominent lineage to what Quality Management philosophy and practice has become.

The existence of and quest for quality in construction, manufacturing, and the service sectors did not just suddenly appear in the 20th century, although a number of factors unique to this time frame may have accelerated its evolution. The importance of and emphasis on 'quality' has been recorded in ancient texts and records for thousands of years. Quality, when considered as an end result, is dependent on proficiencies in planning, and organizing and controlling processes, whether expressed in a material form or as a service, and the Egyptians recognized this concept as early as 4000 BC (George, 1972). The Shang Dynasty, from the 16th to the 11th centuries BC, developed through the "*Records of Etiquette*" and officially owned handicrafts, a complex managerial organization with special officials and divisions of labor:

1. The department in charge of production, collection, storage, and distribution of raw and semi-finished materials
2. The department of production and manufacturing of finished products
3. The department of storing and distributing completed products
4. The department for formulating and executing standards (standardization and metrology)
5. The department of supervision and examination (Juran, 1995a, p. 3)

Other manifestations of quality may be found in ancient Israel, the construction of Greek temples and theaters, early India construction and irrigation projects, early Scandinavian shipbuilding, the aqueducts and engineering marvels of ancient Rome, Germany during the Middle Ages, the development of mining in

Czech lands, the Venetian Republic, the manufacture of clocks in the Netherlands, cathedral building in Europe, the French arms industry, Russia, and the United Kingdom, all predating the 19th century (Juran, 1995a).

According to Juran, “The urge to achieve quality has been observed in all cultures and is probably instinctive in the human spirit” (1995a, p. 209).

However, while the quest for quality in goods and services may be a universal phenomenon, the “quantification of quality and establishment of formal quality standards are decidedly 20th century phenomena” (Hoyer & Hoyer, 2001, p. 54).

There is no precise or consensual definition for ‘quality’ as the expression garners different nuances depending on the context of its use and the philosophical orientation of the one defining it (Cameron & Huber, 1997). The journal *Quality Progress* defines the term as follows:

“Quality” is a subjective term for which each person has his or her own definition. In technical usage, quality can mean the characteristics of a product or service that bear on its ability to satisfy stated or implied needs. Quality means having a high degree of excellence (Nelson & Daniels, 2007, p. 54).

According to Harvey and Green, quality may refer to a product that is exceptional, or perfect, consistent, has value (1993), or as Phillip Crosby opined, fulfills ‘fitness for purpose’ (1993). Garvin proposes the dimensions of performance, features, reliability, conformance, durability, serviceability, aesthetics, and ‘perceived’ quality (1988). Crosby, author of *Quality is Free* (1979) and known for his concept of ‘Zero Defects’ in manufacturing and the

Quality Maturity Grid, further expounded on the intricacies associated with the 'quality' expression.

The first erroneous assumption is that quality means goodness, or luxury, or shininess, or weight. The word "quality" is used to signify the relative worth of things in such phrases as "good quality", "bad quality", and that brave new statement "quality of life". "Quality of life" is a cliché because each listener assumes that the speaker means exactly what he or she, the listener, means by the phrase. It is a situation in which individuals talk dreamily about something without ever bothering to define it. That is precisely the reason we must define quality as "conformance to requirements", if we are to manage it....Requirements must be clearly stated so that they cannot be misunderstood. Measurements are then taken continually to determine conformance to those requirements. The nonconformance detected is the absence of quality. Quality problems become nonconformance problems, and quality becomes definable (1979, p. 15).

From Crosby's perspective, the customer ultimately determines the requirements of quality through support of a product, measured by "cold hard cash" (Crosby, 1979, p. 15).

W. Edwards Deming, another and arguably the preeminent of the Quality Management Gurus, teased a definition of quality from examples, hypothetical propositions, and musings from recognized experts and scholars in statistical process control (Deming, 2002). In *Out of the Crises*, Deming quotes his mentor, Walter A. Shewhart:

The difficulty in defining quality is to translate future needs of the user into measurable characteristics, so that a product can be designed and turned out to give satisfaction at a price that the user will pay. This is not easy, as as soon as one feels fairly successful in the endeavor, he finds that the needs of the consumer have changed, competitors have moved in, there are new materials to work with, some better than the old ones, some worse; some cheaper than the old ones, some dearer (2002, p. 169).

Central to Deming's notion of how quality is defined, and for other Quality Gurus such as Joseph Juran, and Kaoru Ishikawa, is the emphasis on meeting or satisfying the needs of the customer or the client/consumer (Hoyer & Hoyer, 2001). So while the definition of quality is somewhat imprecise, it conjures up notions of excellence, value, consistence, conformity, and has evolved over time to also include the idea that a quality product or service meets or exceeds the needs and expectations of an identifiable customer/client. These particular attributes of 'quality' became primary drivers for the 'quality movement' phenomenon of the 20th century. Although these attributes for defining quality come largely from the latter half of the 20th century, their roots may be traced back to earlier manifestations of management and organizational theory, and from early 20th century businesses and companies that were pioneers in recognizing and implementing some form of quality control in the goods and/or services they produced.

The evolution of 'quality' in Europe, owing to the multiple influences of the European master craftsman and the contribution from mass production created by the industrial revolution, is considered the progenitor of 'managing for quality' in the US, insofar as the concept emerged during the first half of the 20th century (Juran, 1995a). The early 1900s were wrought with change as 'heavy industry' such as the Ford Motor Company, Packard, and General Motors and other large-scale manufacturing companies applied Scientific Management to the assembly line (Kanigel, 1997). There were other nascent outcroppings of the

quality management philosophy that emerged, the most notable appearing in the “Penney Idea” embraced by the J. C. Penney Company in 1913:

1. To serve the public, as nearly as we can, to its complete satisfaction
2. To expect for the service we render a fair remuneration and not all the profit the traffic will bear.
3. To do all in our power to pack the customer’s dollar full of value, quality, and satisfaction.
4. To continue to train our associates and ourselves so that the services we give will be more and more intelligently performed.
5. To improve constantly the human factor in our business.
6. To reward men and women in our organization through participation in what the business produces.
7. To test our every policy, method, and act in this way: “Does it square with what is just and right? (Jablonski, 1992, pp. 29-30)

US industrial growth during the early part of the 20th century prompted new viewpoints on managing production that incorporated new dependencies on scientific management and process control, and quality management would remain in a relatively embryonic stage until the management and organizational sciences matured through the 1930s, 1940s, and 1950s.

The concept of using scientific management and/or statistics to optimize the efficiency of an organization, particularly during the 1920s and 1930s, borrows from a number of thinkers and scholars, some of whom were labeled as ‘patriarchs’. Frederick Taylor emerged as the ‘father’ of Scientific Management (Copley, 1923). Another of these scholars, Walter Shewhart, was considered the ‘father’ of statistical quality control (ASQ, 2008a) and developed a scientific framework for improving quality and production while working for the Bell Labs Division of AT&T (Juran, 2004). Shewhart viewed output in statistical parlance, believed the statistician could work with engineers in understanding variance in

production, and profoundly influenced the thought and philosophy of W. Edwards Deming who later became recognized as one of the leading authorities on quality management (Lindsay & Petrick, 1997).

The rapid growth in standardization, an ideological shift away from the science of 'exactness' to probability and statistical sciences, and the evolution of the division of labor, all shifted industrial production in new directions (Lindsay & Petrick, 1997). With the advent of 'big' industry and business at the turn of and through the middle of the 20th century, management and organization theory were thrust into prominence. Among the early 20th century U.S. scholars and thinkers in management science and organizational theory, four are most often distinguished in the literature: Frederick Winslow Taylor, Mary Parker Follett, Elton Mayo, and Chester I. Barnard (Miner, 2002).

The development of organizational theory may be organized and traced through one or more of three 'systems' perspectives – rational, natural, and open (Scott, 2003). According to Scott, the 'rational' perspective views organizations as "collectivities oriented to the pursuit of relatively specific goals and exhibiting relatively high formalized social structures" (2003, p. 27). The rational systems approach typically appropriates levels of formalization that governs the rules of the organization and how the different job responsibilities are codified. Formalized rules provide a template for how members of an organization relate to others - the work behaviors that are expected, how jobs

are defined, and how work flows between the different units of an organization (Scott, 2003).

The 'natural-systems' perspective views organizations in terms of human relations with people being the most important aspect. The 'natural systems' perspective asserts that organizations are "collectivities whose participants are pursuing multiple interests, both disparate and common, but who recognize the value of perpetuating the organization as an important resource" (Scott, 2003, p. 28). Adherents of the 'natural systems' perspective, do not deny the existence of highly formalized structures within organizations, but may challenge their importance and question their impact on the behavior of participants (Scott, 2003).

The 'open systems' perspective combines both 'rational' and 'natural' systems elements to provide a more diverse perspective. 'Social-systems' models later emerged and represented an 'open' systems viewpoint that attempted to use organizational theory and philosophy to extrude various components such as the organizational structure, the individual, climate and culture, politics, teaching and learning, environment, and effectiveness (Hoy & Miskel, 2001).

As subsequent organizational theory evolved, based on a broader 'social systems' perspective, so did management theory as more eclectic and comprehensive approaches emerged that extended far beyond the boundaries of "Tayloristic" bureaucratic control or mere statistical quality control (Ishikawa,

1986). However, it should be noted that Taylor's 'bureaucratic' model, as described in his 1911 seminal publication, *The Principles of Scientific Management*, was not entirely devoid of any human relations concerns for employees or for harmonious relationships between management and labor within a business organization.

While Frederick Taylor's approach is considered 'rationalistic' because of specific 'Scientific Management' principles such as time and motion study, task management optimization, and the call for increased responsibility roles for management, his perspectives with regard to the importance of harmonious relationships between management and labor were at least acknowledged as an important endeavor.

It is no single element, but rather this whole combination, that constitutes scientific management, which may be summarized as: Science, not rule of thumb. Harmony, not discord. Cooperation, not individualism. Maximum output, in place of restricted output. The development of each man to his greatest efficiency and prosperity (Taylor, 1911, p. 140).

Taylor sought to improve people through the optimization of work routines, but his ultimate goal was driven by a higher aim, "In the past, the man has been first; in the future the system must be first" (Taylor, 1911, p. 7).

Taylor's principles of Scientific Management were hotly debated during the 1920s, drawing representative opposition from both management and labor, and from some politicians and social scientists. Many managers, chained to practices of the past, objected to the new roles that added responsibilities for measuring and controlling work and job task efficiencies. Labor unions objected

to what they perceived to be a loss of freedom on the part of the individual laborer, and more than a handful of politicians and social scientists believed Scientific Management to be 'dehumanizing', reducing the work environment to nothing more than a machine mentality that placed an inflated premium on efficiency (Kanigel, 1997). However, Scientific Management would live on to influence management thinking and organizational theory during the remainder of the 20th century and particular elements of Taylor's philosophy continue to influence the management philosophy and practices of many modern organizations (Kanigel, 1997).

While the rationalistic principles of Scientific Management and the early 20th century mechanization efforts of mass production minimized or ignored the social dynamics of people in the work setting, a new group of scholars emerged who focused on the human relations aspects of management. One such philosopher/scholar, Mary Parker Follett, espoused participatory democracy for organizations in local, state, and national political arenas, and also for business and corporate venues (Follett, 1998). From Follett's perspective, the most perplexing aspect of organizations was that of developing and maintaining dynamic and harmonious relationships (Graham, 1996). Follett believed that in a healthy work environment, socially valuable differences of opinion could actually strengthen the effectiveness of a group, as long as the deliberative processes used to reconcile differences and integrate divergent perspectives were structured towards the primary aims of the organization (Graham, 1996).

Follett became a member of the Taylor Society (Graham, 1996) which was formed between 1917 and 1918 and named in honor of Frederick Taylor (Brown, 1925). Follett's connections with the 'executive engineers' who populated the Society and with the underlying principles of 'Scientific Management' that characterized the philosophical bent of the organization, gave her an understanding of the importance of the formal structure of an organization. However, she believed that for an organization to prosper with regard to its aims and missions, it had to extend its management philosophy beyond that of maximizing efficiency. From her perspective, an organization's workforce must settle differences through the integration of knowledge, implement system-wide cross-functioning groups and teams, and establish a sense of collective responsibility (Graham, 1996). Follett's work helped to span the gap between Scientific Management and the 'human relations' group of philosophers (George, 1972).

Also contributing to the 'natural systems' perspective were two Harvard professors, Elton Mayo and Fritz Roethlisberger, and their work in understanding working conditions at the Hawthorne plant of the Western Electric Company in Chicago, circa, 1927-'31 (Hoy & Miskel, 2001; Mayo, 1945). Mayo, Roethlisberger, and plant manager William J. Dickson first conducted an experiment involving an assembly room for telephone relay equipment to determine the optimum levels of illumination. Much to the initial consternation of the researchers, the productivity of the workers improved with increasing

illumination, but unexpectedly also improved with subsequent decreasing illumination. Thus was born the “Hawthorne Effect”, a phenomena generated because the worker’s behaviors were influenced by their desire to please the researchers, and subsequently responding more prodigiously because of their perception of ‘being in the spotlight’ (Mayo, 1945). While this “effect’ does encourage more careful and thoughtful planning of research (Gall, Borg, & Gall, 1996), subsequent efforts to manipulate the “effect” experimentally through some thirteen different studies, failed to consistently yield predictable results (Adair, 1984, as referenced by Gall, Borg, & Gall, 1996, p. 476) and may distract casual readers of the experiments away from the more significant finding.

The final experiment, and one that is more germane to the ‘natural perspective, was conducted at the Branch Wiring Observation Room and revealed the importance and relevance of informal patterns of interactions that are established between employees in the work environment, and how the resultant forms of behavior impact employee motivation and production (Scott, 2003; Hoy & Miskel, 2001; Mayo, 1945). Mayo, Roethlisberger, and Dickson’s work in the “Hawthorne” experiments generated new ideas and complexities regarding the impact of informal work relationships and group dynamics in organizations.

Management, in any continuously successful plant, is not related to single workers but always to working groups. In every department that continues to operate, the workers have – whether aware of it or not – formed themselves into a group with appropriate customs, duties, routines, even rituals... (Mayo, 1945, p. 81).

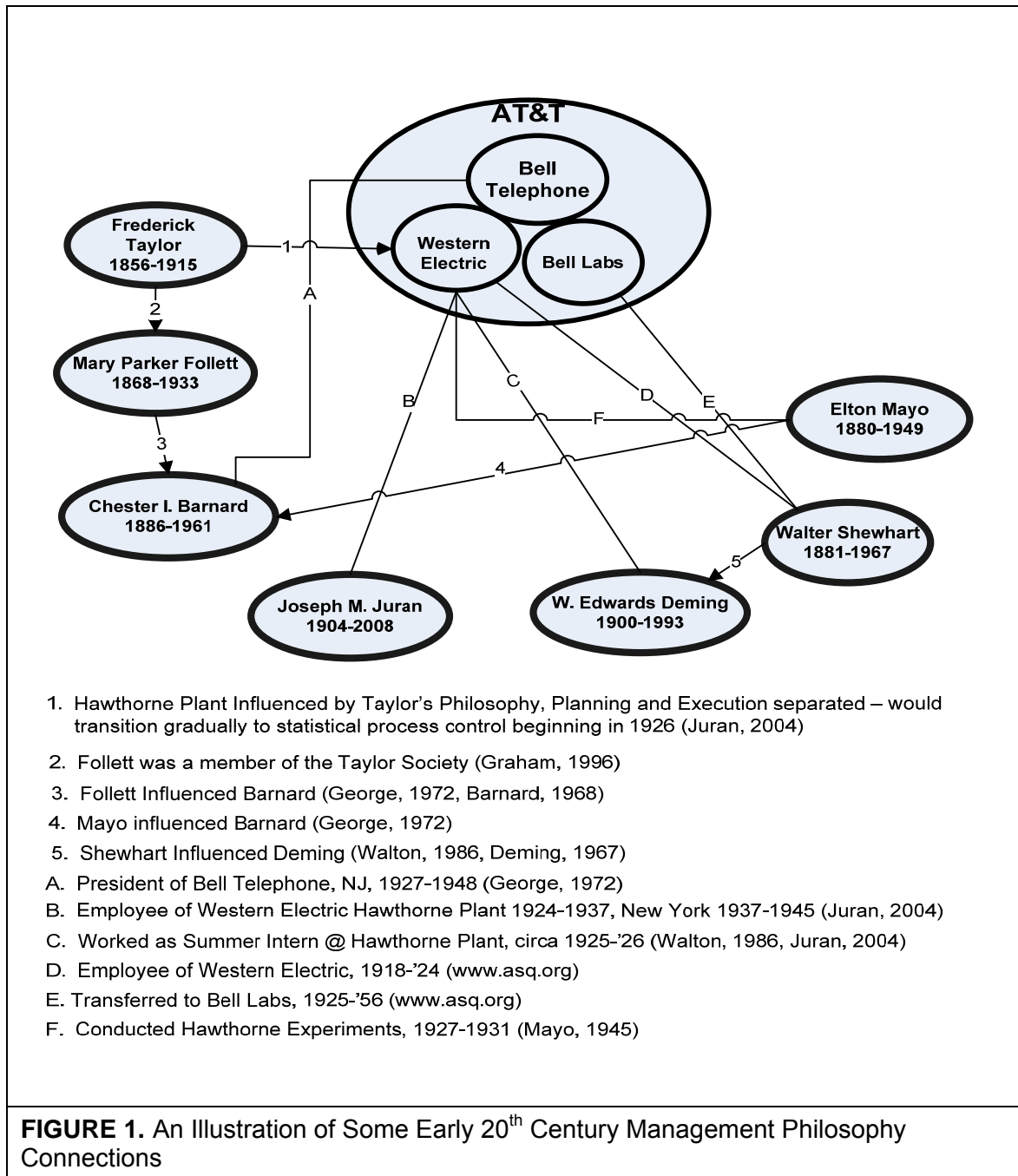
The Hawthorne experiments revealed that “individual workers do not behave as rational economic actors but as complex beings with multiple motives and values; they are driven as much by feelings and sentiments as by facts and interests” (Scott, 2003, p. 62). The implications spawned from Mayo, Roethlisberger, and Dickson’s ‘Hawthorne Experiment’, influenced management theory during the remainder of the 20th century and would foreshadow later work in the field of Organizational Culture.

Using Scott’s framework for organizing management and organizational theory, the third perspective or “open systems” perspective, is typified by Chester I. Barnard (1992). Barnard, building on the work of Henri Fayol and inspired by the philosophies of Follett and others, and the research of Mayo, Roethlisberger, and Dickson, sought to explicate a total theory of management (George, 1972; Scott, 2003). Barnard’s *Functions of the Executive*, first published in 1938, represented personal viewpoints garnered through his experience as a Bell Telephone executive and was heavily influenced by the ‘human relations’ perspective bolstered through the research of and regular contact with Mayo and Roethlisberger (Scott, 2003). Central to Barnard’s theory, are the interdependent relationships that bind an organization together. The individual, the formal structure, and the informal structures are all joined (Andrews, 1968; George, 1972) in a mosaic of “free will, cooperation, communication, authority, the decision process, and dynamic equilibrium” (Hoy & Miskel, 2001, p.19). Barnard’s effort to bind the formal and informal structures

of an organization together, particularly in the interest of highlighting the importance of cooperative behavior, resonated with many of his contemporaries and would continue to influence management and organizational scholars and practitioners for the remainder of the century (Hoy & Miskel, 2001).

The development of modern Quality Management philosophy did not originate in a vacuum isolated from the influences of early 20th century management and organizational scholars and thinkers. Taylor's emphasis on efficiency and effectiveness through scientific metrology coupled with a 'systems' perspective in aligning tasks and work responsibilities, Follett's belief in cooperative employee involvement at all levels of an organization, Mayo's recognition that informal networking and interpersonal relationships can have a profound impact on production, and Barnard's synthesis of the individual and the system to reconcile free will, cooperation, communication, and the proper exercise of authority, provided a rich tapestry of ideas Quality Management scholars and advocates would later draw from.

As compelling as the works of these scholars and scientists were, one cannot ignore the confluence of various institutional connections and networks that may have influenced and moderated their development. Figure 1 illustrates the nexus that American Telephone and Telegraph (AT&T) provided and the potential grafting and transplantation of ideas that are associated with the company and among some of the early 20th century scholars and philosophers.



Shewhart, Joseph M. Juran, and Barnard all worked for one or more of the

AT&T divisions and their careers within the corporate umbrella overlapped by more than twenty years. Deming worked at the Hawthorne Plant while finishing his doctorate at Yale during the summers of 1925 and 1926 (Walton, 1986; Gabor, 1990; Juran, 2004), yet during this period his contributions to management science and the company were limited.

Deming was not aware of the Hawthorne Experiments during his summer internships (Gabor, 1990), and did not meet Juran until the 1940s (Juran, 2004). This is not to imply that his Hawthorne Plant experience was unrewarding for Deming or that the early manifestations of Shewhart's ideas regarding statistical process control went unnoticed, for he would later comment, "(I) did nobody any good, but it was a great experience" (Juran, 2004, p. 302). Beginning in 1927, Deming established a protracted professional relationship with Shewhart that lasted forty years. Deming was a regular visitor to Shewhart's home at Mountain Lakes, New Jersey (Gabor, 1990) where he sought to mine Shewhart's knowledge and understanding of statistics and statistical process control (Hoopes, J., 2003). Of the documented influences depicted in Figure 1, several are particularly compelling.

Juran reveals in his autobiography that when he began his employment with Western Electric in 1926, the Taylor Philosophy was entrenched in the division as evidenced by the separation of planning and execution, an emphasis on 'piecework' incentives for workers and for increased production, and the widespread use of inspection for assessing quality (2004). Taylor's Philosophy

produced measureable increases in production efficiency and output in early 20th century businesses and factories and had found its way into one of America's most prestigious companies.

During the late 1920s through the 1930s, AT&T gradually transitioned to a greater emphasis on statistical quality control largely due to the work of Shewhart and other thinkers such as Joseph M. Juran. Garvin would later categorize the era of 'Inspection' and Taylorism as the 'First Era' of the 20th Century Quality Movement, and subsequently assigned the expression 'Statistical Quality Control' for the 'Second Era' (1988). The Western Electric and Bell Labs divisions were in the vanguard of the migration away from strict Taylorism which emphasized product inspection, to statistical quality control that relied less on inspection and more on adjusting product quality through the measurement of statistical variation.

The company incubated the talents of scientists and management thinkers through the promotion of internal research and was receptive to reputable 'outside' researchers examining its operations. The company's success was ultimately attributable to a number of factors.

- It created an elite corps of scientists and engineers to carry out research and development of the hardware and circuitry. This corps later became an AT&T subsidiary known as Bell Telephone Laboratories (Bell Labs).
- It created a captive source of supply – Western Electric Company – to build the hardware.
- It established measures of the quality of service provided to its subscribers.
- It established a system of data feedback on quality service and on field quality failures.
- It established means for measuring the quality of products produced by Western Electric.

- It created a “quality survey” – an audit – to review the effectiveness of AT&T’s entire system of managing for quality (Juran, 2004, p. 91).

AT&T provided fertile soil for the progenitors of ‘quality management’ and the impact of the organization is highlighted by the contributions made to management science and organizational theory and practice through its managers, scientists, and the research it supported.

Juran’s rise in leadership and management responsibility within the Western Electric Division of AT&T (Juran, 2004), and Deming’s contributions as a statistician for the U.S. Department of Agriculture, his subsequent charge to manage sampling for the 1940 U. S. Census and assistance to the US War Department during WWII (Walton, 1986), established credibility and created governmental contacts for both. Most ‘quality management’ training courses attribute the foundation of the quality movement to Deming’s and Juran’s efforts to reconstitute Japan’s devastated economy after World War II, at the request of General Douglas MacArthur. Japan had garnered a reputation as a “copier”, but the journey to being “leader” began when Deming and Juran introduced the Statistical Quality Control (SQC) concept of management during the early 1950s. As a result, the Japanese postwar marketing strategy shifted toward quality (Prybutok and Stafford, 1997).

Also growing in importance, beginning around the middle of the 20th century was a burgeoning movement surrounding consumerism and consumer rights. Particular issues regarding the plight of consumers surfaced which

piqued the attention of businesses and state and federal governments and a mounting awareness arose regarding the following issues:

- Ignorance, before purchase, of the relative merits of competing products
- Misleading advertising or labeling
- Products that fail during use
- Poor after-sale service
- Inadequate redress following complaints (Juran, 1995a, p. 563)

Thus up to and through the middle of the 20th century, one may observe the convergence of the following: (1). The conceptualization of quality production achieved through scientific management and refined through the lenses of statistics and probability, (2). A growing awareness among management scholars and thinkers of the need to balance the needs of the organization with those of the employees and the customer, and (3). A growing emphasis on arming the consumer with product knowledge and delivering a reliable if not superior product backed by dependable service (Juran, 1995a). Thus the stage was set for the advent of the “quality movement” across a wide variety of adopters, all seeking and competing for excellence in quality, spanning both the material goods and service sectors.

While both Deming and Juran are covered in greater detail in subsequent sections of the Literature Review where their philosophical constructs during the last half of the 20th century matured and gained notoriety, their long life spans enabled them to witness important developments of early 20th century management and organizational theory which would subsequently impact their

own relative viewpoints and perspectives, and ultimately influence and temper what Quality Management would become in both philosophy and practice.

**The Emergence of Quality Management and the Impact on American
Education: Societal Pressures, Formative Factors and Contributory Events
from the 1950s to the Present**

In response to the first Sputnik launch, Lyndon Johnson, Senate majority leader warned, "Soon they will be dropping bombs on us from space like kids dropping rocks from freeway overpasses" (Dickson, 2001, p. 117).

"Nothing less than control of the heavens was at stake. It was Armageddon, the final and decisive battle of the forces of good and evil" (Wolfe, 2008, p. 54).

The October 4, 1957 launch of the first Sputnik satellite heralded a new age of fear in the Cold War between the Soviet Union and the United States, and prompted handwringing and gnashing of teeth from politicians and policy makers as they tried to respond to a bewildered public (Dickson, 2001).

Needing a scapegoat, and goaded by self-proclaimed experts from the scientific and military establishments, the politicians and the general public eventually laid part of the blame for this setback on the shoulders of its public schools (Bracey, 2007). Amid the myriad of "experts" decrying the state of public education was Edward Teller, the alleged "Father of the H-bomb":

Many people are afraid we will be attacked by Russia. I am not free of such worry. But I do not think this is the most probable way in which they will defeat us. They will advance so fast in science and leave us so far behind that their way of doing things will be the way, and there will nothing we can do about it (Knowledge is power, 1958, p. 21).

The influence exerted by the scientists was considerable for they had helped to end World War II, the bloodiest conflict in human history.

If they could build a bomb that shortened the war, they could certainly make significant changes in the education system. They also had the support and good will of an admiring and grateful public. All this gave them new and unprecedented influence in matters of public policy, including education (Atkin, 1997).

Thus, in response to pleas from the scientific community and an alarmed public, and not since the Smith-Hughes Act of 1917, the federal government would again refocus its attention on public education as evidenced by Public Law 85-764, better known as the National Defense Education Act, which was signed into law by President Eisenhower on September 2, 1958 and enacted less than one year after the launch of the first Sputnik (Dow, 1991).

The NDEA would funnel billions of dollars into the reconstruction of American education, and at the urging of and influence from the scientific community, public schools began the migration away from the “life adjustment education” model purportedly championed by the “Deweyites” to one with a heavy emphasis on math, science, and empirical research in the hopes that America would once again regain its status as the world’s preeminent leader in science and technology (Dickson, 2001). This renewed interest in education would also foster a number of spinoff benefits, some directing attention to the liberal arts, others spawning new opportunities for university research (related

more prominently to the defense and aerospace industries), and some constituting more indirect entitlements such as the forgiveness of student loans for those willing to teach (Dickson, 2001).

In a sense America “muscle” its way back to technological supremacy through the monumental outlay of financial resources, highlighted by the placing of men on the moon just over a decade after the passage of the NDEA. But, there would be other global-wide economic events and upheavals to follow that would generate the same if not more angst and for which money or shifts in curricula focus could not provide an effective solution.

While there would be more Russian satellites, none would have the impact on world and national politics, economics, and education like the first, and it became fashionable to borrow or coin the “Sputnik” expression for future events that threatened the nation’s economic or military security. The precipitous increase in gasoline and fuel costs in 1974 led to what some refer to as the “second Sputnik” and prompted new if not dormant multiple realizations: (1) America had limited control of non-renewable natural resources, (2) The United States and its material wealth and capabilities were susceptible to events far removed from its borders, and (3) The US was just one player among many on the world economic stage, and worldwide economic stability could at times be extremely fragile (Dow, 1991; Heynerman, 1993). From these mounting realizations emerged a wide range of constituencies clamoring for strategic, long-range solutions and the concerns over public education would simmer in

the background for almost a decade, finally erupting through multiple fulminatory diatribes and indictments in 1983, sometimes referred to as the “Year of the Reports” (Dow, 1997).

Among the some fifty national studies comprising over six thousand pages, one marched to the forefront, notably the highly publicized *A Nation at Risk* which some referred to as the “paper Sputnik” (Dow, 1997; Bracey, 2005). Behind the reports was the growing awareness that the US had lost its competitive edge in the global marketplace. The idea that in just over thirty years Japan had not only recovered from the devastation of World War II but had become a world economic power and was dominating certain market segments, created consternation and fear among business leaders and politicians (Dobyns & Crawford-Mason, 1994). The emergent question became “What are the Japanese doing that we aren’t”.

The thrust of the reports set the tone for a new generation of reformers appropriating language from the business community and introducing a new lexicon to the education community (Goodlad, 1997). “Restructuring” and “systemic change” was the clarion call as politicians and business leaders believed nothing short of a major overhaul of American manufacturing philosophy and the reformulation of its educational systems could possibly reverse the trend of diminishing worldwide market influence and align the critical resources to successfully compete with Japan whose economy was growing at four times the rate of the US (Dow, 1997; Goodlad, 1997). The US had lost its

competitive economic edge in the global marketplace and something had to be done about it, and for US educational institutions, this “third” or “paper” Sputnik, would arguably constitute the most formidable of the “Sputnik” challenges.

Concurrent with the rise of Japan’s economic prowess during the 1970s and 1980s, was what some perceived to be a realignment of US national priorities and perhaps a malaise or ineptitude among the academic and scientific intelligentsia to contribute meaningfully to the discussion of how and in what direction the country could improve its educational systems. There was a growing faction of dissenters who believed the country needed to channel its resources away from fundamental research and towards more “down to earth” problems such as economic productivity, environmental issues, and the growing AIDS problem (Atkin, 1997). Contrary to these sentiments and among the education professoriate, there was a persistent groupthink that eschewed involvement with the lowly practical work in education, favoring instead “theory building” and “publishing” rather than “perishing” (Eisner, 1979). Ernest Boyer in his seminal report *Scholarship reconsidered: Priorities of the professoriate*, issued a plea, targeted more towards “research” universities and for all disciplines of study, to broaden and legitimize research and discovery through extension, application, practice, and the more intimate act of teaching (1990). The work of research needed not only to extend to peers, but communities of practice as well.

Former Harvard University President, Derek Bok, lamented that American universities still did not have well articulated priorities for the education of teachers, were doing little to develop them, and were failing the challenge of equipping teachers with new ways to help students learn (1992). In the delivery of educational coursework, Stanford University's Elliott Eisner condemned universities for shepherding aspiring school administrators to the mundane and perfunctory "business" aspects of education rather than helping them become competent instructional leaders, and for not providing teachers "the kind of conceptual tools that would enable them to become sophisticated students of one of the most complex and intellectually challenging fields of study in existence" (1979, p. 14). Eisner further intoned that there was little research available for educational practitioners and what was available was characteristically full of scientific or obtuse language, "preoccupied with control" (p. 15), and presented in a humorless and unappealing manner (Eisner, 1979).

Another insult to colleges of education emerged during the 1990s. Representative of the low esteem afforded to the colleges of education was the 'new direction' of state teacher certification and the associative legitimization of 'alternative' certification. This option allowed aspiring educators with 'real world' subject-matter experience or practical knowledge to enter the teacher workforce without having to suffer through the 'corrupting influences' forced on aspirants by schools of education (Labaree, 1994). Other criticisms emerged such as Rita Kramer's *Ed school follies: The miseducation of America's teachers* (1991) that

challenged the academic competencies of education school faculties and Thomas Sowell's *Inside American education* (1992) that accused teacher preparatory institutions of being controlled by 'research barons' who propagated moral confusion, social engineering, philosophical anarchy, and alienation from the very schools within which teachers would work. Where could aspiring and practicing educators turn for counsel, professional development, training, and direction?

Educators cast their nets to ensnare strategies for addressing rising accountability pressures, that 'made sense', leveraged taxpayer contributions, promoted uncompromising 'world class' learning, and in many instances the nets were cast in uncharted waters and away from the 'murky pools' of academe. Influences outside of the education community, specifically the 'latest' trends from business and industry, began vying for greater attention in the form of more complex and eclectic blends and approaches to the management of organizations which suggested potential use in education.

One seemingly innocuous event that predated the "Year of the Reports" and that arguably may have contributed to the urgency behind the "Paper Sputnik" was the June 14, 1980, 9:30 PM, NBC television documentary entitled, "*If Japan can...why can't we?*" (Dumaine, 1995). The program featured W. Edwards Deming, the "prophet" of Total Quality Management, and highlighted his work in turning Japan's economy from one of ridicule to one of global market domination. This caused many to question why American business seemed to

be slipping in the world economy, and whether 'quality management' could reverse this trend (Dobyns & Crawford-Mason, 1994).

It is common to find references to Japan's emergence as a worldwide economic contender and proponent of 'quality management' in the literature. Many published articles, papers, books and websites point to this emergence as a catalyst for America's rediscovering or redirection of the quality movement (Bowles & Hammond, 1991; Jablonski, 1992; Izadi, Kashef, & Stadt, 1996; Landesberg, 1999; Vokurka, 2001).

Interest in 'Quality Management' burgeoned during the mid-1980s through the 1990s, beginning in the manufacturing sectors and eventually migrating to service oriented businesses, and even into governmental agencies, the military, public schools, and to a lesser extent into the financial offices and business schools of colleges and universities, as evidenced through promising if not enthusiastic endorsements and reports of successful practice and numerous implementation strategies (Brandt, 1992; Freeston, 1992; Kaufman & Hirumi, 1992; Bonstingl, 1993; Golden Pryor & Cullen, B., 1993; Blackiston & Sabatella, 1995; Gilmore, 1995; Hackman & Wageman, 1995; Ahire, Golhar, & Waller, 1996; Bonstingl, 1996; Glenn & Akin, 1996; Hodgetts, 1996; Konopnicki, 1996; Lundquist, 1998; Hellsten & Klefsjö, 2000; Detert, Louis, & Schroeder, 2001; and Lllrank, 2003).

Public education and many school districts were likewise attracted to the movement, and under pressure from local constituencies and state education

agencies, and in response to the ‘Paper Sputnik’, the school reform movement began implementing the ideas of Deming and Juran and embraced the concepts of customer focus, continuous improvement, data-based decision-making, process improvement, systems thinking, and employee learning. There were dramatic increases among school districts across the country that reported some form of school improvement initiative based on QM principles (Horine, Hailey, & Rubach, 1993, Hess & Gift, 2008). Other events and flurries of governmental support would nudge the movement further into the spotlight of attention, notoriety, and in some instances respectability.

On January 6, 1987, the 100th US Congress passed House Resolution 812 which was subsequently signed into law by President Ronald Reagan on August 20, 1987 and officially titled *The Malcolm Baldrige National Quality Improvement Act*, named after Secretary of Commerce Malcolm Baldrige who died in a tragic rodeo incident on July 25, 1987 (NIST, 2001a; NIST, 2001b). The primary focus of the resolution was to bolster and improve American manufacturing quality and productivity. The Act also created the Baldrige National Quality Award and assigned the National Institute of Standards and Technology, a division under the Commerce Department, to oversee program guidelines and development in “close cooperation with the private sector” (NIST, 2001a; Vokurka, R. J., 2001).

While the original focus of the program was on the business and manufacturing communities, Congress extended the Award in 1998 to education

and health care organizations and to the non-profit sector in 2005 (NIST, 2008). Contributing also to the emphasis on quality are thirty-seven of the fifty states, which are loosely connected through the “Alliance for Performance Excellence”, and that provide varying levels of support for and recognition of quality efforts at the state and local levels (Baldrige Foundation, 2008). The Alliance is a construct of the nonprofit, private sector organization known as the Baldrige Foundation, an organization that exists separate and apart from the Baldrige Award Program (NIST, 2008).

The Foundation raises donations to fund the Baldrige Awards and to help offset the costs associated with the application processes. The Foundation has no oversight of the Baldrige program and no involvement in the award process itself (NIST, 2008). Much of that work is contracted out from the NIST to the American Society for Quality (ASQ), an organization that “assists with the application review process, preparation of Award documents, publicity, and outreach activities” (NIST, 2008).

The ASQ is a professional, nonprofit association with more than 100,000 individual and organizational members in the United States and around the world that provides information, guidance, certification, and training for the Baldrige Program and similar support for other quality management and improvement issues and endeavors (ASQ, 2008a). The ASQ sponsors an annual “National Quality Education Conference” that provides opportunities for educators to learn more about improving customer satisfaction, closing student

achievement gaps, aligning and integrating systems processes, enhancing staff/faculty high performance, and benchmarking (www.asq.org/communities/nqec/index.html). Additionally, the Society publishes six journals, the flagship of the organization being *Quality Progress*, along with others such as *Journal for Quality and Participation*, *Journal of Quality Technology*, *Quality Management Journal*, *Six Sigma Forum Magazine*, and *Software Quality Professional* (ASQ, 2008c).

The NIST, the Baldrige Foundation, the Alliance for Performance Excellence and state affiliations, the ASQ, and the Baldrige Award are and were contributory influences to the quality movement. As previously noted, the quality gurus and the sheer volume of published articles and books regarding purported quality management theory and practice, were significant influences as well. However, the literature suggests that the confluence of the rise in criticisms towards teacher preparatory institutions and the corresponding weight of those criticisms, with the proliferation in the literature and enthusiastic support for quality management practice, particularly in the early 1990s, helped to spawn public school experimentation with, and in some instances endearment to, quality management philosophy and practice.

The literature indicates that the public schools of the US have been in the spotlight for almost 50 years, much of the time maligned, criticized, and skewered as the challenges to the nation's educational interests have met with increasingly sophisticated and perplexing challenges. For the 'first' Sputnik, the

public schools 'spent' their way to a solution through huge outlays of capital expenditures and entitlements funded by the federal government, i.e. buy more labs, subsidize teacher education, fund more university research, etc. Sometimes the solutions were drawn from a realignment of curriculum or from "warmed-over", "re-tooled", or recycled strategies, and at other times education appropriated ideas from other disciplines, "technology, business management, behavioral engineering and other organizational forms" (Tyack & Cuban, 1995, p. 112). During the latter portion of the 1980s and moving forward into the 1990s, and in a protracted response to the 'paper' Sputnik and the failure of American Colleges and Universities to respond to mounting educational accountability pressures, many public schools and administrators flirted with new, altogether different suitors, some of which donned the luring if not provocative apparel of the 'Quality Management' philosophy. The literature suggests that the early 1990s reflected the most interest in and greatest rise of experimentation with Quality Management within US public schools - an observation that is consistent with the 1992 birth of the movement in the Leander ISD, Leander, Texas.

The Forging of Quality Management: Contributions from Preeminent Gurus and the Quality Literature

Quality Management (QM) is represented through multiple expressions which are often viewed as interchangeable siblings: Total Quality Management (TQM), Total Quality, Continuous Process Improvement, Quality First, Do it Right the First Time, Kaizen, Six Sigma, Reengineering, and Reinvention (Marton, 1997). However, these expressions and their associative philosophical nuances may generate ambiguity and uncertainty for aspirant practitioners who seek one 'best' solution for quality management (Dean & Bowen, 1994). None of the expressions and associative constructs possess sole ownership of Quality Management either in philosophical reach or application, and a number of factors such as the size of an organization, departmental variability (e.g. marketing, engineering, manufacturing, etc.), organizational constraints, levels of shared values among employees, implementation preferences, i.e., 'hard' or tool driven or 'soft' or human relations centered, and other environmental contingencies may predispose a group or an organization to preference one variant over another (Garvin, 1988; Sitkin, Sutcliffe & Schroeder, 1994; Hackman & Wageman, 1995; Reed, Lemak, & Montgomery, 1996; Wilkinson, Godfrey, & Marchington 1997; Giroux & Landry, 1998; Merzon-Luzón & Peris, 1998). Of the QM variants, Total Quality Management (TQM) emerges as the most frequently cited and explored in the quality and management literature during the 1980s and early 1990s, often appears in "different forms reflecting the

different approaches adopted by the early writers on the subject” (Quong & Walker, 1996, p. 222), and collectively represents a “loose union of ideas from systems theory, humanistic and industrial psychology, management theory, human-resource and organizational development, statistical process control, plus lessons from earlier attempts at quality improvement like quality circles” (Marchese, 1993, p. 10).

QM philosophy, regardless of the moniker, is viewed in the quality literature as a ‘holistic’ approach to management (Ahire, Golhar, & Waller, 1996; Shin, Kalinowsky, & El-Enein, 1998) and is recognized as a management paradigm that is arguably consistent with Scott’s ‘open systems’ perspective (2003). Furthermore, the QM philosophy evolved from the limited emphasis on end-result product or service quality, referred to as “Little Q”, to more comprehensive “Big Q” taxonomies that addressed strategy, culture, and meeting the needs of both internal and external customers and dedicating all departments and functions of an organization to quality deployment (Juran, 1989; Johnson & Chvala, 1995; Cameron & Huber, 1997).

As one examines the quality movement of the 20th century and the evolution from ‘Scientific Management’ and ‘Statistical Process Control’ (Little Q) towards more comprehensive frameworks of Quality Management associated with latter 20th century ‘Big Q’ approaches such as ‘Quality Assurance’ and ‘Strategic Quality Management’ (Garvin, 1988), the following practitioners, scholars, thinkers, philosophers, and consultants stand out: Frederick W. Taylor,

Walter Shewhart, Joseph M. Juran, W. Edwards Deming, Phillip B. Crosby, Robert Costello, Rosabeth Moss-Kanter, Kaoru Ishikawa, Masaaki Imai, Genichi Taguchi, Taiichi Ohno, Shigeo Shingo, and A. V. Feigenbaum (Hunt, 1992, 1993). From this list of experts and innovators, Deming, Juran, and Ishikawa, are the most often recognized and referenced in the literature, particularly in relation to TQM, Quality Management in general, and quality-related articles and books published during the 1980s and 1990s (Sashkin & Kiser, 1993; Hackman & Wageman, 1995).

These 'fathers' of Quality Management eschewed using the 'TQM' expression (Hellsten & Klefsjo, 2000) and Deming disdainfully remarked, "The trouble with Total Quality Management – failure of TQM, you call it – is that there is no such thing. It is a buzzword. I have never used the term, as it carries no meaning" (Romano, 1994, p. 22). However, the TQM term was widely used during the late 1980s and 1990s, was not specific to any program or system, and served as a pivot point for multiple approaches. QM adoption was based on different frameworks, some steeped in Deming's 14 Points, others dependent on Juran's Trilogy of Management, some based on other competing quality management schemes, while others relied on combinations of two or more approaches (Tague, 1995). For the purposes of this study and in the interest of unifying common traits and unifying principles, the resources and articles addressing TQM are considered commiserate with and contributory to understanding Quality Management philosophy and practice, as are the contents

of articles and books examining the other quality variants listed and referenced in reviewing the 20th century Quality Movement. As of August 20, 2008 and from the list of quality gurus, a Google search produced the greatest number of 'hits' for W. Edwards Deming (193,000), Kaoru Ishikawa (45,800), and Joseph M. Juran (37,100), results that remain consistent with Hackman and Wageman's previously cited ranking some 13 years earlier. These three 'fathers' of Quality Management thinking are now examined in the order of search engine 'hits'.

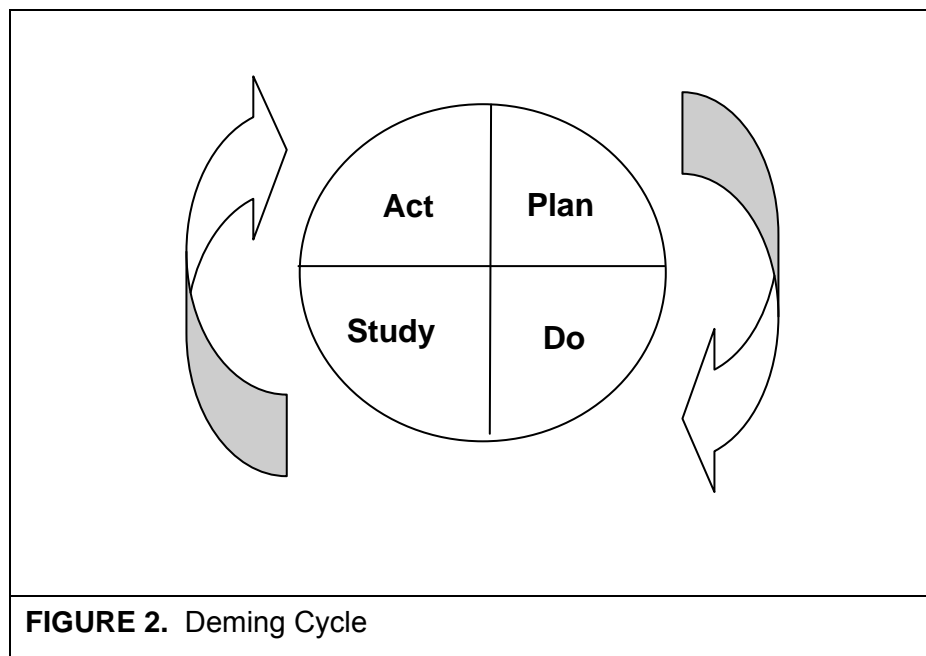
As early as the 1940s, Deming had gained a reputation as an astute maven in statistics and statistical process control. His demonstrated talents in statistics and probability, leadership in the US Department of Agriculture and work for the US Census and War Departments, opened doors for him to travel to Japan to provide expertise in helping the country rebuild its economy and manufacturing capability (Walton, 1986). But it was not until the 1980s that Deming and his management theories began to attract widespread attention in the US, and business schools started to include statistics in their nascent quality management curricula (Gabor, 1990). From his work with the Japanese and continuing on into the 1980s, Deming worked to derive a bedrock philosophy of management, starting with ten or fewer constructs, and finally arriving at fourteen (Walton, 1986). These "14 Points" went far beyond the limited confines of statistical process control.

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations, and targets for the workforce asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.
11. (a). Eliminate work standards (quotas) of the factory floor. Substitute leadership.
(b). Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.
12. (a). Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
(b). Remove barriers that rob people in management and in engineering of the right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.
13. Institute a vigorous program of education and self-improvement.
14. Put everybody in the company to work to accomplish this transformation. The transformation is everybody's job (Deming, 2002, pp. 23, 24).

For Deming, it was important to improve constantly the 'system of production and service' (Deming, 2002) and most of the QM siblings and much of the quality literature embraced the often mutually imbedded concept of 'Continuous Improvement' (Garvin, 1988).

Deming was also known for the 'Plan-Do-Study-Act' (PDSA) cycle (Figure 2) that was borrowed and subsequently modified from Shewhart's 'Plan-Do-Check-Act' (PDCA) cycle, both of which are models for Continuous Improvement (Hunt, 1993).



The first step or beginning of the Deming Cycle is the “Plan” phase in which the problem(s), customers, quality characteristics, and expectations are identified. The “Do” phase follows wherein solutions are developed, schedules defined, resources allocated, and the plan implemented. After implementing the new process, the “Study” phase is implemented and the expectations evaluated. The “Study” phase provides the opportunity for data analysis which may prompt a

refinement of the “Plan” phase and/or modification of strategies and resources in the “Do” phase. In the final or “Act” phase, the successful process improvements are incorporated, new work standards appropriated, results communicated to all stakeholders, and the stage set for a new cycle, thus the establishment of continuous improvement (Deming, 1986; Jablonski, 1992). The moniker “Continuous Improvement” is traceable to the Japanese expression “Kaizen”, which philosophically espouses the involvement of every employee of the organization in continuous improvement (Imai, 1986). Kaizen is usually associated with incremental improvement of existing processes based on internal benchmarking, as compared to significant, if not radical, step-change improvement that relies on broader cross-functional cooperation necessitated by external benchmarking or product comparisons of competitive products/services (Johnston, Fitzgerald, & Markou, 2001).

Borrowing from the ‘14 Points’ and from personal experiences, Deming later developed the “Seven Deadly Diseases”, a compendium of ailments that have the potential to derail a business and prevent it from surviving and/or accomplishing its purpose(s).

1. Lack of constancy of purpose
2. Emphasis on short-term profits
3. Evaluation by performance, merit rating, or annual review of performance
4. Mobility of management (job-hopping of managers)
5. Running a company on visible figures alone
6. Excessive medical costs
7. Excessive costs of warranty, fueled by lawyers that work on contingency fee (Walton, 1986; Deming, 2002)

Deming was also recognized for his derivation of an overarching 'systems perspective' in his lifelong contributions to management science and practice.

Deming called for a transformation in American management through the understanding of "Profound Knowledge". Profound Knowledge is the aggregate knowledge of the system, knowledge of variation within the system, theory of knowledge, and theory of psychology (Deming, 1994). The four components of Profound Knowledge are completely interdependent and interactive. For Deming, 'Knowledge of the System' means understanding the network of interdependent components and how they work together to accomplish the aim of the system. 'Knowledge of Variation' involves understanding the variation between/among the people, outputs, services, and products of the organization and how these variations impact the operation of the system. The 'Theory of Knowledge' rests with the ability of management to predict and assess the probability of future outcomes based on accurate observations of the present and the past. And finally, 'Knowledge of Psychology' prompts organizations to acquire an understanding of human motivation, "interactions between people, customer and supplier, teacher and pupil, a manager and his people, and any system of management" (Deming, 1994, pp. 107-108).

The Deming Philosophy strives to project consequences into the future based on the analysis of facts and data, followed by the resourceful management of an organization's assets to reach the aim of the system and meet the needs of the customer. From a practical sense, it draws its strength

from focusing on the customer, continuous improvement, management by fact, benchmarking, an emphasis on the people of the organization, and vision which empowers each person's work through teamwork, training, responsibility-taking, mutual accountability, and organizational structure (Marchese, 1993). It is a form of 'systems thinking' which Spencer contends blends both organismic and mechanistic concepts into a coherent whole (1994). The 'holistic' qualities of Quality Management are likewise manifested in Ishikawa's beliefs (Watson, 2004).

Kaoru Ishikawa obtained a degree in chemistry from Tokyo University, would later serve on the faculty at the University, and was eventually selected as president of the prestigious Japanese Union of Scientists and Engineers (JUSE). He was a recipient of both Deming's and Juran's teachings and a vital contributor in the reformation of Japanese manufacturing during the late 1940s and early 1950s (Kondo, 1993). Ishikawa developed an approach to quality management that identified seven critical success factors or 'steps' for implementation:

1. Company-wide quality control and participation by all members of the organization
2. Education and training in all aspects of total quality, which often amounts to 30 days per year per employee
3. Use of quality control circles to update standards and regulations, which are in constant need of improvement
4. Quality audits by the president and quality council members (senior executives) twice a year
5. Widespread use of statistical methods and a focus on problem prevention
6. Nationwide quality control promotion activities, with the national imperative of keeping Japanese quality number one in the world

7. Revolutionary mental attitude on part of both management and workers toward one another and toward the customer, including welcoming complaints, encouraging risk, and a wider span of control (Lindsay & Petrick, 1997, p. 75).

Ishikawa's image of quality management was largely vested in the Total Quality Control (TQC) concepts that from his perspective possessed the potential to impact society at large. Other Ishikawa beliefs are expressed as follows:

- QC begins with education and ends with education (p. 13).
- To implement TQC, we need to carry out continuous education for everyone, from the president down to line workers (p.13).
- The first step in QC is to know the requirements of consumers (p. 43).
- One cannot define quality without knowing the cost (p. 43).
- An ideal state of quality control is where control no longer calls for checking (inspection) (p. 43).
- TQC is a group activity and cannot be done by individuals. It calls for teamwork (p. 89).
- If there is no leadership from the top, stop promoting TQC (p. 121).
- Organization means clarified responsibility and authority. Authority can be delegated but responsibility cannot (p. 121).
- Ninety-five percent of the problems in a company can be solved by the seven tools of QC (Ishikawa & Lu, p. 197).

Ishikawa believed in 'top-to-bottom' involvement throughout the production chain and was considered the father of 'Quality Circles', a phenomenon characterized by close working relationships among 'front line' workers to maximize efficiency, enhance quality, and advance employee ownership of production processes (Kondo, 1993). He was given credit for originating at least one of the quality tools, dubbed the 'Cause and Effect', Fishbone, or Ishikawa diagram, and actively promoted and used six additional 'tools' that collectively became known as the "Basic Seven", the "First Seven" or the "Old Seven", which also included

the check sheet, control charts, histogram, Pareto Chart, scatter diagram, and stratification charts (Ishikawa & Lu, 1985; Sashkin & Kiser, 1993; Tague, 1995).

Metrology is an important aspect of QM as a system cannot be controlled without methodologies or 'tools' to measure process effectiveness and production quality. Among these tools, the Pareto Chart drew more attention than the others. The Pareto Chart is "a statistical method of measurement to identify the most important problem (in a process)...usually displayed by a bar graph that ranks causes of process variation by the degree of impact on quality (sometimes called the 80/20 rule)" (Johnson & Chvala, 1996, p. 265). The Pareto Chart and the analytical principles behind it were recognized and promoted by all three philosophers, but Juran highlighted and devoted special attention to it in all of his major publications. However, Juran's interest in QM went far beyond the Quality Tools.

Juran saw the achievement of quality as a result of a 'trilogy' of action: Quality Planning, Quality Control, and Quality Improvement. In attempting to explain the 'Trilogy', Juran drew analogies from the field of finance equating 'Quality Planning' with budgeting and business planning, 'Quality Control' with controlling costs, expenses, and inventory, and 'Quality Improvement' with cost reduction and profit improvement (Juran, 1988). For American businesses to survive and prosper, they needed to achieve a balance between and move through alternating periods of 'Breakthrough' and 'Control'. Breakthroughs are the new ideas and concepts that raise the bar of quality and create new

expectations and standards of excellence. However, to achieve the new standards, the system and its processes must be analyzed, modified, optimized, and stabilized under the 'Control' regimen before subsequent 'Breakthroughs' can be conceptualized and forged. Too much 'Control' and a company fails to innovate and remain competitive. Too much 'Breakthrough' and the company never learns how to successfully implement a strategy (Juran, 1995b). From Juran's perspective, 'Breakthroughs' are representative of radical step-change improvement borne from external benchmarking and achieved through cross-functional departmental cooperation, while 'Control' is achieved through internal benchmarking and intradepartmental, incremental process improvement. For a company to be successful it must have the capacity and the will to do both, and it must be adroit in implementing improvement at both the micro and macro process levels (Juran, 1989).

Juran, as a teacher of management practice, believed in strategic planning, managing processes, and optimizing cross-functional macro-processes (Juran, 1992). Where Juran's writings, teaching, and consultation work was based on management practice, Deming's was on statistics and management theory (Hunt, 1993). While Deming and Juran may have emphasized different aspects of quality, they were congruent with regard to the following beliefs and/or viewpoints: (1). quality management involves the commitment and involvement of top management, (2). problems in organizational performance stemmed more from the system of work rather than

the front line operator, (3). both placed great importance on planning, and (4). understood that process variation introduced uncertainty and inefficiencies in the delivery of goods and services (Landesberg, 1999).

Hackman and Wageman grafted five TQM 'core values' that are common to Deming, Ishikawa, and Juran.

1. Explicit identification and measurement of internal and external customer requirements
2. Creation of supplier partnerships
3. Use of cross-functional teams to identify and solve quality problems
4. Use of scientific methods to monitor performance and identify points of high leverage for performance improvement", e.g. control charts, Pareto analysis, and cost-of-quality analysis
5. Use of process-management heuristics to enhance team effectiveness, e.g., flowcharts, brainstorming, and fishbone/'cause and effect' diagrams (1995, pp. 312-314).

However, the core of TQM is often viewed through somewhat different perspectives, as demonstrated in Table 1. These perspectives represent a limited sampling of scholars, authors, and consultants who attempted to encapsulate the critical attributes of TQM.

Among the five sets of scholars and authors depicted in Table 1, four different classification schemes are used to express the essence of TQM using expressions such as "core values", 'constructs', 'principles', and 'precepts'.

TABLE 1. TQM Interpretative Perspectives			
Ahire, Golhar, & Waller, 1996	Hackman & Wageman, 1995	Jablonski, 1992	Sitkin, Sutcliffe, & Schroeder, 1994
TQM	TQM	TQM	TQM
Constructs	Core Values	Principles	Core TQM Precepts
Attributes	Attributes	Attributes	Attributes
1. Top Management Commitment	1. Explicit identification and measurement of customer requirements	1. Customer Focus	1. Focusing on customer satisfaction
2. Customer focus	2. Creation of Customer Partnerships'	2. A Focus on Process as Well as the Results	2. Stressing Continuous Improvement
3. Supplier Quality Management	3. Use of cross-functional teams to identify and solve quality problems	3. Prevention versus Inspection	3. Treating the organization as a total system
4. Product Design Quality Management	4. Use of scientific methods to monitor performance and to identify points of high leverage for performance improvements – e.g., control charts, Pareto analysis, cost-of-quality analysis	4. Mobilize Expertise of Workforce	
5. Benchmarking	5. Use of process-management heuristics to enhance team effectiveness – e.g., flowcharts, brainstorming, and fishbone diagrams	5. Fact-Based Decision Making	
6. Use of Statistical Process Control		6. Feedback throughout the system with multiple sensors	
7. Use of Internal Quality Information			
8. Employee Empowerment			
9. Employee Involvement			
10. Employee Training			
11. Improve Product Quality			
12. Optimize Supplier Performance			

Quality, Quality Management, and the Quality Philosophy. While 'principles' is the preferred expression for describing the 'Quality' adaptations in Table 2,

TABLE 2. Other Quality Management Interpretive Perspectives			
MacDonald & Piggot, 1993	Marton, J., 1997	Jacques & Scholtes, 1996	Dean & Bowen, 1994
Quality Management	Total Quality	Quality Philosophy	Total Quality
Common Concepts	Basic Principles	Basic Principles	Principles
Attributes	Attributes	Attributes	Attributes
1. Top management must lead in the change process.	1. Sustained commitment to excellence	1. Focus on the outside customer	1. Customer focus - providing products and services that fulfill customer needs; requires organization-wide focus on customers
2. The change process requires a cultural transformation.	2. Long-term view of the future	2. Understanding and managing systems	2. Continuous improvement - Consistent customer satisfaction can be attained only through relentless improvement of processes that create products and services
3. Quality is integrated into all functions and not regarded as a separate function.	3. Focus on customer satisfaction	3. Understanding and using data	3. Teamwork – Customer focus and continuous improvement are best achieved by collaboration throughout an organization as well as with customers and suppliers
4. People, not machines, are the driving force behind quality.	4. A continuous learning and improvement mentality	4. Understanding people	
5. Quality requires participation from everyone in the organization.	5. A culture that encourages employee involvement and empowerment	5. Mastering improvement	
6. Motivation alone does not engender change although it is important.	6. Value of teamwork among all stakeholders	6. Direction and focus	
7. Company-wide education and training is essential for long-term improvement.	7. Process management and defect prevention philosophy		
8. Continuous improvement demands commitment and singleness of purpose from top management.			

there is observable variation in the number and foci of associative attributes. In analyzing the multiple frameworks of TQM, Total Quality, Quality Management, and Quality Philosophy from all nine 'sample' articles, particular attributes appear with greater frequency than others (Table 3).

TABLE 3. Frequency of Attributes from Selected Quality Management Articles	
Quality Management Attribute	Frequency
Customer Driven Focus	8
Emphasis on Leadership Involvement and/or Commitment	6
Emphasis on System-wide Continuous Improvement	5
Emphasis on Fact and/or Data-based Decision-making	5
Emphasis on Teamwork and Collaboration	4
Emphasis on Stakeholder Involvement	4
Emphasis on Employee Education/training	4

As suggested by Dean and Bowen, theory development for Total Quality may be interpreted through the multiple dimensions of "Principles", "Practices", and "Technologies" (1994, p. 395). Accordingly, "Principles" direct how the central aim(s) and supportive goals of the organization are met (i.e., through Customer focus, Continuous Improvement, and Teamwork). The "Practices" consists of the various ways an organization interacts with the customer base and mobilizes its resources, typically collecting information about customer needs and applying process analysis, problem solving, and other analytical constructs such as the PDSA Cycle or reengineering to design or refine system

processes to meet those needs. Finally, Dean and Bowen describe the “Technologies” as the tools and devices used to analyze data such as customer surveys, focus groups, flowcharts, Pareto analysis, statistical process control, and the Fishbone diagram (1994). Some of the prescriptions for quality management present only the “Principles”, others focus on the “Practices” or the “Technologies”, while some blend two or more dimensions together. Unfortunately, in many instances, the author(s) of ‘quality’ articles do not always make clear which dimension(s) they are using to frame their description of Quality Management and it remains the task of the reader to sift through these distinctions, often without having the knowledge base or interpretive framework to recognize the differences. This lack of cohesion among the prescriptions for quality management, aggravate conditions in the field where practitioners “have difficulty distinguishing between correction action, improvement, and learning, and between conformance quality and strategic quality” (Reimann, p. 23).

The Forging of Quality Management: Contributions from Quality Certification and Awards-Granting Organizations

Concurrent with the US Department of Commerce’s NIST Division, its scientific and industry standards support branches, and the Malcolm Baldrige Quality Award (MBQA) program, is the separate non-profit organization, the

American National Standards Institute (ANSI), that “oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector” (www.ansi.org). ANSI is the nation’s representative in the International Organization of Standards (ISO), the International Electrotechnical Commission (IEC), and the Pacific Area Standards Congress (PASC) (www.ansi.org). ISO is the better known and more widely adopted of these three international/regional quality standards organizations, and has developed quality management principles through the latest ISO 9001-2000 transition that are more closely aligned with the core values of the Malcolm Baldrige Quality Award program (MBQA) (Kan, 2003). Other noted international/regional quality assessment providers include the non-profit autonomous European Organization for Quality (EOQ), the European Foundation for Quality Management (EFQM), and the World Excellence Council that includes other quality assessment bodies outside of the European Union that adhere to the guidelines and Quality Management Principles of the EFQM (www.efqm.org; www.eoq.org). However, US companies and businesses have most frequently depended on the Baldrige or ISO 9000 for quality assessment.

ISO is a private-sector international standardization organization that was constituted in 1947 from the union of the International Federation of the National Standardizing Associations (ISA) and the United Nations Standards Coordinating Committee. Headquartered in Geneva, Switzerland, the organization develops certification requirements that attest to a company’s

commitment to and adherence of quality process control standards for its products or services (www.iso.org). The current differences in the quality core principles/values between ISO 9001-2000 and the MBQA are not as distinct in content as they are on emphasis. The Malcolm Baldrige Quality Award program maintains a stronger emphasis on the 'results' and 'customer focus' of an organization, while ISO standards focus more on 'process improvement' (Kan, 2003). The Baldrige Core Values for business and education, ISO 9001 Principles, and the EFQM Concepts are depicted in Table 4 (p. 67). The EFQM standards are included in Table 4 solely in the interest of examining quality values and principles on a more global scale, and the Baldrige Education Values are included to illustrate the broader service reach of the MBQA.

The Baldrige Award and ISO 9001 certification are both initiated through an application process. Businesses that engage either program may elect to procure the services of outside consultants to provide guidance through the endeavor, although both programs offer instructive written material and opportunities for familiarization and training. Aside from application fees, training and education expenses, and possible third party consultant fees, are the difficult to assess time and labor costs associated with the investigative and exploratory work required of employees and staff to complete the application. The major determinant of costs rests in the starting position of the company, and whether or not the establishment of a quality system has to begin from the ground up. When examined through the Baldrige criteria, a company generally

transitions from the more primitive 'reacting to problems' mindset to a more comprehensive 'systemic improvement' orientation (Marton, 1997). A company

TABLE 4. Core Principles/Concepts/Values			
MBQA(Business) 2008	ISO 9001-2000	MBQA(Education) 2008	EFQM 2008
Core Values	Core Principles	Core Values	Fundamental Concepts
1. Visionary Leadership	1. Customer focus	1. Visionary Leadership	1. Results Orientation
2. Customer-driven excellence	2. Leadership	2. Learning-centered education	2. Customer Focus
3. Organizational and personal learning	3. Involvement of people	3. Organizational and personal learning	3. Leadership & Constancy of Purpose
4. Valuing workforce members and partners	4. Process approach	4. Valuing workforce members and partners	4. Management by Processes and Facts
5. Agility	5. System approach to management	5. Agility	5. People Development and Involvement
6. Focus on the future	6. Continual improvement	6. Focus on the future	6. Continuous Learning, Innovation and Improvement
7. Managing for innovation	7. Factual approach to decision making	7. Managing for innovation	7. Partnership Development
8. Management by fact	8. Mutually beneficial supplier relationships	8. Management by fact	8. Social Responsibility
9. Social responsibility		9. Social responsibility	
10. Focus on results		10. Focus on results and creating value	
11. Systems perspective		11. Systems perspective	

that has already traversed the Baldrige application process is better prepared in undertaking ISO 9000 certification efforts (Omachonu & Ross, 2004), and in like manner the ISO 9000 registration is a good starting point for businesses seeking to complete the Baldrige Award and/or associative self-evaluation process (<http://ts.nist.gov/standards/conformity/ir4721.cfm>). However, many companies would view the simultaneous or sequential engagement of both programs as a duplication of effort and cost prohibitive.

Between the two, the ISO program is far larger involving 157 countries, and from 1987 to 2004 conveying 670,399 certificates (www.iso.org). The Baldrige, conversely, is aimed at American enterprises and therein attracts appreciably fewer applications and through the rigorous application process bestows even fewer awards. It is difficult to assess the long-term durability of the Baldrige, in light of the apparent loss of interest in the program among manufacturing, service, and small business sectors. The waning of interest among these sectors is reflected in Table 5. However, the number of applications in recent years has increased somewhat due to the sustaining involvement from the “Education”, ‘Health Care’, and the more recently added “Non-Profit” sectors (Table 5). The NIST contends that participation in state, regional, and local quality program affiliations are increasing although the data to support this contention is not substantiated through information available from the organization’s web site (Table 5).

Yet for US educational institutions, the Baldrige framework is virtually unchallenged in providing an established process for self-evaluation and recognition, as the ISO 9001 educational standards remain in an underutilized if

TABLE 5. Baldrige Applications, 1988-2007
Source: http://www.quality.nist.gov/Word_files/2008_Baldrige_Program_FAQs.doc

Year	Mnfng	Service	Small Business	Education	Health Care	Non-Profit	TOTAL	State, Regional, and Local Applications*
1988	45	9	12	n/a	n/a	n/a	66	n/a
1989	23	6	11	n/a	n/a	n/a	40	n/a
1990	45	18	34	n/a	n/a	n/a	97	n/a
1991	38	21	47	n/a	n/a	n/a	106	217
1992	31	15	44	n/a	n/a	n/a	90	234
1993	32	13	31	n/a	n/a	n/a	76	433
1994	23	18	30	n/a	n/a	n/a	71	499
1995	18	10	19	n/a	n/a	n/a	47	621
1996	13	6	10	n/a	n/a	n/a	29	833
1997	9	7	10	n/a	n/a	n/a	26	1,000
1998	15	5	16	n/a	n/a	n/a	36	830
1999	4	11	12	16	9	n/a	52	1,015
2000	14	5	11	11	8	n/a	49	862
2001	7	4	8	10	8	n/a	37	609
2002	8	3	11	10	17	n/a	49	395
2003	10	8	12	19	19	n/a	68	437
2004	8	5	8	17	22	n/a	60	481
2005	1	6	8	16	33	n/a	64	635
2006	3	4	8	16	45	10	86	426
2007	2	4	7	16	42	13	84	243
TOTAL	349	178	349	131	203	23	1,233	9,770

not dormant state, kept on life support only through the insular effort of an ISO International Workshop Agreement (IWA) that adopted the existing eight Quality Management Principles (Table 4), with four 'customized-for-education' additions: creating learner value, focusing on social value, agility, and autonomy (Farrando, 2007). Generally, ISO 9001 certification is more closely associated with manufacturing and other profit motivated enterprises, while the MBQA also extends quality-systems assessment services to the public, education, health care, and non-profit sectors.

The impact of the Baldrige and other quality award/certification bodies should not be discounted as their reach has been considerable over the years, extending beyond national boundaries and across manufacturing and service sectors. Japan, through the auspices of the Japanese Union of Scientists and Engineers promotes the Deming Prize, named in honor of W. Edwards Deming. The Deming Prize is the oldest of the Quality Awards tracing its lineage back to 1951, and the purpose of the organization is to recognize individuals, groups, and businesses that continually deploy company-wide quality control (CWQC) based on statistical quality control (Izadi, Kashef, & Stadt, 1996). This award was made available to non-Japanese companies beginning in 1984 and has separate categories, one for companies, another for individuals (Japan only), and a third based on the application itself (www.juse.org.jp). All three award categories are based on Deming's 14 Points, usually take three to five years to

complete, and require a TQM Diagnosis as part of the application process (Izadi, Kashef, & Stadt, 1996; The Deming Prize Committee, 2009).

Another quality award deserving mention is the Shingo Prize named after Shigeo Shingo, the Japanese engineer and consultant who gained a reputation for promoting 'lean manufacturing'. These awards are directed by the College of Business at Utah State University and are divided into three divisions or types, business, research, and the public sector (<http://www.shingoprize.org>). The Shingo Prize is based on three 'Levels of Transformation' that direct an organization to be 'Principle-Driven' with emphases on the cultural enablers of leadership, ethics, and people development, 'System-Driven' with dependencies on structuring the use of quality tools into a systems context, and 'Tool-Driven' by using quality tools to derive problem-specific solutions. For an organization to be in contention for the Shingo Prize it must demonstrate that it has created a culture that supports quality-system development and deployment, allocates the resources and provides support for continuous improvement, engages systemic thinking and maintains constancy of purpose, and generates business results that yield quality, competitive, products or services on schedule through the efforts of a well trained, knowledgeable, and involved workforce (Shingo Prize for Operational Excellence, 2009).

The philosophical influences of Deming, Ishikawa, and Juran on the scholars and practitioners of QM and the institutions sponsoring quality assessment programs are readily discernible. The more commonly shared

attributes among the institutional quality assessment providers, as revealed in the business profiles of Table 4, are as follows: an overriding focus on meeting the needs of the customer, leadership commitment and involvement, management by fact/data, establishing and maintaining a systems perspective, promoting organizational learning and/or personal development, implementing continuous Improvement, promoting social responsibility, and establishing partnerships. These core values are similarly represented in the scholars' and practitioners' core values and principles summarized in Table 3. Integrating Table 3 with the more common attributes from the quality assessment awards and certification bodies listed in Table 4 yields the core concepts listed in Table 6. There are conspicuous similarities in respective core values/principles among

TABLE 6. Core Concepts: Summary Analysis of Quality Management Core Concepts From the Literature, Preeminent Quality Gurus, and Certification/Award-Granting Organizations

1. Customer-driven Focus
2. Emphasis on Leadership Involvement and Commitment
3. Emphasis on System-wide Continuous Improvement
4. Emphasis on Fact and/or Data-based Decision-making
5. Emphasis on Teamwork, Collaboration, and Partnerships
6. Emphasis on Stakeholder Involvement
7. Emphasis on Employee Education/learning/training
8. Emphasis on Establishing and Maintaining a Systems Perspective
9. Emphasis on Promoting Social Responsibility

the scholars, practitioners and quality assessment support institutions. However, there are no indications from the tables in this study which of the core values/principles are more likely to leverage the greatest impact on the successful implementation of Quality Management or the extent these values/principles are relationally interdependent. To accomplish this task, a theory of QM is needed along with complimentary research for verification.

Ontological, Epistemological, and Methodological Foundations of Quality Management

The purpose of this section is to explore the ontological, epistemological, and methodological influences on Quality Management, identify supportive and complimentary orientations, and examine worldviews and practices that contribute to Quality Management philosophy. The conceptualization of reality (ontological frameworks), the nature of knowledge (epistemological frameworks), and the manner in which knowledge is acquired, appropriated, and applied (methodological frameworks), determine how theory is developed, tested, and consumed (Guba & Lincoln, 1994). The epistemological dimension sifts through the distinctions between explicit and tacit knowledge, while the ontological dimension relates to the level of social interaction where the knowledge created by an individual is transformed and legitimized (Nonaka, 1994; Benavent, 2006). Metaphorically speaking, this section is not 'sewn' in the interest of revealing

every thread in the cloth, but to trace some of the stitching that holds Quality Management together. It is beyond the scope of this study to deliver a comprehensive treatise on all forms of management theory by discussing every branched derivative, or the contributions from all the philosophers, scholars, and experts that have been part of their respective development. Apropos, the primary aim of this section of the literary review is to reveal the supportive and complimentary ontological, epistemological, and methodological connections that lend form and substance to the QM philosophy.

Quality Management, depending on the structure or variety and the observer's perspective, may be described as a philosophy, paradigm, or method. Deming, in referring to Point #1 of his 14 Points, i.e. "Create constancy of purpose", chose to label his approach as a "philosophy" (Point #2) (Deming, 2002, p. 23), while some of his proponents coined the collectivity of ideas as a 'method' (Walton, 1986; Milakovich, 1995). Even when QM is sometimes reviewed as a philosophy, some scholars allege that it is driven by rational paradigms (Combe & Botschen, 2002), and TQM is sometimes expressed as a management paradigm rather than a management philosophy (Amsden, Ferratt, and Amsden 1996; Foster, 2001; Berman, 2006). Regardless of the descriptor, the assemblages of ideas binding Quality Management together are manifested as 'core concepts' (i.e. Table 6) or 'truths' that serve to provide form and function to the general concept.

Truth, as Lincoln and Guba would argue and in mirroring the musings of Julienne Ford (Ford, 1975), may be classified as one of four types: (1). empirical truth in the form of testable hypothesis or predicate, (2). logical truth founded in some logical or mathematical deduction, (3). ethical truth based on some professional code of conduct, and (4). metaphysical truth which is truth taken at 'face value' without a corresponding relationship with the other three 'types of truth' or the epistemological assets attributable to them (1985). Metaphysical 'truths' lie at the heart of philosophical debate and Lincoln and Guba, in borrowing from William L. Reese, state that metaphysical beliefs can cluster together to form a "system of ideas" (1985, p. 15), that "either give us some judgment about the nature of reality, or a reason why we must be content with knowing something less than the nature of reality, along with a method of taking hold of whatever can be known" (Reese, 1980, p. 353; Reese, 1999, p. 476). These "systems of ideas" may form what is known as a 'paradigm' which Lincoln and Guba define as distillations of reality which cannot be proven (1985). However, Lincoln and Guba's concept of 'paradigm' is but one among many of how the concept may be visualized.

Thomas S. Kuhn is generally credited for popularizing the 'paradigm' expression in *The Structure of Scientific Revolutions*. Using the historiography of scientific discoveries, Kuhn defined the expression in terms of an alternating series of events characterized by periods of disequilibrium and chaos wherein old ideas of practice fall short in describing phenomena and forecasting

outcomes, followed by the discovery and appropriation of new insights, terminologies, and epistemologies which produce new research traditions and models of practice, that when viewed as a cycle suggests the transition to new ways of solving problems, from an old paradigm to the new, and the resultant creation of a 'paradigm shift' (Kuhn, 1970). Where Lincoln and Guba define 'paradigm' as a 'worldview', Kuhn aggressively relates the expression to 'practice'. From Kuhn's perspective, a paradigm is "a specific example of actual scientific practice which serves as a model for a research community and implicitly defines the legitimate problems and methods of research for successive generations of practitioners" (King, 1971, p. 26), and "governs...not a subject matter but rather a group of practitioners" (Kuhn, 1970, p. 180). The American Heritage Dictionary presents yet another definition of 'paradigm', "The conceptual framework that permits the explanation and investigation of phenomena or the objects of study" (Costello, 1997, p. 989).

In the preceding definitions, which are used principally as exemplars, paradigm can be used to express a worldview, a system of practice, or a conceptual framework, any of which may be applicable, depending on the context, purpose(s), and philosophical leanings of the author using the expression. Reconciling the differences between these perspectives is problematic. Post-modern discourse, used in the more general sense of referring to postmodernism, poststructuralism, and 'naturalistic' constructivism, begs the use of 'worldview' perspectives; positivism/rationalism and other

kindred orientations such as Kuhn's perspective of inquiry, seem to fit more propitiously with the 'conceptual framework' and 'systems of practice' models, particularly if one is trying to reason with members of the empirical or 'hard' sciences.

The three 'fathers' of Quality Management all had formal training in the 'hard' or physical sciences, Deming in physics and mathematics/statistics (Gabor, 1990), Ishikawa in chemistry (Kondo, 1994), Juran in engineering (Juran, 1995). Physics and chemistry, with their predilection for mathematics, are generally considered as quantitative or 'hard' sciences, while the social sciences are often viewed as 'soft', expressed "less with pejorative intent than to signal their (putative) imprecision and lack of dependability" (Guba & Lincoln, 1994, p. 106). The physical sciences draw their philosophical underpinnings from the scientific method and are rooted in the positivistic and rationalistic paradigms emanating from and through the modernist tradition. Scholars often trace the origins of the rationalistic paradigm from (albeit down a somewhat tortuous path) Immanuel Kant and the Great Enlightenment to early and mid 20th century rationalism, and in similar fashion associate the French Philosopher Auguste Comte with the advent of positivism (King, 1971; Mill, 1973). However, there is considerable debate regarding the advent of positivism, and some scholars attach the philosophy to a family of philosophies arising out of France and Germany during the 18th and 19th centuries (Reese, 1999) while others see a direct lineage to Newtonian physics (Wolf, 1989). Regardless of the path,

positivism/rationalism served as an undergirding support structure for 20th century scientific disciplines and many of the 20th century management philosophies.

Twentieth century sociologists such as Daniel Bell and Jürgen Habermas defended the positivistic tradition through their own individual interpretations and made efforts to adapt positivistic epistemology to sociology (Cooper & Burrell, 1988), while others such as Talcott Parsons, Robert K. Merton and physicist Thomas S. Kuhn debated the ordination of scientific theory and practice (King, 1971). The philosophers/scientists/sociologists that specialized in the study and application of positivism/rationalism, were not always in agreement, often differing in the primacy between knowledge and practice, and whether or not scientific laws exist as inviolate '*a priori*' principles or as principles '*de jure*', subject to evolving decisions from the 'courts' of the scientific disciplines (King, 1971).

There were other perturbations within the positivistic communities during the early to mid 20th century, such as neo-positivism/logical positivism which was introduced by the 'Vienna Circle' of Moritz Schlick, Rudolf Carnap, Olga Hahn-Neurath, and E. Schrödinger (Reese, 1999; Tseng, 2003), that made attempts to reduce all the sciences to physics (Shavelson & Towne, 2002), and post-positivism/post-empiricism which is more commonly associated with psychologist/philosopher Karl Popper. Popper introduced the notion that "'falsifiability' is a more reliable criterion of both meaning and truth than is

verifiability” (Reese, 1999, p. 594), suggesting that the lack of negative instances bolsters confidence in the associative conjectures and/or refutations used to frame a hypothesis, an approach that became popularized as the ‘null hypothesis’ (Fox, 1995). Although post-positivism may have differed in the detailed perspectives regarding theory testing and the extent results are generalizable (amid growing efforts to accommodate the disciplines of anthropology, political science, psychology, and sociology), it remained relatively true to a set of core principles and values that generally supported hypothetico-deductive reasoning (Guba & Lincoln, 1994).

Positivism is characteristic of the empirical disciplines and consistent with the epistemology of scientific inquiry. Positivist researchers and practitioners develop knowledge by collecting data on observable, measurable phenomenon followed by some form of data analysis (Gall, Borg, & Gall, 1996). The Rationalism paradigm is often used interchangeably with Positivism (King, 1971) and “assumes that there is a single reality onto which inquiry can converge, and that reality is separable or fragmentable (sic) into independently manipulatable (sic) parts commonly called variables” (Guba, 1981, p. 78). The rationalistic approach is nomothetic in nature generally seeking to explicate scientific law or extrude scientific principle, and subsequently focuses on the similarities between objects of research. Rationalistic practitioners prefer the use of ‘*a priori*’ theory in the tradition of hypothesis testing, lean heavily towards quantitative methodologies, emphasize rigor or internal validity in their data analysis, assume

that 'truth statements' are relatively free of context, and strive to establish and maintain independence between themselves and the objects of their research (Guba, 1981).

Positivism as previously noted, branched in several directions, sometimes straining to respond to the 'social sciences' and the mounting criticisms from burgeoning critical theory camps (e.g., Marxism, feminism, materialism, participatory inquiry) (Lincoln & Guba, 1985). According to Lincoln and Guba, the post-positivism branch made some accommodation to these criticisms by adopting an ontological posture that moved somewhat away from that of viewing reality as "apprehendable" (sic) and supported by "immutable natural laws and mechanisms", to one that embraced a more eclectic perspective wherein reality is viewed as imperfectly "apprehendable" (sic) and subject to the fallibilities of human measurement" (1985, p. 109). Epistemologically, positivists treat inquiry from the dualist/objectivist perspective, such that the investigator and the objects of investigation are separable, whereas post-positivists hold that the separation of researcher and the objects of research are difficult to maintain and generally unattainable (Lincoln & Guba, 1985).

These adjustments of ontological and epistemological perspectives to accommodate the social sciences, forced a corresponding shift in methodology. Methodologically, post-positivists are open to using multiple sources of data/information or triangulation as a way of "falsifying" rather than "verifying" hypotheses and are generally amenable to using qualitative methodologies to

support their research (Lincoln & Guba, 1985). Regardless of these efforts, post-positivism, at least from Lincoln and Guba's perspective, remains in many other ways akin to positivism in that they both possess an affinity for prediction and control, a propensity for attempting to form generalizations and deduce cause and effect relationships, stress similar benchmark criteria, values, and ethics, view the role of scientists as informers (1985), and demonstrate a tendency to promote a reductionist perspective that "there exists or will be found to exist, some common rational structure to which all questions of difference can be referred for resolution" (p. 115). Post-positivism, as least insofar as Lincoln and Guba were concerned, has overtaken positivism in its breadth of influence in university research (Guba & Lincoln, 1994), a claim that must be mediated and in some respects suspended, when examining the growth and domination of the various forms of critical theory in the humanities and the social sciences (Gross & Levitt, 1994).

While Quality Management is decidedly positivistic in its epistemology (Lillrank, 2002, Kujala & Lillrank, 2004), and dependent to a large extent on the scientific method (Joiner & Scholtes, 1988; Box, 1997) and statistical methodologies (Hackman & Wageman, 1995), it has matured over time to reveal characteristics and nuances that transcend the positivistic/rationalistic traditions. Although the focus on data-based or fact-driven analysis and decision-making draw ostensibly from the rationalistic paradigm, the other attributes of Quality Management, as noted by Marchese, appear just as convincingly wrought from

systems theory, humanistic and industrial psychology, management theory, and human-resource and organizational development, which when viewed individually, entertain ontologically and epistemologically diverse perspectives (1993). Many of the criticisms directed towards Quality Management center around that portion of the philosophy which does in fact embrace quantitative analyses of system processes and data/fact driven decision-making, and in this particular attribution the paradigm obviously borrows from the positivistic tradition. However, quality management “encompasses many management practices and prescriptions that have comprised the organizational literature for the past several decades” (Druckman, Singer, & Van Cott, p. 39), and the holistic nature of the philosophy renders it difficult to classify. Attempts to disparage Quality Management as a captive minion dominated solely by the dictates of positivism, post-positivism, or rationalism is arguably inconsistent with the broad collection of narratives that have attempted to define it. The divergence of QM from a strict, scientific-management-only perspective to more ‘softer’ and even ‘partial’ approaches is noted in the quality management literature (Fok, Hartman, Patti, & Razak, 2000; Kekule, Fecikova, & Kitaigorodskaja, 2004).

The core principles of quality management can also be found in organizations that do not outwardly or consciously espouse the philosophy. Thomas C. Powell (1995), following an exhaustive review of the quality management literature, and after receiving TQM training and consultation with

TQM authorities, developed a survey for assessing the presence of TQM core principles. The instrument was piloted, statistically validated, and subsequently refined and administered according to Dillman's (1978) Total Design Method.

The instrument was designed to test the extent that the following TQM attributes were present in participating organizations, using a six point Likert scale:

1. Executive commitment: a near-evangelical, unwavering, long-term commitment by top managers to the philosophy, usually under a name something like Total Quality Management, Continuous Improvement (CI), or Quality Improvement (QI).
2. Adopting the philosophy: using tools like the mission statement, and themes or slogans.
3. Closer to customers: determining customers' (both inside and outside the firm) requirements, then meeting those requirements no matter what it takes.
4. Closer to suppliers: working closely and cooperatively with suppliers (often sole-sourcing key components), ensuring they provide inputs that conform to customers' end-use requirements.
5. Benchmarking: researching and observing best competitive practices.
6. Training: usually includes TQM principles, team skills, and problem-solving.
7. Open organization: lean staff, empowered work teams, open horizontal communications, and a relaxation of traditional hierarchy.
8. Employee empowerment: increased employee involvement in design and planning, and greater autonomy in decision-making.
9. Zero-defects mentality: a system in place to spot defects as they occur, rather than through inspection and rework.
10. Flexible manufacturing: (applicable only to manufacturers) can include just-in-time inventory, cellular manufacturing, design for manufacturability (DFM), statistical process control (SPC), and design of experiments (DOE).
11. Process Improvement: reduced waste and cycle times in all areas through cross-departmental process analysis.
12. Measurement: goal-orientation and zeal for data, with constant performance measurement, often using statistical methods. (Powell, 1995, p. 19)

From 24 manufacturing firms, 15 service firms, and 15 non-TQM firms, the results demonstrated some context specificity (e.g., the manufacturing firms demonstrated a much stronger positive correlation to the establishment and maintenance of close supplier relationships). However, the highest positive

correlations came from executive commitment, promoting and maintaining an open organizational structure, and employee empowerment, which were just as highly correlative in the non-TQM firms; lower but significant correlations were associated with the traditional QM constructs of benchmarking, training, process improvement, flexible manufacturing, and improved measurement. Powell noted in the limitations of the study, the results “do not strictly prove that TQM caused performance to increase, but only that an association existed” (1995, pp. 31, 32). The results of this study indicate that some of the QM attributes work regardless of commitment to TQM or lack thereof, across a wide range of manufacturing and service industries and suggests that ‘partial Quality Management’ may work in some industrial and service sectors, despite objections to the contrary from many QM consultants and purists (Yong & Wilkinson, 1999). Similarly, and supporting Powell’s research, Prajogo and Brown found no significant differences in performance between Australian firms that adopted formal TQM programs versus those that implemented isolated TQM practices, as demonstrated by a validated and reliability tested instrument measuring the six constructs of leadership, strategic planning, customer focus, information and analysis, people management, process management, and product quality (2004).

Quality Management is generally viewed to be consistent with prevailing management theory regarding the need for top management involvement and commitment, employee involvement, the use of teams, education and training,

and career management (Dean & Bowen, 1994). However, management scholars have failed to provide research specifically tailored to address why some QM efforts are successful while others fail (Hackman & Wageman, 1995; (Druckman, Singer, & Van Cott, 1997)), and the need for theory development for QM is a recurrent theme in the management literature (Saraph, Benson, & Schroeder 1989; Anderson, Rungtusanatham, & Schroeder, 1994; Flynn, Schroeder, and Sakakibara, 1994; Dean & Bowen, 1995; Ahire, Golhar, & Waller 1996, Black, & Porter, 1996; Leonard & McAdam, 2000). TQM insofar as the literature, the gurus, and consultants have tried to define it, can appear as a change program, a set of management principles, a combination of values, an evaluation process, a type of organizational structure, or a combination of these descriptors, which begs the following questions:

1. What is it?
2. What are the key dimensions?
3. How are the key dimensions related?
4. Are TQM principles universal or are they dependent on other factors?
5. What is new about the concept and how does it differentiate itself from research-based social science principles?
6. What isn't TQM?
7. What is the role of timing in implementing TQM?
8. What is its role in relation to and impact on organizational effectiveness?
9. How is it measured?
10. What are the policy implications? (Druckman, Singer, & Van Cott, 1997)

While these are relevant questions, it is important to understand that they may never be answered, absent underlying theory to define the QM concept and the associative key dimensions or constructs that provide structure, utility, and predictive potential.

Sitkin et al point out, "Much of the TQM research has focused on descriptions of practice rather than on (formal) theory development which is of use to managers and scholars" (1994, p. 556). Kujala and Lillrank contend that TQM remains poorly defined with weak scientific foundations (2004). Powell indicates that most studies about QM are presented by consultants or entities that have a vested interest in illustrating successful practice while ignoring the failures (1995). Hackman & Wageman conclude that research in the area of 'Total Quality Management' is hampered with serious statistical measurement problems because (1). There are no standard indices of success that garner universal agreement, (2). Exogenous disturbances may corrupt the data, and (3). It's difficult to decide how long after an intervention one should wait before analyzing outcome measures (1995). Furthermore, attributions assigned to successful quality interventions may have been influenced by other temporal events, the Hawthorne effect, or the selection of an organizational unit that is so mired in inefficiencies that any intervention would have generated favorable results (Hackman & Wageman, 1995). Hackman & Wageman conclude that research on the effects of TQM have focused on global outcomes, and while strongly positive, are based mostly on case reports and practice rather than on research designs that include manipulation checks and measurements of process criteria (1995). While quantitative inquiry appears to prevail in the sheer number of citations listed in the literature, there remains considerable criticism regarding the rigor, controls, and measurements employed.

Efforts were made by Saraph, Benson, & Schroeder (1989), Flynn, Schroeder, and Sakakibara (1994), Ahire, Golhar, & Waller (1996), and Black & Porter (1996), to resolve some of these issues, in the development of surveys to measure the underlying dimensions or constructs. These instruments were derived either from the Baldrige Criteria or the Quality Management Literature and were tested for construct and empirical validity, and the scales refined using Chronbach Alpha reliability measurements. However, and as depicted in Table 7, the scales vary, by description and by items, are arguably inconsistent, in some instances refer to functions or departments that are nonexistent in smaller organizations, and all four instruments were developed for and tested in business environments suggesting transferability issues with regard to their adaptability and conformity to educational settings. Despite the shortcomings of these instruments, they have assisted other researchers in trying to determine the fundamental constructs of Quality Management.

Fok, Hartman, Patti, and Razek (1999) conducted exploratory research to examine the 'human factors' involved with QM implementation. Their study, from a population of 85 accountants across a wide variety of organizations in a large Southern US city, sought to examine the relationships between QM organizational maturity and worker perceptions expressed in job satisfaction, equity of rewards, psychological needs, and work-related employee benevolence. Respondents completed an extensive questionnaire battery that

TABLE 7. QM/TQM “Management Constructs” Surveys			
Ahire, Golhar, & Waller, 1996	Black & Porter, 1996	Flynn, Schroeder, & Sakakibara, 1994	Saraph, Benson, and Schroeder, 1989
N=371	N=204	N=716	N=62
12 scales, (60) items	7 scales (25) items	7 scales (14) items	8 scales (66) items
Quality Literature Based	Baldrige Based	Quality Literature Based	Quality Literature Based
1. Top Management Commitment(6)	1. People and Customer Management (3)	1. Top Management Support (2)	1. Management Leadership (13)
2. Supplier Quality Management (6)	2. Supplier Partnerships (3)	2. Quality Information (2)	2. Role of Quality Department (5)
3. Supplier Performance (6)	3. Communication of Improvement Information (4)	3. Process Management (2)	3. Training (8)
4. Customer Focus (4)	4. Customer Satisfaction Orientation (4)	4. Product Design (3)	4. Product Design (6)
5. SPC (Statistical Process Control) Usage (4)	5. External Interface Management (3)	5. Workforce Management (3)	5. Supplier Quality Management (8)
6. Benchmarking (5)	6. Strategic Quality Management (6)	6. Supplier Involvement/relationship (1)	6. Process Management (10)
7. Internal Quality Information Usage (6)	7. Teamwork Structures for Improvement (2)	7. Customer Involvement/interaction (1)	7. Quality Data Reporting (8)
8. Employee Involvement (3)	8. Operational Quality Planning (2)		8. Employee Relations (8)
9. Employee Training (5)	9. Quality Improvement Measurement Systems (3)		
10. Design Quality Management (6)	10. Corporate Quality Culture (2)		
11. Employee Empowerment (5)			
12. Product Quality (4)			

borrowed from a revised version of the Ahire, et al. instrument rebadged as a 'TQM Maturity' measurement, and a revised version of Black & Porter's

questionnaire to test for the overall reaction of the respondents to QM. These two metrics were combined with the Equity Sensibility instrument (Huseman, Hatfield, and Miles, 1985), the Organizational Citizenship Behavior (OCB) instrument (Smith, Organ, & Near, 1983), and a climate instrument developed by Fok et al. from a previous study. The results indicated that companies with a high TQM maturity are perceived to be open, cooperative, team-oriented, personal, participative, quality-oriented, innovation promoting, and proactive. The questionnaires also indicated that “individuals in organizations with higher levels of TQM maturity are more positive in their perceptions that the organization is performing well, that morale is high, that TQM has affected the job positively, that the organization's financial performance is strong, and that their co-workers are happy” (Fok et al, 1999, p. 724). From an individual perspective, results of the study also suggest that employees preferring more ‘routine’ work or who shun cooperative ‘citizenship’ behavior may resist the quality paradigm. Although the modified instruments were reliability tested, there is no mention of transferability potential for the ‘combined instrument’ approach, or to what extent possible respondent survey fatigue may have influenced the results. This study does highlight the gradual migration towards a more eclectic view of QM that moves beyond the principles of scientific management. The issue thus arises, that perhaps a new paradigm of analysis is needed to fit more congruently with what Quality management must become to remain relevant to

evolving management theory, global forces, societal pressures, and cultural change.

Quality Management/Continuous Improvement as Viewed from the Culture Theory Tradition: Artifacts, Espoused Values, Beliefs, and Underlying Assumptions

Generally speaking, QM as a philosophical paradigm emphasizes the importance of the following values: a strong and abiding interest in meeting the needs of the customer, leadership commitment, full participation of all members in an organization, a focus on optimizing processes, continuous improvement, and an emphasis on accurate and ongoing measurement of the inputs and outputs of the system (Lagrosen, 2002). The extent, to which individual and group behavior are impacted by the Continuous Improvement philosophy and manifested through sustainable cultural change, is a fertile area for research.

The topic of culture is made more relevant as organizations, in order to compete more effectively in the global economy, strive to sustain economic and institutional growth, generate increasingly superior goods or services, and are subsequently forced to examine how people think, feel, value, and act, as guided by ideas, meanings, and beliefs (Alvesson, 2002). The issue of culture and how it contributes to organizational effectiveness and management philosophy has garnered considerable attention and there appears to be a

growing awareness on the part of practitioners that causal and crucial links exist between management philosophy and organizational culture (Alvesson, 2002; Kekule, Fecikova, & Kitaigorodskaja, 2004). As stated by the former CEO of CompUSA, James Halpin, "Companies win or lose based on the cultures they create" (Puffer, 1999, p. 29). Thus, this study focuses on examining the relationships between quality management philosophy and concomitant organizational culture.

The history of studying 'culture' has attracted an array of perspectives and a review of the literature by Kroeber and Kluckhohn (1952) generated over 150 definitions for the term (as referenced by Detert, et al, 2001). The concept of culture as it relates to organizations is borrowed largely from the field of anthropology. Just as there is no consensus regarding the meaning of 'culture', there appears to be an equally broad and varied perspective through which organizational culture studies are approached based on the ontological viewpoint of social reality appropriated by the researcher (Smircich, 1983). Any cultural study needs to be based on a definition of culture, but there are no commonly agreed on definitions (Marton, 1997; Hofstede et al, 1990; Smircich, 1983; Gruenert, 2000). However, Hofstede et al contend most researchers would agree that culture constructs possess the characteristics of being holistic, historically determined, related to anthropological concepts, socially constructed, and difficult to change (1990). At the most general conceptual level, researchers

seem to agree that culture can be thought of as a set of cognitions shared by members of a social unit (Smircich, 1983).

The range of interests and epistemological frameworks from which to study culture create analyses issues when related to organizational effectiveness and how effectiveness is measured. Because school reform can and often does involve cultural change, the manner in which an existing culture responds to an imported philosophy for improvement becomes paramount to theorists and practitioners alike.

A general understanding of culture is grasped by examining a range of conceptualizations expounded by noted scholars and organizational theorists.

Culture is the sum total of ways of living (e.g. values, customs, rituals, and beliefs) that are built up by a group of human beings and that are transmitted from one generation to another from current members to newly admitted members (Gall, Borg, & Gall, 1996, p. 607).

An organization's culture is reflected by what is valued, the dominant leadership styles, the language and symbols, the procedures and routines, and the definitions of success that make an organization unique (Cameron & Quinn, 2006, p. 17).

School culture is conceptualized as the common set of beliefs, values and practices held by members of the school community about the way things are done (Edwards, Green, & Lyons, 1996, p. 1).

Culture consists of the stable underlying social meanings that shape beliefs and behavior over time (Deal & Peterson, 1999, p. 7).

The core of culture is formed by values, in the sense of broad, nonspecific feelings of good and evil, beautiful and ugly, normal and abnormal, rational and irrational – feelings that are often unconscious and rarely discussable, that cannot be observed as such but are manifested in alternatives of behavior (Hofstede et al, 1990, p. 291).

Culture is "A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has

worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, 1992, p. 12)

Common to these definitions is the inclusion of or reference to the concept of values; it is a predominant term in many of the various descriptions of culture. If culture is a function of an organization’s values, then researchers and practitioners alike, must wrestle with how values originate and how they are maintained, promulgated, and transferred.

If a value is associated with a process that yields good results, the process of being cognitively transformed begins and eventually becomes a shared assumption. Values can exist at both the subconscious and conscious levels. Values at the conscious level may predict much of the behavior that can be observed at the ‘artifact’ level, but if they are not based on prior learning, they may reflect more what a person says, rather than what he does (Argyris & Schön, 1974, Schein, 1992). If, on the other hand, values are acquired through prior learning and reinforced through successful repetitive practice such that reliance on them become reflexive, they become what is known as basic underlying assumptions and represent the deepest level of culture (Schein, 1992). Basic assumptions, like Argyris & Schön’s ‘theories-in-use’ “tend to be those we neither confront nor debate and hence become extremely difficult to change” (Schein, 1992, p. 22). Conversely, the shallowest manifestations of culture reside in the visible, the physical, the ‘things’ of an organization, and are often referred to as ‘artifacts’.

Artifacts are often the outward physical manifestations of values and beliefs. Artifacts include the material objects and patterns that communicate an organization's beliefs, values, assumptions, and ways of doing things, often represented through various physical structures, organizational processes, language, and symbolism, e.g. physical environment, rituals and ceremonies, mission statements, clichés, history and traditions (Ott, 1989; Schein, 1992; Deal & Peterson, 1999). This definition suggests that cultural artifacts exist in the realm of material objects and are often the progeny of social and ideological constructs. The term culture, relates to what is learned and what one needs to know to meet the expectations of others, while cultural artifacts represent the material manifestations of what is learned (Goodenough, 1981). On the surface, it would appear that the identification of artifacts and how they relate to a particular culture is a relatively straightforward endeavor.

When discussing beliefs or personal values, it is not uncommon for the members of an organization to make reference to what they consider to be an associative material byproduct. They may also refer to an artifact in isolation, with no hint of origin or explanation of why it is important or relevant. Some artifacts are the product of multiple values and beliefs; others are orphaned products of past regimes or failed strategies that linger for no apparent reason. Or an artifact may be spawned by state or federal governmental directives that may or may not reflect the core values and beliefs of the local culture. Even though artifacts may be classified as the "surface" phenomena of an

organization and thus more easily observable, they are often the most difficult to interpret (Schein, 1992).

Cultural artifacts, once formed, may become a model for the creation of other artifacts. Quoting Goodenough, "A striking utterance gives rise to a cliché...the teaching of a prophet is converted into an ethical standard" (1981, p. 51). It is important to understand the feedback relationship between a culture and its artifacts without compromising the distinction between them (Goodenough, 1981). Artifacts frequently mirror the underlying assumptions and beliefs that many rank and file members of the organization value and consider relevant. However, research regarding culture, quality management, and education, as a nexus for study has been few in number and the subject of growing scholarly debate.

The research methodologies and associative shortcomings regarding studies of 'quality management' and culture are chronicled in the social science and management literature. An overview is revealing. For instance, Alvesson and Willmott (1996) posit that most management research is based on deductive theory testing and positivistic research methodologies, which fail to give deep insights and provide rich data into quality management practice (as cited in Leonard & McAdam, 2000). Hoy and Miskel state that good contemporary research on culture is scarce and call for qualitative studies and thick description to map the basic assumptions and common values of the cultures of schools (2001). Research by Firestone and Louis (1999) indicate that the use of

organizational culture as a research construct in education is diminished by limited empirical work and theoretical development (as cited by Detert et al, 2001).

Likewise, research seeking to develop QM theory based on a rich understanding of both socio-political and technical issues is sparse (Leonard & McAdam, 2000) and there are relatively few studies at the interface between culture and quality management (Lagrosen, 2002). Detert et al state that “the importance of culture in the prediction of successful quality management practice is subject to limited empirical verification” (2001). In summary, the literature suggests that quantitative research on Quality Management is too heavily concentrated on practice and limited in methodological control, while qualitative research as reflected in ethnographic and phenomenological study of culture and quality management practice, remains relatively unexplored. Arguably, the literature suggests the most obvious shortcoming of meaningful research at both quantitative and qualitative levels, occurs at the juncture of culture theory, quality management philosophy, and educational practice (Detert, et al., 2001)

In order to move beyond the quagmire created by ontological, methodological, and epistemological conflict, Detert, et al, recommend that inquiry regarding quality management and culture begin with a commonly recognized set of core values that underpin the quality paradigm (2001). “Values may be defined as broad tendencies that prompt individuals and groups to prefer

one state over another” (Lagrosen, 2002), internalized normative beliefs that guide behavior (Rokeach, 1973), and social constructs that capture the imagination and form the soul of the organization’s culture (Deal & Kennedy, 2000). Enz defines values as the beliefs held by an individual or group that determine the ends, means, actions, and objectives that should be identified in running an organization (1988).

Detert’s research, gleaned from analyzing the quality literature, the Baldrige Criteria, and deriving consensus among quality experts using Nominal Group Technique (NGT) (2001), suggests that nine ‘Core Values’ are present in successful quality-based schools and likewise lists nine corresponding negative manifestations for each (Table 8). These proposed constructs were philosophically in alignment with the confirmatory purposes underlying this dissertation and are subsequently pursued and adapted/modified for use in Chapter IV. Detert, Schroeder, and Cudeck (2003), refined the above construct schemata through three iterative questionnaire field tests, the first with 208 secondary teacher respondents across 7 states and 8 school districts, the second from K-12 teachers representing 16 schools, and the third from 36 different campuses across five states and seven school districts. The third iteration produced 1740 useable returns and included two additional referent fields for each question, reflecting ‘WHAT ARE’ and ‘WHAT SHOULD BE’ realms to examine the espoused and underlying beliefs. The schools in this

'third' iteration ranged from suburban schools of over 2500 students to rural schools with fewer than 500 and accumulatively represented the overall demography of the US population. After conducting factor loading analyses and examining the instrument for inter-rater reliability, the first eight of the constructs

TABLE 8. Quality Core Values and Corresponding Opposites (Detert, Louis, and Schroeder, 2001)	
Value 1: A shared vision and shared goals among faculty, staff and administrators are critical for school success.	Opposite: Successful schools respect the right of individuals to establish their own vision and goals without regard for higher levels of goals which are often ambiguous and difficult to interpret.
Value 2: Educational needs should be determined primarily by parents, community groups, students, and other stakeholders.	Opposite: Educational experts should make the important educational decisions.
Value 3: Improving education requires a long-term commitment.	Opposite: Present pressures – the students in a school and the immediate external demands are most important; the future is too uncertain to plan for or worry about.
Value 4: A school should strive to make continuous changes to improve education.	Opposite: Schools should be conservative about making changes.
Value 5: Teachers should be active in improving the overall school operation.	Opposite: Overall school operations should be left to administrators and a few teacher-leaders.
Value 6: Collaboration is necessary for an effective school.	Opposite: Professional autonomy with a minimum of cooperation is key to school effectiveness.
Value 7: Decision-making should rely on factual information.	Opposite: Decision-making should rely on personal, professional experience.
Value 8: Quality problems are caused by poor systems and processes, not by teachers.	Opposite: The cause of most problems is human error.
Value 9: Quality can be improved with the existing resources.	Opposite: We are doing the best we can with existing resources.

loaded consistently for both 'WHAT ARE' and 'WHAT SHOULD BE' realms, with the ninth, pertaining to the use of existing resources, not loading as acceptably as the others. The results of the survey iterations and validation protocols for what is now known as the School Quality Management Culture Survey (SQMCS) were published in the March issue of the *Journal of Operations Management*, 2003. The purported strength of the instrument and what makes it unique, is its emphasis on uncovering the variance between 'what we say' and 'what we do' with respect to QM philosophy and practice, which as an underlying construct, reflects an application of the 'theory in practice' or 'theory in use' concept originated by Argyris & Schön (Argyris & Schön, 1974; Argyris, & Schön, 1996; Detert, Louis, & Schroeder, 2001; Detert, Schroeder, & Cudeck, 2003). The one significant design limitation of the SQMCS (or strength, depending on the research goal of the investigator), rests in its respective attachment to teachers, at the expense of not accommodating school administrators and other school support personnel. And finally, Detert, Schroeder, and Cudeck experienced difficulty in statistically validating Core Value #9, "the estimates for the ninth factor – that attempting to assess 'Quality at the Same Cost'...were unstable (p. 319)...the results consistently suggest we have failed at this stage to find multiple items representing this idea (2003, p. 325).

The intersection of scholarly research with QM philosophy and practice, culture theory, and educational practice, is relatively sparse and the supposition that an organization's culture can predict the success or failure of QM has scant

if any empirical or theoretical verification (Detert, Louis, & Schroeder, 2001). A search of the ProQuest Dissertations database revealed over 2,000 doctoral studies that addressed one or two of three indices (QM philosophy/practice, culture, and public school education/practice). The second search filtered out twenty-nine dissertations that related to either education and quality management or education and culture. All 29 of the dissertations were examined and only two addressed all three indices in a manner that could contribute to this study.

Bruner's 1997 case study of six Florida elementary schools used both quantitative and qualitative methodologies, to identify themes, patterns, and stages in the transformation of school work cultures, as manifested in low and high performing schools. The quantitative portion of her study consisted of the disaggregation and systematic matching of existing data from two different self-assessment questionnaires of participating schools, the Education Quality Benchmark System (EQBS) which consisted of 7 scales and 48 items, with predefined item descriptions (Snyder, Acker-Hocevar, & Snyder, 1994; Bruner, 1997). The School Work Culture Profile (SWCP) contained two parts; Part 1 consisted of 60 items and used a 5 point Likert scale, and Part 2 contained a demographic profile and job satisfaction related questions (Snyder & Anderson, 1986, Bruner, 1997). The EQBS in the quantitative portion of the study also provided the framework for the qualitative interviews, and involved principals from three low and three high performing schools based on the seven scales

under the EQBS: visionary leadership, strategic planning, systems thinking, information systems, human resource development, quality programs and services, and customer success and satisfaction. The quantitative and qualitative methods served as reciprocal triangulation devices and revealed substantial differences between the strategies and practices of low performing and high performing elementary schools. The reported results were illuminating.

1. Visionary Leadership (5 items) – The principals from low-performing (LP) schools were more focused on school environment, and teacher training; their vision did not address success for all students, activities were not tied to goals, and the focus was more on being managers of change rather than participants in finding alternative solutions. The high-performing (HP) principals viewed everyone in the system as learners and the school as a community of learners; their focus was on student achievement and all activities were addressed to this end.
2. Strategic Planning (8 items) – LP principals used needs assessments minimally, and focused on material resources and training and did not express their goals with regard to student achievement. The HP principals talked about improving student performances in reading and math, emphasized standards of achievement, and continuously monitored progress. Also, they were involved with some form of community input in planning, and supported and engaged in strategies to realign strategies to improve student achievement.
3. Systems Thinking and Action (13 items) – the LP schools had the same goals for meetings as the HP schools, i.e. the establishment of interdependency, but had no formal way of relaying the discussions and decisions to the constituencies represented at the meetings. HP schools articulated and communicate vision, planning and activities, whether regarding curriculum and instruction information or sharing new knowledge and improvement processes, and they worked diligently in communicating with all staff to connect all stakeholders into a collective pattern for a common purpose.
4. Information Systems (7 items) - LP and HP principals relied on state supplied data, but LP principals did not discuss using the data to improve student group or individual achievement. HP principals tend also to use other locally derived measures of achievement and student achievement information was examined by relevant stakeholders for each student grade level and for the entire school.
5. Human Resource Development (9 items)– LP schools were prone to use “canned” training programs with little coherence in their training agendas and gave no indication of their involvement in the training of staff except to

- appoint or assign responsibilities. HP principals actively promote the use of staff and teachers as trainers with an emphasis on sharing knowledge.
6. Quality Programs and Services (3 items) – LP principals monitored teachers and implemented “canned” strategies. The information the LP schools gathered did not lead them to question why they are doing what they are doing. The HP principals were results oriented. They monitored students’ learning and assessed programs and services using a variety of inputs. HP principals sought to replicate success rather than dwell on failure.
 7. Customer Success and Satisfaction (3 items) – LP schools gathered data but gave no indication that they analyzed it to further student outcomes or school improvement. Information gathered by the state and district was reviewed, not analyzed. There was no evidence that these schools worked to generate data but simply relied on outside sources for information. The HP schools looked at individual student progress, received input from those involved with the students, and looked for methods to help students be successful. There was a commitment to continual improvement evidenced by use of the Plan-Do-Study-Act cycle (Bruner, 1997).

The results from this study suggest that Quality Management can make a difference in school improvement and educational practice. Both quantitative instruments were statistically verified and checked for reliability through a three step iterative process, and were designed to reflect on educational practice.

There were several important differences revealed in the strategies used between the low and high performing schools that link directly to the TQM philosophy. First, the high performance school principals focused more on processes than manifestations of the material world. This is not to say that the HP principals did not strive to keep a clean building, a safe school environment, or work to provide the physical resources needed by teachers and students. But the focus was on student achievement and the processes to assess and monitor it, preferably at frequent intervals. The HP principals were data driven, and actively sought to understand and monitor the learning processes taking place

on his/her campus, and the once or twice a year state assessment results were not enough to assess a child's current assessment status to insure continuous, sustainable progress. The HP principals placed a premium on communications, feedback, and information flow, not only within their buildings but with parents and community members as well, and stakeholder involvement was encouraged, promoted, and sustained. Another admirable characteristic was that the HP principals viewed their campuses as learning communities, for both students and teachers and were themselves heavily engaged in learning and sharing information and instructional insight with their teachers. This particular study illustrates how Quality Management can make a 'measurable' difference in learning and student achievement. In summary, there were marked differences between the HP and LP principals' student academic achievement that are demonstrably related to their approach to problem solving, and adoption of identifiable TQM constructs and strategies. However, in reviewing the SWCP instrument, it would appear that many of the questions are arguably reflective of just good teaching strategies, effective communications strategies, and enabling interpersonal relationship skills, whether tied to the Effective School Correlates or any other research driven instructional approach and may not necessarily be associated exclusively with Quality Management culture, philosophy, or principles. Bruner's approach applies two separate quantitative measures, one for TQM, the other for an educational 'Work Culture', and combines the different metrics for linkages to a relatively small sample of qualitative interviews, which

while producing somewhat revealing if not promising results, arguably falls short in generating either grounded theory or confirmatory research regarding the culture of quality management and the causative relationships to sound educational theory and practice.

The second dissertation, by Champion and published in 2007, was of interest because all three indices were involved, and additionally, the study was conducted in the Leander ISD and to some extent ran concurrently with the researcher's study. As an employee and 'insider', Champion examined the effects of high-stakes testing on the culture of the central office, using qualitative methodology, drawing heavily from the Constant Comparison methodology promoted by Glaser & Strauss (2007). Through semi-structured focus group discussions, interviews, a review of District processes, and within-district communications, Champion concluded that for central office personnel, high-stakes testing had instilled fear, invoked frustration, inhibited freedom, but improved focus. The findings of the study produced six specific changes in district-wide practices: "(1). more precise student data analysis, (2). reactive and targeted intervention, (3). Increased discussion about high-stakes testing, (4). improved curriculum alignment, (5). research-based professional development, and (6). logistical changes" (Champion, 2007). It is interesting to note that all of the recommended changes arguably involve at least one of the QM constructs listed in Table 6, and directly or indirectly call for some form of process improvement or systemic change. Despite the pressures from high-stakes

testing, Quality Management in the form of Continuous Improvement, has not been abandoned in the Leander ISD, and in and through associative practice continues to be applied to system-wide school improvement.

The professional peer reviewed literature is relatively quiet regarding the intersection of QM with public school environments and educational strategy, as viewed and analyzed through the culture theory perspective. James R. Detert is one of the few scholars to tackle this approach, an effort originating through his field studies of the late 1990s, which with additional research, produced a series of articles that were published between 2000 and 2003 (Detert, Schroeder, & Mauriel, 2000; Detert, Louis, and Schroeder, 2001; Detert, Schroeder, & Cudeck, 2003). The latest published work was officially released in 2008, and reflects a continued interest in and exploration of this multi-faceted arena. The actual fieldwork for the latest publication was conducted during a three year period from 1998 – 2000 (Detert & Pollock, 2008).

The latest study examines and compares two school districts that implemented TQM strategies, one with the designation of School A, the other School B. The superintendent for School A had purposely avoided the TQM verbiage and chose instead to label his improvement strategy under the guise of “effective school research”. School B on the other hand, and from the outset, appropriated the TQM ‘badge’ and forged ahead attaching the label to all subsequent workshops, seminars, training sessions, and implementation strategies. During this period, School A was not under state-wide accountability

pressure, the school board practiced a 'laissez faire' attitude in their relationship with the superintendent, the school had an experienced principal who eschewed confrontation, and the parents were generally content with their children's schools. School A staff-development for the first year focused on 'quality learning concepts' led by an external teacher-turned-consultant, and four of the school's teachers received intensive off site training, who later became resource persons and teacher-trainers for the school's improvement efforts. The training sessions were purposefully designed to avoid using the technical language of TQM, such that teachers were taught to use the 'spokes of an improvement wheel' rather than 'continuous improvement' and were taught 'ways to measure improvement' rather than 'data-based decision making'.

In contrast, School B was under intense pressure from state accountability mandates and was overseen by a 'hands on' board that was encouraged by concerned parents with high standards for their school. School B began indoctrination with community-wide focus groups, and training for the leadership council, followed by four 'boot camps' for the teachers. The principal was new to the role and willing if not eager to make changes. Both schools were predominately Caucasian and had graduation rates exceeding 90%. The full range of TQM strategies was not taught in either school, and of the ones taught by the superintendents and principals, not all were equally emphasized.

The nine component 31 item School Quality Management Culture Survey (SQMCS) was the preferred metric for both schools, along with

interviews to yield a mixed-method research approach. For the final interviews of 11 teachers from School A, and 13 teachers from School B, the focus questions addressed the three areas where the schools varied the most: external customer focus, collaboration, and data-based decision-making. “Respondents were asked to explain both the actual level reported for that area in their school, the average desired level reported by their own staff, and the reasons for any gaps. The goals of this round were to triangulate aspects of the survey findings and to go beyond them by exploring with teachers the patterns and paradoxes of the findings (p. 196).

With these differences in school environments, and approaches to implementing TQM, one would expect differentiation in both quantitative and qualitative assessments, and there were some. School B teachers complained about the overly directive leadership of their principal, a lack of consistency, and a failure to understand the real issues teachers face. Teachers at School A noted a lack of directive leadership from their principal. School A teachers were generally more satisfied with their jobs, citing that the lack of intrusion from other stakeholders, an apolitical board, and high graduation rates and matriculation to 4 year colleges gave them satisfaction with their work. Conversely, because of the high stakes testing and the overall demanding institutional environment, School B teachers felt stressed and not even the \$1500 bonus awarded for student test score improvement, seemed to help; in fact, most of the teachers commented that they would gladly sacrifice this bonus for less stress. Teachers

in School B were subjected to more local involvement in the form of a biennial survey of stakeholder satisfaction and had to sign yearly parent-student-teacher contracts, which added even more stress.

One of the more significant findings is that “the high levels of pressure placed on teachers at school B, to change their behavior in ways that would produce immediately quantifiable results, seemed to actually inhibit the real learning promoted by the components of the TQM paradigm” (Detert & Pollock, p. 204). Also, because of high stakes testing and the pressures to focus so much of their time and energy to this end, School B teachers believed they had little time or incentive to work on engaging new behaviors and strategies, and resented the time taken away from their lesson preparations to attend TQM professional development training. Conversely, the reduced lack of pressure at School A produced a more positive teacher attitude regarding the exploration of the various improvement tools. In summation, the teachers at School B were significantly more “burned out” than their counterparts at School A. This situation conjures up Deming’s admonition to drive out fear (2002), For practitioners, a concerted effort must be made to minimize fear by creating an environment where people are allowed to fail, so long as they learn from it, and to create acceptable if not enlightened alternative paths to negotiate around failure.

There were also similarities between the two schools. Generally, teachers from both schools were positive regarding most of the TQM

components, strategies, and tools. But collectively they had difficulty reconciling the time requirements to study and learn the TQM constructs and felt the support processes and opportunities for guiding and reinforcing the TQM strategies so that they would become reflexive, were sparse to nonexistent. The issue of teacher capacity is one that is often overlooked in the literature, but as Detert and Pollock contend, can have a profound influence on the extent any new philosophy or strategy is adopted (2008). If teachers are not provided the time and/or other incentives to engage in learning new skills, any effort to import a new strategy is doomed from the start.

Also common to both schools, was the revelation of dislike for one of the major TQM components, that of outside stakeholder involvement. Many of the teachers believed that the involvement of or reaching out to external stakeholders placed educators at risk of criticism, seldom reconciled problems, and in general was a waste of precious time. This phenomenon was especially pronounced among 'college prep' teachers from both schools. Detert and Pollock reasoned that this may be attributable to the more open attitude that non-college prep teachers might have towards the outside business world along with perhaps more practice in communicating with outside constituencies (Detert & Pollock, 2008). For practitioners, this is an alarm to configure QM implementation in such a way as to emphasize, encourage, and impart the skill of relationship-building.

And finally, Detert and Pollock conclude the approach of using more 'teacher friendly' terminology that fits more harmoniously with existing learning strategies and pedagogical practice, focusing on TQM components that fit more easily into the local teaching culture, and setting reasonable, achievable short-term goals, appear to be a sound strategies in the initial trial of a Quality Management program. This type of research, carefully and painstakingly constructed, and perched at the interface of quality management philosophy, culture theory, and educational practice, has the potential to explicate theory and expand our knowledge of how Quality Management constructs predictably interact in different settings and under what conditions they leverage the greatest impact.

Summary

The accountability pressures on contemporary US education are formidable, many would say unrelenting and overwhelming. The goal to educate every child in accordance with 'world class standards' gains urgency in view of the current global economic recession and international product and service competition. The days of managing schools through authoritarian rule and random acts of improvement for a monolithic student population, have long since passed. What is needed is a system of pedagogy that leverages resources, fosters collegiality, respect, and egalitarian relationships, and most importantly, meets the learning, physical, and psychological needs of all children. There are

hints and suggestions in the literature that the Quality Management philosophy may foster the development of a distinct culture in school environments, which provides a framework for practice in the fulfillment of these needs.

Quality Management owes its lineage not only to the renowned quality management experts, such as Deming, Juran, Ishikawa, Crosby, Feigenbaum, Costello, Moss-Kanter, Taguchi, Imai, and Shingo, but also to early 20th century management theorists and thinkers such as Taylor, Follett, Barnard, and Mayo. The combined contributions from this array of philosophers, scholars, and practitioners, form a figurative 'Rosetta Stone' that modern day management and organizational theorists continue to decipher. The key is finding the right codex to unlock the full potential, and the mechanism to achieve this may come by merging the culture theory framework with that of Quality Management.

CHAPTER III

RESEARCH METHODOLOGIES

“He who asks is a fool for five minutes, but he who does not ask remains a fool forever” (Chinese proverb as quoted by Moncur, www.quotationspage.com, #771).

Direction and Focus of the Research Design

Chapter I served as an introduction to the conundrums resting at the interface of Quality Management, the organizational culture surrounding and associated with the paradigm, and how relevant these factors may be in influencing organizational strategy and practice for K-12 education. The chapter also raised awareness that research at the intersecting boundary of these factors and the potential valences contained within, while sparsely addressed in the literature, is given some sense of direction through the interpretive Quality Management framework proposed by James R. Detert, et al (2001).

Subsequently, and based to a large extent on Detert’s framework assumptions, four research questions were developed to guide this study.

1. What are the espoused values and beliefs in the Leander ISD (TX) and to what extent are they consistent with Detert’s Quality Management Core Values?
2. How and to what extent are practices in the Leander ISD (TX), aligned with Detert’s Quality Management Core values and the philosophy of Continuous Improvement?

3. How are personal experiences in the Leander ISD (TX) reflective of, or associated with, Detert's Nine Core Values and the philosophy of Continuous Improvement?
4. How are the values, beliefs, and underlying assumptions of the Leander ISD (TX) that sustain and promote Detert's Nine Core Values and the philosophy of Continuous Improvement manifested through material artifacts, creations, and processes?

Chapter II traced the lineage of Quality Management through 20th century management, organization, and culture theory development, examined the multiple influences from prominent QM and organizational management philosophers and scholars, global economic pressures, higher education, US governmental policies, and quality management assessment institutions, explored the contributory ontological, epistemological, and methodological dimensions of the philosophy, and revealed the scarcity of theory development to explain the concept.

Chapter III highlights the research approach used in this study to identify the values, beliefs, and underlying assumptions present in the organizational culture of the Leander ISD (TX), and assess the extent they are consistent with Detert's Quality Management Values and reflected in practices, personal experiences, artifacts, creations, and processes that sustain and promote the philosophy of Continuous Improvement.

Case Selection

The setting for this study was a single suburban school district, the Leander ISD, located approximately 20 miles Northwest of Austin, Texas, in Williamson County. The school district, at the time of the field study and data collection, had an enrollment of 19,877 students, 18% of which were Hispanic, 5% African American (Texas Education Agency, *Snapshots*, 2005), employed 2713 employees to service the student population, and was experiencing an annual student growth rate of just over nine percent per year. The District has espoused and been involved with the philosophy of Quality Management under the moniker of Continuous Improvement since 1992. The primary fieldwork for this study occurred between January and July of 2005, with follow up visits in February of 2006 and 2008.

The District has served as a venue in the research of Quality Management for several previous doctoral projects, the first a study by Ruben Garansuay (*ProQuest*, AAT 9800674), a second by Denise Collier (*ProQuest*, AAT 3026194), and the third by Justo Rolando Hernandez, Jr. (*ProQuest*, AAT 3034546). Garansuay's study compared TQM practices among different institutional types (a school district, a private business, and a military base), Collier's study examined the prioritization of Baldrige Criteria in the Leander and a bordering Texas school district, and Hernandez's work, while masking the identity of the research site, explored the application and effectiveness of TQM in the District's response to increased state accountability pressure. A fourth

study, completed by Bret Champion (*ProQuest*, AAT 3274765), examined the influence of high-stakes testing on central office culture. None of the first three studies focused on Quality Management culture as a requisite research attribute or as applicable research constructs. Champion's focus was exclusively on the values and norms that affect the culture at the central office level, and his study does not rely on or make any reference to James Detert's 'Core Values' approach.

James R. Detert conducted interviews and distributed, collected, and analyzed pilot surveys from school districts through separate iterations in his field work leading to the establishment of the School Quality Management Culture Survey (SQMCS) which represented an expansion of the Nine Core Values (Detert, et al, 2003). This study serves as a link to Detert's original field studies in that the Leander ISD was one of the participating schools. The key gatekeepers in the District were accustomed to 'outside' scrutiny in the form of scholarly research and were agreeable to yet another study, and the opportunity was ripe for confirmatory and exploratory research to overlay or complement Detert's Quality Management cultural constructs. And finally, Dr. Bryan Cole, the researcher's dissertation committee chairperson, had established a long term relationship with the District which provided a crucial connection in the establishment of dialogue with District administrators and the subsequent approval to conduct research.

Adoption of Qualitative and Empirical Anchors, and Associative Research Tools and Instrumentation

The basic outline for Chapter III was influenced by the organizational style suggested by Eisenhardt (2002) and functions to align the research design with the appropriate instrumentation, and protocols anticipated to be used in the collection and analysis of data for the study. The research design is the logic through which the data to be collected and the conclusions to be drawn are connected to the initial questions of the study (Yin, 2003). The purpose of this chapter is to present the essential research strategies, underlying principles, and associative instrument incepts and designs that were established in preparation for the Chapter IV research and findings.

Case Study Approach

The case study strategy was selected for this research since it is the preferred approach when ““how” and “why” questions are being posed, when the investigator has little control over events, and when the focus is on contemporary phenomenon with some real-life context” (Yin, 2003, p. 1). Additionally, the case study strategy is often viewed as a ‘holistic’ approach that typically includes both quantitative and qualitative data collection and analysis through an assortment of collectivities that may include archives, interviews, questionnaires, and observations (Eisenhardt, 2002; Yin, 2003; Glaser &

Strauss, 2007). Moreover, it is not uncommon for quantitative researchers to use qualitative strategies or for qualitative researchers to apply quantitative methodology (Erlandson, Harris, Skipper, & Allen, 1993), and the mixed methods approach is generally favorably if not enthusiastically encouraged by scholars of the social and behavioral sciences (Martin, 2002).

The case study approach can be characterized as pragmatic with regard to the use of multiple methods in research, embracing both qualitative and quantitative methodologies, and the researcher chose to avoid the traps and ontological/epistemological contentions that have drawn some scholars into heated exchanges over which is superior (Sechrest, 1992; Lincoln & Guba, 1992; Sechrest, Babcock, & Smith, 1993; Lincoln & Guba, 1994; Sechrest, 1994). Paradigmatic relativism appears to be a growing trend in social and behavioral research, as theorists and scholars are increasingly resorting to mixed methodologies or to using whatever paradigm or combination of paradigms that suit the problems of study (Creswell, Clark, Gutmann, & Hanson, 2003). The author of this paper is content with Glaser and Strauss's assessment, "Our position is as follows: there is no fundamental clash between the purposes and capacities of qualitative and quantitative methods or data...We believe that each form of data is useful for both verification and generation of theory" (2003, p. 17).

Investigators engage in case study research to produce detailed descriptions of a phenomenon, develop possible explanations for it, or evaluate

it (Gall, Borg, & Gall, 1996). Case study research, particularly in the social and behavioral sciences, often draws from the quantitative paradigm through the use of surveys, which as a methodological tool is useful for generalizing theoretical propositions (Yin, 2003), and can be used to examine existing or the creation of new data (Glaser & Strauss, 2007). Surveys are particularly appropriate when addressing the 'who', 'what', 'where', 'how many', and 'how much' (Yin, 2003), have been used productively in the study of organizational culture (Rollins & Roberts, 1998), and are often used to triangulate propositions in tandem with qualitative methodology (Jick, 1979).

Finally, case study researchers can assume a research position from either the etic or emic perspective. The emic position is one wherein the investigator attempts to view organizational or situational phenomenon from an 'insider' or participant perspective and is characteristic of ethnographic-based studies. With the etic position, researchers maintain their own perspective and view the phenomenon from an 'outsider's' perspective, which assists in making sense of the conceptual and theoretical frameworks of the case (Gall, Borg, & Gall, 1996). The researcher primarily assumed the etic position in conducting this research because the study itself was framed by the Continuous Improvement constructs that gave it direction and because an emic stance was inhibited by the outsider position from which the researcher operated. Nevertheless, by the very nature of the thick descriptive material that was

derived from the conversational interviews, a contextual element was provided to the overall study that gives evidence of a contributing emic stance as well.

Institutional Review Board: Review and Approval

Before research field studies can commence at Texas A&M University, the research proposal and all relevant instrumentation, protocols, and site agreements must be submitted to the Institutional Review Board (IRB) for review and approval. Prior to these processes, the researcher submitted copies of both the quantitative pilot survey and the final survey (Appendix, A3), and the preliminary and revised qualitative interview instruments (Appendix, A4) to the dissertation chair, Dr. Bryan Cole, for review and revision. In addition, the survey introduction and 'Information Sheet' (Appendix, A1) and the Interview 'Consent Form' (Appendix, A2) were critically reviewed by Texas A&M University, Education and Human Resource Development staff specialist, Mr. Bill Ashworth and by Dr. Cole before submission to the IRB. Initial instrumentation and protocols submitted to the IRB were approved without correction. This process was followed for all subsequent changes or revisions for all instruments and protocols.

Quantitative Instrumentation and Protocols

Quantitative instrumentation rests on the premise that “If a thing exists, it exists in some amount. If it exists in some amount, it can be measured” (Cronbach, 1990, p. 34). A primary tool for measurement in the social and behavioral sciences is the survey. According to Fink and Kosekoff, “surveys are information collection methods used to describe, compare, or explain individual or societal knowledge, feelings, values, preferences, and behavior” (1998, p.1) as well as an individual’s beliefs and judgments (Taylor, 1998). The quantitative portion of this study consists of a survey that borrows heavily from James R. Detert’s ‘Nine Core Values’ (NCV), and the initial formative constructs and descriptive elements used for the survey are depicted in Chapter II, Table 8. The constructs are described as ‘Core Values’ that Detert extracted through the confluence of an exhaustive literature review, cross-referenced with the Baldrige Criteria, and combined with results from a Nominal Group Technique (NGT) analysis from a group of Quality Management scholars and practitioners (Detert, et al, 2001). For the purposes of this study the expression Quality Management and Continuous Improvement are used interchangeably, as the Quality Management philosophy espoused by the District is most often referred to as Continuous Improvement. The descriptors used under “Continuous Improvement” and “Opposite” headers from Table 8, were modified in the initial pilot instrument to reflect more generalized perspectives extendable to all employees of the District, rather than exclusively to ‘teachers’, and the

“Opposite” heading was exchanged for the “Traditional” expression. The rationale for this change originated from concerns that in an environment where Quality Management/Continuous Improvement is espoused, respondents might feel compelled to avoid responses leaning towards the “Opposite” end of the scale, whereas the “Traditional” heading would attenuate the meaning and be less likely to introduce internal bias into the instrument. Internal bias is introduced when a research participant succumbs to ‘socially desirable’ standards of behavior or perceived external pressure in the response to a query (Gall, Borg, & Gall, 1996). The survey and the logic behind the design were emailed to Dr. James R. Detert at Pennsylvania State University, from whom the researcher received subsequent and useful feedback through emails, phone conversations, and written communications during March of 2004.

Quantitative Fieldwork Preparation, Final Instrument Design, Acknowledged Caveats and Limitations

The instrument was piloted during the month of November, 2004, and 15 of 30 instruments were returned from randomly selected employees of the Leander ISD, none of whom were central office lead administrators, to test for clarity, readability, grammatical error, and the extent the individual descriptors (Core Values) were comprehensible, and was based on a nine point Likert scale. A letter of introduction was attached, composed by the researcher, and subsequently modified and approved by the principal District gatekeeper

(Assistant Superintendent for Curriculum) to explain the purpose of the pilot survey, and to convey to the potential respondent that participation was strictly voluntary. From the feedback obtained from the pilot instrument, modifications were made which included: (1) The Likert scale range was reduced from nine to seven, (2). Scale range descriptions were modified to reflect suggestions from pilot instrument respondents, and (3). The “Values” extremes descriptions reflected in the pilot were modified to improve readability and comprehension of concept. The refined instrument was converted to the PDF format and emailed to James Detert, and feedback solicited to verify that the changes did not appreciably alter either the intent or focus associated with the original, 2001, “Nine Core Values” (NCV). On December 13, 2004, Detert reviewed the final instrument (Appendix, A3) and expressed his opinion that the refined instrument held true to the Core Values he had published and would be acceptable for the purposes of this study. This external review was a collegial process, delivered in the spirit of a ‘peer’ review, and was considered essential to the crafting of the final instrument. The descriptors for the survey are depicted in Table 9.

Advantages of the survey used in this study are that it contains only nine questions or evaluation constructs which should negate any effects attributable to instrument fatigue, and therein, arguably contribute to the likelihood of higher return rates. Long, wieldy surveys not only discourage participation (Gall, Borg, & Gall, 1996; Punch, 2003), but provide the respondent an excuse for not doing so (Iarossi, 2006). The language of the instrument was modified to generalize

TABLE 9. Final Instrument Descriptors		
“Continuous Improvement” Values Descriptors	Evaluative Focus	“Traditional” Values Descriptors
<p>A shared vision and shared goals among faculty, staff and administrators are critical for school success. A ‘constancy of purpose’ must be agreed upon and shared by all staff members. Individuals should be willing to sacrifice some autonomy for the sake of organization-wide goals. Successful schools are those in which staff agree on what’s most important and pursue those areas jointly.</p>	<p>1. Role of Vision</p>	<p>Successful schools respect the right of individuals to establish their own vision and goals without regard for higher levels of goals which are often ambiguous and difficult to interpret. As long as a school district employee meets his/her own goals that are consistent with sound practice and assigned responsibility, he/she is contributing to school effectiveness. Innovative and high quality teaching and/or work are inhibited by excessive emphasis on common goals and practices which dilute or unnecessarily redirect individual employee goals and practices.</p>
<p>Educational needs should be determined primarily by parents, community groups, students, and other stakeholders. Learning centered education focuses on learning and meeting the real needs of students. These needs are derived from the “marketplace”, the requirements of citizenship, and the need to develop every student to his/her full potential. In learning centered education, students, teachers, parents and community groups should have a substantial voice in the curriculum and programs offered by the school.</p>	<p>2. Determination of Educational Needs</p>	<p>Expert practitioners and professionals should make the important educational decisions. Parents and community members don’t know what their children really need when it comes to curriculum. Professional expertise should be the basis of decision-making about curriculum, assessment, etc. The goals of a school should be determined primarily by the faculty, support staff, and the principal.</p>

Table 9 (Continued)

“Continuous Improvement” Values Descriptors	Evaluative Focus	“Traditional” Values Descriptors
<p>Improving education requires a long-term commitment and alignment of improvement goals throughout the school system. Schools should be driven by long-term stable improvement goals. Short-term sacrifices – especially in effort and time – may be necessary.</p>	<p>3. Long and Short-term Commitments</p>	<p>Present pressures – the students in a school and the immediate external demands – are most important. When improvement is needed, anything we can do to get results quickly is worthwhile. Localized short-term goals and objectives may lead to quicker results because they are more likely to accommodate the immediate needs of specific teachers/employees and students.</p>
<p>Schools should strive to make continuous changes to improve education. Teachers and support staff in the school should devote time and energy to make things better. This is a never-ending process. People should be willing to take risks associated with making change.</p>	<p>4. Managing Change</p>	<p>Schools should be cautious about making changes. It is better to stick with what we know than risk failure, given the significant consequences of schooling for individual children. Change does not always mean improvement.</p>
<p>Teachers and support staff should be active in improving the overall school operation. Employee judgment about system processes is valuable and needed to improve quality. Decisions should be decentralized to involve teachers and employees in key school decisions.</p>	<p>5. Decision-making Involvement</p>	<p>Overall school operations should be left to administrators and department leaders. Shared decision making is too slow and inconsistent. Teachers/staff should rarely be taken out of the classroom/department for team meetings, committee work, or administrative tasks. Administrators are responsible for and paid to make school-wide decisions.</p>

Table 9 (Continued)

“Continuous Improvement” Values Descriptors	Evaluative Focus	“Traditional” Values Descriptors
<p>Collaboration is necessary for an effective school. The entire organization must work together for a quality education to occur. Teachers and staff should not be left to do their own work. Collaboration leads to better decisions, higher quality, and more satisfied employees.</p>	<p>6. Collaboration and Autonomy</p>	<p>Professional and individual autonomy is the key to greater school effectiveness. For instance, teachers are most effective when left to make classroom decisions by themselves. Working alone is usually more productive than working in teams and attending endless, unfruitful committee meetings.</p>
<p>Decision-making should rely on factual information. A school runs best on facts, not opinion. The best decisions are driven by data and analysis. It is better to be open about data than to be defensive. Data feedback to teachers, staff, and students should be objective and oriented toward process improvement.</p>	<p>7. Decision-making Environment</p>	<p>Decision-making should rely on personal, and/or professional experience. The best decisions are based on applying personal experience and judgments made by education professionals and knowledgeable staff members. Data about school performance are difficult to interpret. The most important schooling processes and outcomes can't be measured accurately. Unlike other fields like medicine or business, there is not much data that can be compared across services, organizations, and/or departments.</p>
<p>Quality problems are caused by poor systems and processes, not by teachers or employees. Quality should be improved by using better processes and more customer/client input, rather than imploring teachers and staff to work harder. Most people are competent and motivated to do a good job.</p>	<p>8. The source of Problems</p>	<p>The cause of most problems is human error. When something goes wrong, it is usually because someone made a mistake. Our system is pretty good. Supervising people's actions and taking disciplinary measure when something goes wrong are a necessary part of motivating people to improve quality. School outcomes would improve substantially if some teachers and staff made fewer mistakes. To improve quality, the system must focus on reducing employee error.</p>

Table 9 (Continued)

“Continuous Improvement” Values Descriptors	Evaluative Focus	“Traditional” Values Descriptors
Quality can be improved with existing resources. By improving processes, schools can improve the quality of education with little or no additional resources. This requires doing things in a different way and fixing some of the processes and methods which waste resources.	9. Results and Resources	We are doing the best we can with existing resources. There is little waste or inefficiency in our system. We cannot improve the results of this school or department without more money or resources.

the “Values” concepts, such that a wider range of school employees could conceivably see relevance to, and be able to associate the Nine Core Values with, their individual work assignment/environment. Also, the decision was made to use a paper survey because web surveys generally have lower return rates and cannot be randomized for demographic comparisons from email lists alone (Gunn, 2002). The Krejcie and Morgan sampling table (1970) indicated that a sample size of 338 was required for a population of 2800, which falls slightly above the requirements for the Districts employment population of 2713. Correspondingly, 650 instruments were prepared for the initial distribution, which translates to a potential return rate of $338/650 = 52\%$. It was unknown prior to the initial distribution if a 52% return rate was realistic, and the researcher was prepared to do ‘re-sends’ to those who failed to return 1st distribution surveys, and even do an entire 2nd distribution if the original distribution and ‘re-sends’ combined, failed to reach the 338 sample-size threshold.

One major technical disadvantage of the initial and final survey designs is that the Microsoft Word 2003 Flesch Reading Ease (FRE) score registered at 39.2 and the Flesch-Kincaid Grade Level (FKGL) score was 12.1. Detert's original derivation of the "Nine Core Values" and the subsequent SQMCS were designed for teachers, and there was researcher concern that for some Service Function Employees, with a high school education, a GED, or those with limited English proficiency, might have difficulty comprehending the directions and/or the syntax and meanings of the descriptors, and consequently an effort was made based on suggestions from the pilot instrument, to improve the readability of the instrument, which yielded no measureable improvement in either the FRE or FKGL scores. However, since the entire study is based on the original derivation of the "Nine Core Values" (NCV), and the focus of the instrument directed at the 'holistic' meanings behind the descriptors, the researcher believed that there was little accommodation that could be made to change the language without substantially jeopardizing the original descriptor intent, given the limited time and resources available before the actual administration of the instrument. The one exception made in the distribution of the survey was for the custodial population of the District which was 92% Hispanic. Surveys for this population were purposefully directed only to those employees the District Custodial Director knew to be English language proficient, the number of which was determined through the random list generation. The demographic profile variables were grouped as listed in Table 10.

TABLE 10. Demographic Variables of Survey	
Demographic Profile	Variable
Gender	Male Female
Administrative Position	Central Office Administrator Principal Assistant Principal
Service Function	Instruction (teachers and teacher aides) Transportation Food Services Maintenance Other (e.g. Guidance & Counseling, Technology Support, Social Services, Compliance, Extracurricular, etc.)
Campus	District-wide or Multi-campus High School Middle School Elementary
Years of Service Completed in the LISD	8 or more years 3-7 years 0-2 year(s)

The initial quantitative plan anticipated the use of descriptive statistics to show central tendencies, a Cronbach Alpha analysis to test for construct reliability, and Univariate and multivariate analyses to test for demographic profile variability between groups at the $p < .05$ level. The software used for the initial statistical analysis was SPSS ver. 12.1. However, it should be noted that the primary purpose of the survey was to serve as a triangulation device to the qualitative portion of the study using Detert's original construct derivations. The 'values' descriptors, as expressed in the instrument, reflect a 'holistic' approach to Quality Management in an educational setting. Detert later separated the Nine

Core Values (NCV) into 31 separate items as revealed in the SQMCS instrument published in 2003. This study does not make any claims to generalizability of the instrument to other settings or that the descriptors used in the instrument cannot be further reduced to yield more narrowly defined units for analysis.

The researcher obtained an EXCEL spreadsheet from the Personnel Office of the District prior to field work that contained the demographic information used for selecting the sample set and profiling the instrument returns. Each of the 95 administrators listed on the District spreadsheet was sent a survey. The selection process for the remaining employees involved the assignment of a number for every person remaining in the spreadsheet and executing the EXCEL-based Random Number Generator Plug-In from Macro-Systems to randomize the sample, the size of which was determined using the Krejcie & Morgan (1970) sample size table. Only the researcher possessed the numeric codes for 'unlocking' respondent identities and their responses on the survey.

The original distribution was sent out on January 20th, 2005 through the campus mail system, with a "Time Sensitive: Please return by February 2" message stamped on the envelope. Instructions were given allowing all participants to opt out of participation, by simply marking an "X" through the distribution number and returning the survey. All surveys were mailed with a sealable self-addressed return envelope. By February 3rd only 56 administrators

had mailed back returns and only 119 from the remaining demographics. The researcher emailed reminders to the Central Office and principals on two occasions during the month of February, to serve as prompts for the returns. By the end of February, the number of useable returns had increased to 61 for the administrators and 185 for the remaining demographics, but fell far short of the Krejcie and Morgan recommendation of 338. On March 3rd, 2005, the research mailed “re-sends” to all who had not returned a survey. Additionally, all of the names from the first sample were deleted from the non-administrator list and a new list was generated using the random number generator, and a 2nd distribution mailed out on the same date with a “Time Sensitive: Please Return by March 24” message stamped on all envelopes. By the end of April the researcher had received a total of 86 administrator surveys out of a possible 95 in the District, and 391 from the remaining demographics which exceeded the minimum required by the Krejcie and Morgan table. Because the SPSS software requires complete fields in the inferential analyses, four of the administrator surveys had to be excluded and ten from the randomized group. An eleventh survey from the randomized sample was added to the exclusion list because the demographic code used for campus assignment did not match the fields analyzed. The final number of completed surveys included 82 administrators, and 380 employees from the randomized samples, both of which were analyzed as separate groups. The number of surveys for the randomized group as reflected by demographic profiles is depicted in Table 11.

TABLE 11. Number of Surveys Analyzed by Demographic Profile				
Demographic	Gender	Service Function	Campus Assignment	Years of Experience
Male	76			
Female	304			
Total	380			
Food Services		25		
Instructional		250		
Maintenance and/or Facilities Support		34		
Other		54		
Transportation		17		
Total		380		
Elementary			169	
Middle School			67	
High School			75	
Multiple Campus			69	
Total			380	
8 or more years of District experience completed				111
3-7 years of District experience completed				141
1-2 years of District experience completed				128
Total				380

Methodological Triangulation

Central to the design of this study is the use of methodological triangulation to direct, coordinate, and strengthen the findings. Denzin (1978), as quoted by Jick (1979), defines triangulation as “the combination of

methodologies in the study of the same phenomenon” (p. 291). Triangulation is a metaphor borrowed from navigation and the military that incorporates multiple geometric points to improve accuracy (Jick, 1979). Denzin and Lincoln define the strategy as “the simultaneous display of multiple refracted realities...” that serves to “...create simultaneity rather than the sequential or linear” (2005, p. 6). Triangulation can occur within a methodology or between methodologies (Jick, 1979; Duncan, 1989; Glaser & Strauss, 2007), and for either approach a combination of different types of data/information is encouraged and in many instances required (Erlandson, et al, 1993). Mixed methodologies can help the researcher to see logical patterns, and identify outlying or deviant exceptions to a phenomenon under study, or synthesize or integrate theory (Jick, 1979). The principle methodological ‘refractions’ used for this study are the survey and the interview.

Naturalistic inquiry: Methodological Attributions and Associative Field Preparations

For the purposes of this study the qualitative portion of the research follows the ‘Naturalistic’ or ‘Naturalistic Inquiry’ (NI) model, often labeled as the ‘Constructivist’ approach (Guba & Lincoln, 1994). The Naturalistic Inquiry designation is the preferred moniker for the qualitative portion of the study. To understand the unique attributes of NI, it is helpful to compare the research

perspectives between the Rationalistic and Naturalistic paradigms. The chief characteristics of the two paradigms are presented in Table 12.

As often practiced within the social and behavioral sciences, NI researchers are content with and may even prefer to begin a study with no clear preconceptions, that is, to build knowledge from the ground up (Erlandson, et al, 1993, Glaser & Strauss, 2007). Furthermore, the approach often arrives at convergent conclusions from divergent data and NI researchers may not expect to necessarily find 'cause and effect' relationships within or between the phenomena being studied. The approach may instead investigate the setting looking for mutual simultaneous shaping or unfolding of events and relationships (Erlandson, et al, 1993). The cumulative effects of these research attributes often reveal the non-linear and overlapping complexities of social settings and how difficult it is to draw sweeping conclusions. The findings of NI studies may, to varying extent, transfer to similar settings or similar respondent populations, but researcher judgment must be prudently if not cautiously exercised for such an endeavor, as unlike much of empirical research, it is the obligation of the receiving context to determine applicability (Guba & Lincoln, 1989, Erlandson, et al, 1993). Naturalistic Inquiry is a useful strategy for any researcher whose primary task is in the "development and verifying of shared constructions that will enable the meaningful expansion of knowledge" (Erlandson, et al, p. 21). The

TABLE 12. Attributes of Rationalistic Research and Naturalistic Inquiry (Guba, 1981)		
Paradigmatic Themes	Rationalistic Attributes	Naturalistic Attributes
The nature of reality	A single reality, separable into independently controlled parts (variables); separate parts can be studied without affecting others	Multiple realities – inquiry will create a divergence as more is known; all parts of reality are interrelated
The inquirer/object relationship	The researcher and the objects of research are discrete; the relationship between the researcher and the object(s) of research is characteristically one of independence	The researcher and the objects of research are interrelated, with each influencing the other; the researcher seeks an optimal distance without compromising inquirer-respondent interchanges
The nature of “truth” statements	Generalizations are context free; nomothetic knowledge (generalizations, laws) is the goal of research	Generalizations are not possible; idiographic knowledge is the goal of research, focusing as much on differences between objects as similarities
Preferred research methods	Quantitative	Qualitative
Research quality criterion	Internal validity (rigor)	External validity (relevance)
Source of theory	“A priori” based on hypothetico-deductive theory	Theory emerges from the data
Knowledge types used	Propositional knowledge, or knowledge that can be cast into language form; based on ‘a priori’ theory	The researcher is not totally opposed to using propositional knowledge, but prefers to explore the ‘tacit’ knowledge in a research setting, or knowledge based on intuition, apprehensions, or feelings that cannot be easily reduced to language forms
Instruments	Researcher prefers a ‘layer of instrumentation’ between themselves and the phenomenon being studied, asserting that separation can improve reliability and objectivity	Researcher is inclined to use himself/herself as the instrument, therein gaining flexibility in the understanding of tacit knowledge
Research design	Data collection, analysis, and reporting methodologies are decided in advance	Prefers a research strategy that is emerging and malleable, depending on the unfolding events of the study
Research setting	Prefers a setting where variables can be controlled	The researcher is content to conduct his/her study in a natural environment, complete with interferences

shared constructions, particularly as manifested through shared institutional values and beliefs, are of particular interest for this study.

The NI approach is sensitive to language constructions and associative meanings, and is usually purposeful in the appropriation of “thick description” as a strategy to explicate understanding (Erlandson, et al, 1993). Thick description is often used in case studies, ethnography, and in the study of culture and concomitant theory. It involves the use of all the senses and focuses on describing and understanding the context(s) of observable actions, events, organizational constructs (Erlandson, et al, 1993), and the signifiers, symbols, and symbolic acts that contribute to a culture, for the purpose of uncovering what might lie beneath (Geertz, 1973). Thick description provides the base of information that allows other researchers to determine if transferability to other settings is possible or appropriate (Lincoln & Guba, 1985). This study anticipated the generous use of thick description as interviews unfurl and the cloaks of espoused values are lifted and perceptions revealed.

The Naturalistic approach is considered trustworthy if the following principles are established: (1). credibility or the confidence in the truth of the findings, (2). transferability or the extent the findings can be applied in other contexts or to other respondents, (3). dependability or the likelihood that the results are repeatable in contexts with similar settings or respondents, and (4). confirmability which is an indicator that the study is guided by sound research

design and not by the biases or prejudices of the researcher (Erlandson, et al, 1993). Each of these principles employs a variety of techniques.

The credibility principle emphasizes prolonged engagement, persistent observations, triangulation, referential adequacy, peer debriefing, and the use of a reflexive journal or 'research diary'. The second guiding principle for trustworthiness is transferability which contains the techniques of thick description, purposive sampling, and coordination with the reflexive journal. The third principle, dependability, employs the techniques of using a dependability audit and use of the reflexive journal. The last principle, confirmability, applies the technique of the confirmability audit and the reflexive journal (Erlandson, et al, 1993). These principles and the extent the associative techniques were planned for the study, are intermittently addressed throughout the remainder of Chapter III, usually linked with other complimentary research approbations, instrumentation, and tools. These techniques were addressed in the planning with the intent of expanding the Naturalistic depth once the actual fieldwork began.

The researcher first visited the Leander ISD, almost three years prior to the inception of the study. As part of the requirements of a previous graduate studies course, the researcher visited the District to obtain information regarding aspects of TQM implementation. The visit included in-depth interviews with the Continuous Improvement Coordinator, an elementary, and a high school principal, and the on-site resource collection, notes, and the resultant paper,

helped to provide direction and focus for this study. Field work and official data collection for the research were tentatively set for January through May of 2005, and subsequent visits were anticipated to annual Leander February Continuous Improvement Conferences until the research project was completed. Prolonged engagement, a contributing factor to Naturalistic credibility was purposefully planned into the research project before the fieldwork began.

A 2004/2005 school planner book was procured and used to arrange the interview sessions and accompanying visits to offices, cafeterias, hallways, and gymnasiums, and a compact digital camera and digital voice recorder were purchased as 'everyday tools' for the capture of classroom decorations, office posters, bulletin boards, professional book shelves, and post-conversation audio notes of impromptu conversations, that would hopefully establish referential adequacy. Additionally, video recordings were planned to frame 'vignettes' of the Annual February Conferences, to document the images, sounds, speeches, and some of the sessions afforded by the event. The collection of documents such as campus guides for students and parents, employee evaluation forms, professional planning announcements, letters to parents, mission and goals statements, volunteer guidelines, Spanish language announcements of school events, brochures of district-sponsored summer camps and educational events, school supply lists, school newspapers, and digital images of marker-board planning, comprise a partial list of what the researcher hoped to collect for referential adequacy and triangulation, two other important techniques for the

establishment of credibility. The planner book also served as a 'running diary' or 'reflexive journal' of observations and impressions which were entered either at the time a signification occurred, or later in the day, which as a research device became a valuable asset in tying information together and contributing to the credibility, transferability, dependability, and confirmability of the study.

Methodological Intent

Case studies are often the nexus for theory building and often use Naturalistic and Quantitative methodologies. Grounded theory development is often the *raison d'être* for case study and mixed methods research (Gall, Borg, & Gall, 1996, Glaser & Strauss, 2007). Grounded theory is an approach that builds theory from the 'ground up', or as defined by Gall, Borg, & Gall, it is a theory development approach that "involves deriving constructs and laws directly from the immediate data that one has collected rather than from prior research and theory. In other words, the constructs and laws are "grounded" in the particular sets of data that the researcher has collected" (1996, p. 10). From a grounded theory research perspective, the 'Nine Core Values' or nine constructs proposed by Detert, are categories derived from a database (Gall, Borg, & Gall, 1996) consisting of reoccurring ideas from the management and quality literature, the Baldrige Criteria, and NGT analysis among scholars and practitioners (Detert, et al, 2001). Conceptual categories are generated from evidence (Gall, Borg, & Gall, 1996) and the primary evidence to substantiate

Detert's Nine Core Values, as theoretical constructs or categories, come from his own work, as reflected through the three publications of 2001, 2003, and 2008. Part of the rationale for this study is to independently assess the theoretical connections and applicability of the Nine Core Values within an educational setting, which with respect to Detert's work prods the study towards confirmatory research.

A common approach to the development of grounded theory is the use of the Constant Comparative Method that encourages the researcher to constantly compare incoming data, so that new directions and emergent theory can be recognized in real time, and adjustments subsequently directed to research strategies and practices that may guide the study in more fruitful directions (Glaser & Strauss, 2007). This approach is particularly useful for new theory or emergent theory development, and does not necessarily exclude application for confirmatory research purposes (Glaser & Strauss, 2007). This study is to some extent confirmatory research because it strives to verify the utility of existing constructs or theoretical categories. However, because of the inclusion of the Naturalistic paradigm, the study can also explore for new knowledge that may emerge at the interface of Quality Management, QM Culture, and educational practice. Therefore, this study is in essence not only mixed with regard to methodology, but also with regard to research intent. It is both quantitative and qualitative, and confirmatory and exploratory. The case study approach can be designed for a wide range of explicative work, for theory development or theory

confirmation, and may include descriptive, explanatory, and exploratory dimensions of research (Yin, 2007, Glaser & Strauss, 2007)

Establishing Interview Focus and Instrument Design Regimen

One of the most important sources for the qualitative domain of case study research is the interview, which can be designed as ‘open-ended’, ‘focused’, or ‘structured’ (Yin, 2003). Regardless of the type, the researcher has two responsibilities that must drive the interview process: to follow the line of inquiry as indicated in the case study protocol, and to ask the questions in an unbiased manner. The open-ended interview generally involves asking the respondent about the facts of a matter in a conversational tone, followed by ‘how they feel about it’, and the role of the respondent is more akin to that of an ‘informant’. Focused interviews, are usually shorter in length, and while ‘conversational’ in tone, are more direct and corroboratory in delivery. The structured interview is as the name suggests, more direct and more specific and akin to what might be classified as a conversational survey (Yin, 2003).

The researcher realized early in the development phase of this study that the quantitative and qualitative strategies and data must interconnect and be structured to serve in a complimentary fashion. The logic was to examine and overlay “The Nine Core Values (or constructs) across and through survey and interview instrumentation. The interview was finally designed with three sections, with nine focus questions corresponding to the Nine Core Values in the

first section, eight questions emphasizing the affective domain for the second section, and seven questions in the third set covering how the respondents 'felt' about various aspects of Continuous Improvement, or the extent competing responsibilities interfered with CI implementation (Appendix, A4).

The first set of questions lie at the fulcrum for triangulation, were structured to align with the NCVs, and were more directly related to the central questions and issues of the study. The second and third sections of the interview questions were designed to elicit open-ended responses, and were included as a check for methodological dependability and reliability, and to look particularly for incongruities that might reside beneath the responses to the first nine focus questions. The dependability audit for this study, consisting of raw interview files and data reduction and reconstruction files from the question sets, was to be used to track the overall themes of the study and to track any variance of meanings in the interview transcriptions and notes - which constitute important research design features of Naturalistic Inquiry (Guba, 1981; Lincoln & Guba, 1985; Erlandson, et al, 1993).

From an instrument design perspective, the overall thrust of the questionnaire could arguably be considered as semi-structured. According to Erlandson, et al, "a well-organized plan, built around the central questions and issues that the interviewer wishes to explore, is a most important tool in the semi-structured interview" (p. 90). Credibility is enhanced through member checks, or feedback from the respondents, which are used to verify and clarify

the meaning of a statement or an opinion. Within the time constraints of the interview sessions, the researcher planned to ask for clarification or extensions to questions yielding uncertain responses, or that refer to what possibly could be a 'critical incident'. The researcher was also prepared to corroborate meanings and opinions by providing conversational summaries and then asking the respondent for verification of the researcher's assessment. Additionally, arrangements were made to mail all interview respondents full transcriptions of their interviews and invited to make corrections or suggestions for any typographical mistakes or errors in transcription. And finally, the last member check would consist of sending the respondents a copy of any comments that would be used in the final report, convey why the researcher considered the comment relevant to the study, and followed by a request for feedback.

The interview questions had the potential to triangulate meaningfully with the survey, the first set of interview questions linking directly to the focus of the study, and the second and third sets designed to check for dependability in the responses from the first nine focus questions. The full questionnaire can conceivably reveal significations about operations in the school that cannot possibly be gleaned from a survey, and which may constitute what Erlandson, et al, classify as 'critical incidents'. 'Critical incidents' are specific events occurring in a social context that reflect critically on the operation of that context, and either highlight the normal operation of the organization, or contrast sharply with it (Erlandson, et al, 1993, p. 103).

Additionally, purposive sampling of interview respondents is an important contributor to Naturalistic trustworthiness and for transferability to other settings (Lincoln & Guba, 1985; Erlandson, et al, 1993). It is here that the survey would play a vital if not critical role. Interview respondents would be purposively selected, based on accumulative NCV average survey scores and demographic diversity, to ensure that a full range of TM/CI perspectives were subsequently represented in the interviews.

The triangulation strategy was to cross-reference what the employees indicated was happening in their respective departments or campuses as reported in the survey, to what was actually happening as revealed in the interviews, with a focus on uncovering consistencies or inconsistencies between the 'espoused values' and the 'values in action'. The original plan was to interview 4 individuals from the administrative ranks, 4 elementary teachers, and 4 secondary teachers. However, the final number of interview respondents was not finalized prior to the actual field studies and was open to revision, depending on emergent data from both the survey and information gleaned from the first round of interviews. All the respondents were assigned pseudonyms to provide a layer of confidentiality.

The interview questionnaire was initially designed for a 50 minute administration in the interest of accommodating teachers with 45 to 50 minute conference/planning periods and the researcher was also available to meet with employees after their regular work day. There was no compensation of any kind

offered for participation, and for triangulation purposes only respondents who returned surveys were eligible for the qualitative interview. In summary, Interview respondents would be purposefully selected, to represent diversity by gender, campus assignment (elementary and secondary), years of experience in the District, and range of mean scores from the survey. Armed with the knowledge that the qualitative methodologies and interview protocols were based on sound Naturalistic principles, the interview questions were reviewed and recommendations for revision made by the dissertation chairperson and Dr. David Erlandson during the summer of 2004 design phase, and subsequently submitted to and approved by the IRB on September 15, 2004.

The final field of respondents consisted of four central office administrators, two campus level administrators, eight teachers, and four service function employees. The inclusion of two representatives from mid-management, a principal and an assistant principal, was considered necessary additions because of the critical role they serve in creating, nurturing, and transmitting culture and values (Deal & Peterson, 1999). The four service-function employees were added after it was discovered that there were statistically significant variations in their survey responses compared to administrators and teachers, and reflects how emergent data can influence information-gathering strategies (Erlandson, et al, 1993). The interviews were scheduled at the respondents' convenience and were most often dependent on work schedules. The majority of the teachers and assistant principal sessions

generally consumed an hour to an hour and a half, during the equivalent of two conference periods; the central office administrators and two service function supervisors averaged over two hours, and the longest session was with the elementary principal which spanned five hours. The longer interviews were guided to a large extent by the enthusiasm of the respondents and their willingness to contribute additional information as the interview unfolded and questions were extended.

There were many unknowns going into the field work. Besides not knowing how the response rate for the survey would fare, the researcher could not predict how many interviews would be needed to reach the saturation point for relevant information, or, if the interview questions would align with the desired triangulation strategy in the field. Based on emergent data, the researcher was prepared to adjust the interview protocols to achieve the proper alignment, pending approval of the changes from the dissertation chair and the IRB. But this could conceivably delay reentry back into the field, and compress the timeline for finishing the fieldwork. These research conundrums are highlighted for the purpose of demonstrating the importance of planning, identification of possible logistical and methodological snares, and the anticipatory mindset that must accompany a research project. Fortunately, the aforementioned conundrums unfolded in a manageable fashion, as revealed in the data and information gathered and analyzed for Chapter IV.

An important strategy of NI is the collection of multiple sources of information and reference materials which may include surveys, interviews, documents, observed behaviors, photographs, video and/or audio recordings and other organizational artifacts (Erlandson, et al, 1993). All of these resources, as interwoven and contextually relevant collectivities, potentially contribute to the knowledge and understanding of what drives the behaviors and practices within an organization and how the associative culture is formed and perpetuated. Conventional NI practice strongly suggests that the researcher remain in the field until the ongoing data collection and analysis results become redundant (Erlandson, et al, 1993). However, in most instances the researcher begins the field work not knowing when this threshold will be reached, and labors with the apprehension that to extend the fieldwork beyond an encapsulated timeframe may jeopardize the credibility of the study, as the characteristics of the target population and organization may appreciably change beyond his/her control.

Qualitative research can be a very complex undertaking and does not lend itself to the linearity one normally associates with empirical work (Guba & Lincoln, 1994). Qualitative research is drawn from language and words, rather than numbers and empirical data. Words are “fatter than numbers” (Miles & Huberman, 1984, p. 54), are more ambiguous, and from the NI perspective, form the tapestry of ‘thick description’ (Miles & Huberman, 1984). Interview data in the form of transcripts, can be particularly difficult to manage, and therein benefit from some form of organization, or coding strategy (Miles & Huberman, 1984).

Normally, one of the chief properties of transcripts is that some words appear with greater frequency than others. Knowing the frequency of use and where the words occur, can alert the researcher to possible contextual clues, and the saturation of a concept in an organization. In anticipation of the mountain of data that would flow from the interviews, the researcher purchased a Windows based text analyzer, *Textanz* developed by Cro-Code and prepared for more elaborate disaggregation and coding of interview information by procuring Microsoft Visio in order to organize interview content by research question. The content that became unitized through Microsoft Visio was to serve as the primary audit trail for the research. Additionally a Sony ECD-S10 digital voice recorder was purchased to transcribe interviews, record field notes, and to record thoughts and content-related information from impromptu or serendipitous conversations.

Most of these preparations, analytical, and instrument appropriations were made prior to the official fieldwork and are reflective of the methodologies, strategies, and tools used for analyzing both the quantitative and qualitative data and generating the findings in Chapter IV. The inclusion of some of the strategies that emerged after the field work began is germane to understanding how the original design was influenced by unfolding research events and decisions.

CHAPTER IV

ANALYSES AND FINDINGS

*“Good is the enemy of Great.”
(Collins, 2001, p. 1)*

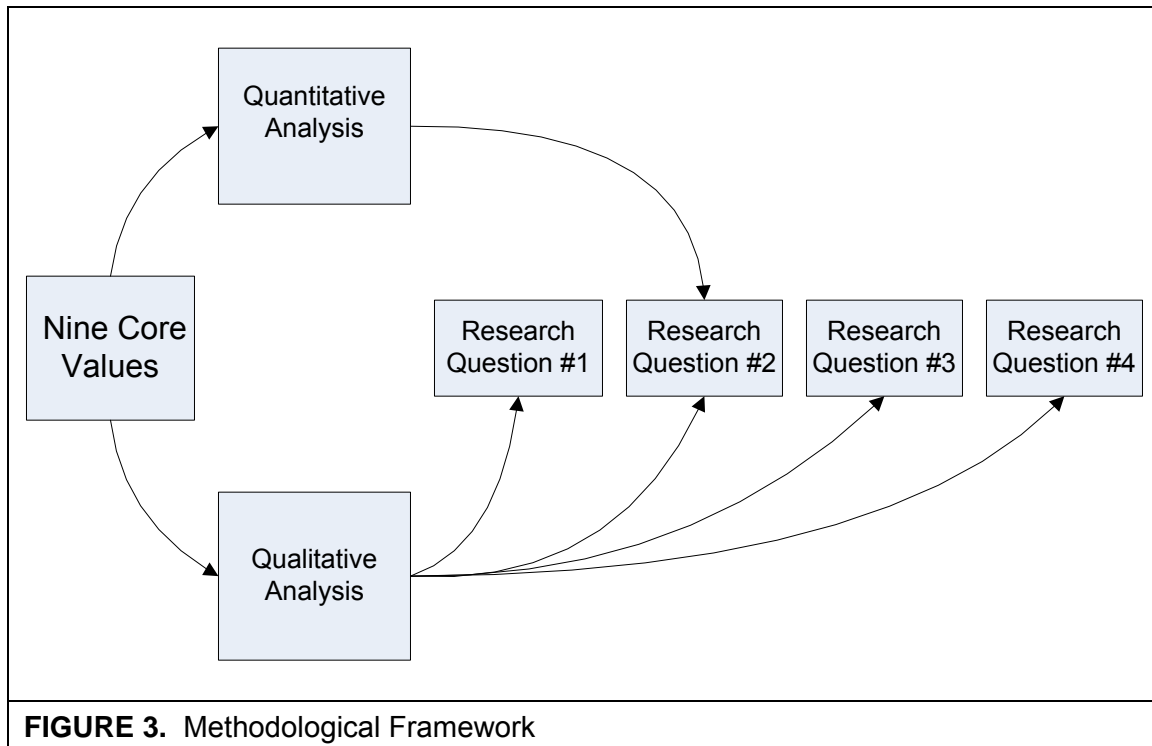
*“The systems perspective tells us that we
must look beyond individual mistakes or bad
luck to understand important problems”
(Senge, 1990, p. 42).*

*“I suppose it is tempting, if the only tool you
have is a hammer, to treat everything as if it
were a nail” (Maslow, 1966, p. 9)*

Methodology Overview

The research for this study deploys two methodologies beginning with an initial quantitative segment that serves as a preliminary exploration vehicle, much as astronomers would send a probe to gather information about a distant planet before designing and launching a second, more diversely provisioned research craft (the qualitative portion) for uncovering what the initial probe might have missed or only partially revealed. This analogy is not to imply that quantitative research is somehow inferior to qualitative, but that each provides distinctive yet complementary instrumentalities for achieving the purposes of this study, and for contributing to and shaping the Chapter IV findings, and Chapter V discussions and conclusions. The more comprehensive qualitative portion was

designed as the principal research vehicle and explores all four research questions while the quantitative portion contributes primarily to Research Question #2, as depicted in Figure 3.



The central research questions posed in Chapter I drive the study.

1. What are the espoused values and beliefs in the Leander ISD (TX) and to what extent are they consistent with Detert's Quality Management Core Values?
2. How and to what extent are practices in the Leander ISD (TX), aligned with Detert's Quality Management Core values and the philosophy of Continuous Improvement?
3. How are personal experiences in the Leander ISD (TX) reflective of or associated with, Detert's Nine Core Values and the philosophy of Continuous Improvement?
4. How are the values, beliefs, and underlying assumptions of the Leander ISD (TX) that sustain and promote Detert's Nine Core Values and the

philosophy of Continuous Improvement, manifested through District artifacts, creations, and processes?

The quantitative portion of the study was designed with two purposes in mind:

(1). to provide complementary triangulation for Research Question #2, which is the core research question of the study, and (2). to provide demographic profile information to help steer the purposeful selection of respondents for the qualitative interviews.

Quantitative Analysis

The quantitative portion of this study relies on a survey that borrows heavily from Detert, Louis, and Schroeder's 'Nine Core Values' (2001) and the formative constructs and descriptive elements used for the survey are depicted in Chapter II, Table 8, and the final instrument design is presented in Appendix A3. As revealed in the literature review, these values were selected as the constructs of choice because they were designed for school settings using the organizational culture framework. The constructs are described as 'Core Values' that Detert et al, extracted through the confluence of an exhaustive literature review, cross-referenced with the Baldrige Criteria, and combined with results from a Nominal Group Technique (NGT) analysis completed by an assemblage of Quality Management scholars and practitioners (Detert, et al, 2001). These "Core Values" served as a basis for anchoring this study and for the construction of the survey.

The instructions accompanying the survey state the following:

Along a scale from one to seven, please indicate where you perceive the operation of your school/department lies between the two value statements below. Please keep in mind, the statements are not meant to be representations of your own personal philosophy, but rather should reflect the practices your campus or department uses in accomplishing tasks and responding to stakeholders (Appendix A3).

The central purpose of the survey was to obtain some idea of the prevailing Quality Management practices purportedly occurring across the District that pertain specifically to Detert's Nine Core Values. In summary, the quantitative portion of Chapter IV serves as a tool for the qualitative interview selection process, and complementary triangulation device for Research Question #2, while the qualitative portion serves as the primary delivery vehicle for addressing all four research questions. The combination of quantitative and qualitative methodologies for case study work in the social and behavioral sciences is becoming more common if not preferred as researchers pick and choose combinations that best suit the purposes of their studies (Tashakorri & Teddlie, 2008).

Quantitative Instrumentation

A seven point Likert scale was used for the survey design. While Likert scaled surveys are widely used across a broad array of disciplines (Vogt, 1993, Bernard, 2000), they are not without caveat or controversy with regard to application. Most Likert-type scales contain an odd number of response choices,

other, or in some instances a staff member will embrace Traditional values in one circumstance and the Continuous Improvement values in another. Neither consistently influences the decisions we make or what we do.

5. Somewhat embraces the Traditional Values – these values occasionally influence what we do.
6. Significantly embraces the Traditional Values – these values frequently influence what we do.
7. Totally embraces the Traditional Values – these values always influence what we do.

The lower the Likert scale number, the more prevalent is the emphasis on “Continuous Improvement Values”, with the higher numbers representing a preference for the “Traditional Values”. The scale was developed in the manner presented so that participants would not associate a higher score or number with Continuous Improvement, which could conceivably bias the responses.

Although the directions for the survey asked for observed practices, the responses are essentially reflections of opinion subject to personal and/or institutional bias, and Likert-type surveys generally lack checks as to whether the respondents are telling the truth (Cohen, Manion, & Morrison, 2000). Given these limitations, the results from the quantitative portion of the study serve to inform Research Question #2: How and to what extent are practices in the Leander ISD (TX) aligned with Detert’s Quality Management Core values and the philosophy of Continuous Improvement? Surveys are particularly appropriate when addressing the ‘who’, ‘what’, ‘where’, ‘how many’, and ‘how much dimensions of a study (Yin, 2003).

Other caveats and limitations to consider are that the intervals between points on a Likert scale cannot be assumed to be equal, ordinarily there is no

way of knowing the extent participants would prefer to clarify or explain their responses, the possible negative connotations associated with selecting answers at the extremes of the scales may influence the responses, and some respondents may succumb to selecting answers at the mid-point of the scale to shorten the time required for the survey or to pick a 'safe' answer between two extremes (Cohen, et al, 2000). While the selection of a 'seven points' or greater scale can help to mitigate mid-point bias (Matell & Jacoby, 1972), the results from Likert scaled instruments are not without limitations.

The survey used in this study (Appendix A3) borrows descriptors for both "Continuous Improvement Values" and "Traditional Values" which are adaptations of those originally coined by Detert, Louis, and Schroeder (2001) which for the purposes of this study were modified to reach a wider audience of school employees. Additionally, the descriptors for each value arguably contain elements that invite further delineation, as evident in subsequent work by Detert, Schroeder, and Cudeck, that produced the SQMCS (2003). The SQMCS (School Quality Management Culture Survey) was designed for teachers and conflicted somewhat with the purposes of this study which sought a wider audience, one to include administrators, staff, and other employees. The researcher makes no claims that the instrument used for this study cannot be further refined or that the results are transferable to other settings.

The sample populations were split into two basic groups, a smaller administrator group that consisted of Central Office administrators, campus

principals, and assistant principals, and the much larger “randomized sample” group that represented all other employees of the District (Table 13). From the ‘administrators’ group there were 86 returns from a total of 95, 82 of which contained complete responses, which constitutes a 86.32% return rate and a sampling size that exceeds the Krejcie and Morgan table recommendation of 76

TABLE 13. Survey Returns for Administrators			
Group	Total Population	Complete Returns	Krejcie & Morgan Recommended Sample Size (1970)
Administrators (Central Office, Campus Principals, Assistant Principals)	95	82	76
Randomized Remainder - Instruction, Transportation, Food Services, Maintenance, Other (instructional support) and other Campus Assignments	2713 – 95 = 2618	380	338

(Krejcie & Morgan, 1970). The two ‘randomized’ general population sample sets generated 391 returns from 1300 mail-outs representing a population of (2713-95) 2618, 380 of which were complete, producing a return rate of 29.23% and exceeding the Krejcie & Morgan sample size recommendation of 338.

Descriptive Analyses and Measures of Central Tendencies

The focus of the descriptive statistics resides chiefly in the larger demographic profiles, to draw a better correlation with the inferential statistics which are governed more rigidly by sample size (Krejcie & Morgan, 1970) and because larger sample sizes at the $N \geq 30$ level reduce the degree of uncertainty for inferential analysis (Spatz, 2001). The quantitative analyses endeavored to minimize comparison groups across multiple 'cuts' or reductions that violated the $N \geq 30$ threshold, and the demographic profiles that produced the largest profiles were 'Gender', 'Service Function', 'Years of Experience', and 'Campus assignment'. The "District-wide or multiple campus" designation from the Campus Profile group (Appendix A3), crossed over all campuses and service functions but did not yield any unique or distinguishing characteristics that would be useful for analysis beyond that provided by the other demographic profiles, failed in many instances to meet the $N \geq 30$ threshold, and was not subsequently analyzed as a separate category nor was it included in the "Campus" analyses. The "Other" demographic group under the "Service Function" category, which included professional and paraprofessional educators providing instructional or extracurricular support, was added to the "Instruction" group in the randomized sample by campus classification from information gleaned from the District-supplied personnel spreadsheet. Food Services, Maintenance, and Transportation employees were combined as the 'Support

Function' (SF) grouping. The initial descriptive results were generated through Microsoft Excel and subsequently crosschecked using the descriptive tools of SPSS 12.1, during the spring of 2005. The descriptive statistics and inferential analyses that follow, strive to extract information relevant to Research Question #2 and provide triangulation material for the Chapter IV findings and the Chapter V discussions and conclusions.

Descriptive Statistics for Core Value #1: Role of Vision – “A Shared Vision and Shared Goals among Faculty, Staff, and Administrators are Critical for School Success”

The descriptive statistics for Core Value # 1 indicate that the administrators of the District “perceive” QM/CI (Quality Management/Continuous Improvement) practices occurring in their department or campus to a greater extent than any of the other groups, with the Support Function employees (Food Services, Maintenance, and Transportation) seeing the least, although the Mode for all groups was a “2” which suggests an organization that leans substantially towards CV #1 (Role of Vision, Table 14). Experience in the District appears to be a factor with those employees with 8 or more years of experience scoring the most favorable observations regarding QM/CI. The female/male and elementary/secondary campus comparison groups produced the most tightly clustered means for this Core Value, and the “Instruction”/SF” and “8 or more

years”/”3-7 years” comparison categories recorded the largest mean differentials.

TABLE 14. Descriptive Statistics for Core Value # 1: Role of Vision				
Group	N	Mean	Mode	Standard Deviation
Administrator List	82	*2.28	2	1.18
Randomized General Employee List	380	2.54	2	1.26
Female	304	2.54	2	1.24
Male	76	2.57	2	1.36
Instruction + Others (Instructional Support)	304	2.47	2	1.24
Food Services, Maintenance, Transportation (SF)	76	**2.82	2	1.33
Elementary Instruction + Elementary Others	147	2.52	2	1.25
Secondary Instruction + Secondary Others	98	2.60	2	1.35
8 or more years completed in District	99	2.29	2	1.00
3-7 years completed in District	133	2.68	2	1.25
0-2 years completed in District	148	2.58	2	1.41
* Lowest score; Suggestive of More QM/CI “Core Value” Influence				
**Highest score; Suggestive of Less QM/CI “Core Value” Influence				

*Descriptive Statistics for Core Value #2: Determination of Educational Needs –
“Educational Needs Should Be Determined Primarily by Parents, Community
Groups, Students, and Other Stakeholders”*

While the “Administrator List” score is lower than that from the “Randomized General Employee List”, the employee group with the lowest score is the profile with “8 or more years” of District experience, and the highest score comes from the male employees (Table 15). However, the internal data revealed that 29 of the 76 male respondents come from the SF group which may skew the results. With the exception of the Support Function Employees, Core

Value #2 recorded the highest overall mean scores of all the Core Values which suggests that ‘outside stakeholder involvement’ is considered the least implemented Core Value.

Group	N	Mean	Mode	SD
Administrator List	82	2.91	2	1.29
Randomized General Employee List	380	3.13	2	1.57
Female	304	3.08	2	1.55
Male	76	**3.32	2	1.68
Instruction + Others (Instructional Support)	304	3.10	2	1.57
Food Services, Maintenance, Transportation (SF)	76	3.25	2	1.56
Elementary Instruction + Elementary Others	147	3.16	2	1.57
Secondary Instruction + Secondary Others	98	3.20	2	1.64
8 or more years completed in District	99	*2.77	2	1.36
3-7 years completed in District	133	3.21	2	1.57
0-2 years completed in District	148	3.29	2	1.67
* Lowest score; Suggestive of More QM/CI “Core Value” Influence				
**Highest score; Suggestive of Less QM/CI “Core Value” Influence				

*Descriptive Statistics for Core Value #3: Long versus Short-term Commitments –
“Improving Education Requires a Long-term Commitment”*

The trend of the administrators having the lowest mean score and the SF employees the highest continues with this Core Value (Table 16). Another trend emerging is the relatively low scores of the “8 or more years completed in District” profile compared to the other ‘experience’ groups, with the unanticipated ‘out of order’ results of the “3-7 years completed in District” group recording a higher mean score than the “0-2 years completed in District” group.

TABLE 16. Descriptive Statistics for Core Value #3: Long versus Short-term Commitments				
Group	N	Mean	Mode	SD
Administrator List	82	*2.29	2	1.10
Randomized General Employee List	380	2.82	2	1.47
Female	304	2.77	2	1.43
Male	76	3.04	2	1.61
Instruction + Others (Instructional Support)	304	2.65	2	1.37
Food Services + Maintenance + Transportation (SF)	76	**3.50	3	1.65
Elementary Instruction + Elementary Others	147	2.65	2	1.42
Secondary Instruction + Secondary Others	98	2.81	2	1.37
8 or more years completed in District	99	2.46	2	1.19
3-7 years completed in District	133	3.02	2	1.56
0-2 years completed in District	148	2.89	2	1.53
* Lowest score; Suggestive of More QM/CI "Core Value" Influence				
**Highest score; Suggestive of Less QM/CI "Core Value" Influence				

Descriptive Statistics for Core Value #4: Managing Change – “A School Should Strive to Make Continuous Changes to Improve Education”

The same trends continue with the administrators having the lowest mean score, the SF employees the highest, and the most experienced employees having the lowest mean from the “experience” groups (Table 17). This Core Value had the lowest overall Mode scores and the lowest overall Mean scores of all the Core Values.

Group	N	Mean	Mode	SD
Administrator List	82	*2.00	2	0.93
Randomized General Employee List	380	2.22	1	1.27
Female	304	2.13	2	1.19
Male	76	2.54	1	1.54
Instruction + Others (Instructional Support)	304	2.07	1	1.14
Food Services + Maintenance + Transportation (SF)	76	**2.82	1	1.59
Elementary Instruction + Elementary Others	147	2.07	2	1.09
Secondary Instruction + Secondary Others	98	2.12	1	1.30
8 or more years completed in District	99	2.13	1	1.22
3-7 years completed in District	133	2.27	2	1.29
0-2 years completed in District	148	2.22	1	1.30
* Lowest score; Suggestive of More QM/CI "Core Value" Influence				
**Highest score; Suggestive of Less QM/CI "Core Value" Influence				

*Descriptive Statistics for Core Value #5: Decision-making Involvement –
“Teachers (Employees) Should Be Active in Improving the Overall School
Operation”*

The same trends for the administrators, SF employees, and employees with “8 or more years of experience” are evident for this Core Value, and while the Mode for the SF group is the lowest, the standard deviation is the highest (Table 18).

Group	N	Mean	Mode	SD
Administrator List	82	*2.30	2	0.98
Randomized General Employee List	380	2.67	2	1.54
Female	304	2.66	2	1.52
Male	76	2.68	2	1.63
Instruction + Others (Instructional Support)	304	2.56	2	1.43
Food Services, Maintenance, Transportation (SF)	76	**3.09	1	1.87
Elementary Instruction + Elementary Others	147	2.67	2	1.50
Secondary Instruction + Secondary Others	98	2.60	2	1.43
8 or more years completed in District	99	2.51	2	1.26
3-7 years completed in District	133	2.69	2	1.57
0-2 years completed in District	148	2.76	2	1.68
* Lowest score; Suggestive of More QM/CI "Core Value" Influence				
**Highest score; Suggestive of Less QM/CI "Core Value" Influence				

Descriptive Statistics for Core Value #6: Collaboration and Autonomy–

"Collaboration Is Necessary for an Effective School"

The same trends for the administrators, SF employees, and experience groups are again present including the 'out of order' mean score for the '3-7 years' experience group for Core Value #6 (Table 19).

Group	N	Mean	Mode	SD
Administrator List	82	*2.27	2	1.07
Randomized General Employee List	380	2.56	2	1.38
Female	304	2.51	2	1.37
Male	76	2.75	2	1.42
Instruction + Others (Instructional Support)	304	2.46	2	1.33
Food Services, Maintenance, Transportation (SF)	76	**2.92	2	1.53
Elementary Instruction + Elementary Others	147	2.57	2	1.38
Secondary Instruction + Secondary Others	98	2.48	2	1.28
8 or more years completed in District	99	2.44	2	1.27
3-7 years completed in District	133	2.66	2	1.42
0-2 years completed in District	148	2.53	2	1.41
* Lowest score; Suggestive of More QM/CI “Core Value” Influence				
**Highest score; Suggestive of Less QM/CI “Core Value” Influence				

Descriptive Statistics for Core Value #7: Decision-making Environment –

“Decision-making Should Rely on Factual Information”

The same ‘descriptive’ trends among the administrators, SF employees, and ‘experience’ are again repeated (Table 20). The Mode for the SF employees and “Secondary Instruction” were 4’s which suggests the possibility of midpoint bias, a genuine incongruence between the comparative profiles, or a combination of both. This Core Value also demonstrated the tendency of the “3-7 years” experience group to score higher than the least experienced group, an anomaly that appeared in six of the nine Core Values.

Group	N	Mean	Mode	SD
Administrator List	82	*2.12	2	1.05
Randomized General Employee List	380	2.60	2	1.44
Female	304	2.58	2	1.44
Male	76	2.71	2	1.58
Instruction + Others (Instructional Support)	304	2.45	2	1.34
Food Services, Maintenance, Transportation (SF)	76	**3.20	4	1.66
Elementary Instruction + Elementary Others	147	2.29	2	1.22
Secondary Instruction + Secondary Others	98	2.88	4	1.50
8 or more years completed in District	99	2.37	2	1.31
3-7 years completed in District	133	2.79	2	1.48
0-2 years completed in District	148	2.59	2	1.48
* Lowest score; Suggestive of More QM/CI "Core Value" Influence				
**Highest score; Suggestive of Less QM/CI "Core Value" Influence				

Descriptive Statistics for Core Value #8: The Source of Problems – “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees”

The same trends among the administrators, SF employees, and “experience” profiles are again present (Table 21). The Mode for the SF and “3-7 years” employees recorded 4’s, which suggests the possibility of midpoint bias for these groups, a genuine incongruence between the comparative profiles, or a combination of both.

TABLE 21. Descriptive Statistics for Core Value #8: The Source of Problems				
Group	N	Mean	Mode	SD
Administrator List	82	*2.20	2	1.00
Randomized General Employee List	380	2.80	2	1.40
Female	304	2.74	2	1.37
Male	76	3.04	2	1.49
Instruction + Others (Instructional Support)	304	2.63	2	1.33
Food Services, Maintenance, Transportation (SF)	76	**3.49	4	1.47
Elementary Instruction + Elementary Others	147	2.59	2	1.37
Secondary Instruction + Secondary Others	98	2.83	2	1.34
8 or more years completed in District	99	2.39	2	1.19
3-7 years completed in District	133	3.06	4	1.40
0-2 years completed in District	148	2.83	2	1.47
* Lowest score; Suggestive of More QM/CI "Core Value" Influence **Highest score; Suggestive of Less QM/CI "Core Value" Influence				

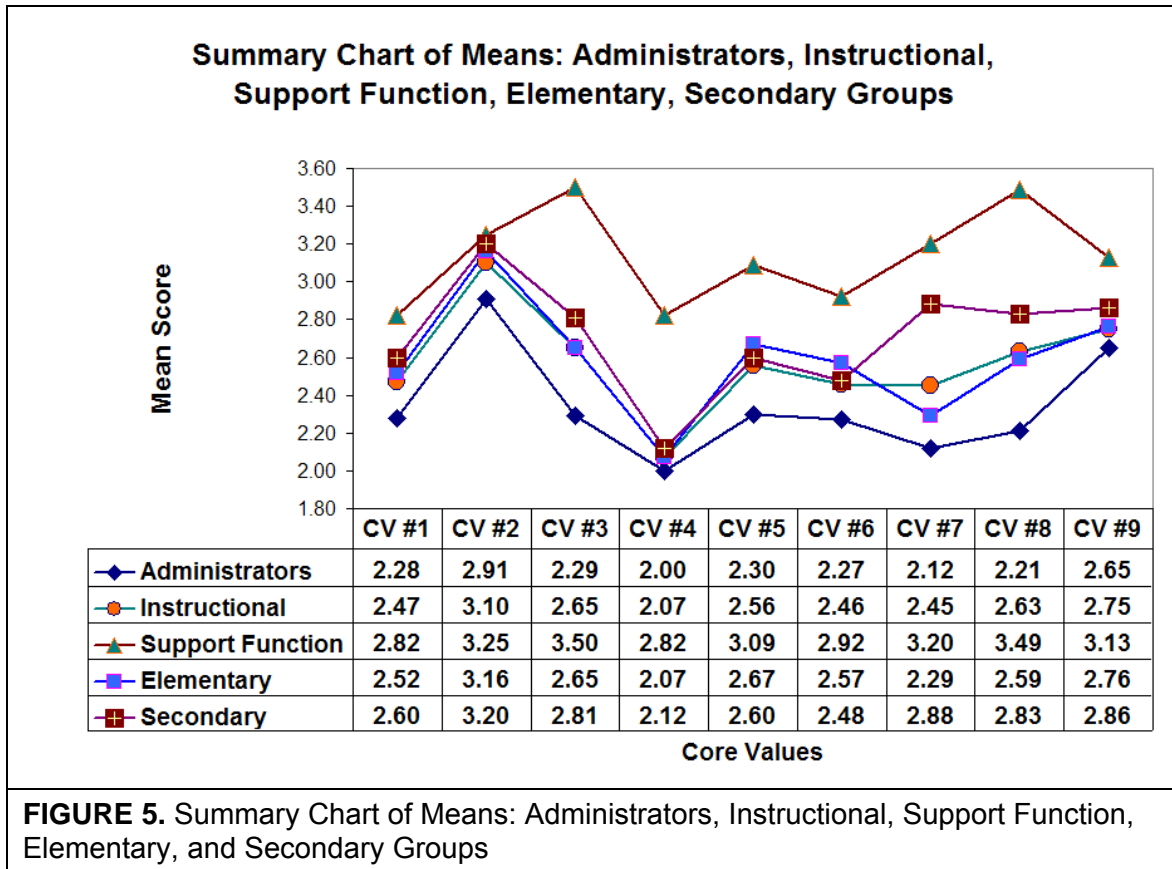
Descriptive Statistics for Core Value #9: Results and Resources – “Quality Can Be Improved within Existing Resources”

The lowest mean score was for the “8 or more years” employees and the highest from the SF employees (Table 22). The administrators recorded the highest Mode, but again had the lowest standard deviation.

Group	N	Mean	Mode	SD
Administrator List	82	2.64	3	1.00
Randomized General Employee List	380	2.82	2	1.46
Female	304	2.85	2	1.41
Male	76	2.71	2	1.64
Instruction + Others (Instructional Support)	304	2.75	2	1.37
Food Services, Maintenance, Transportation (SF)	76	**3.13	2	1.74
Elementary Instruction + Elementary Others	147	2.76	2	1.28
Secondary Instruction + Secondary Others	98	2.86	2	1.49
8 or more years completed in District	99	*2.53	2	1.26
3-7 years completed in District	133	2.83	2	1.43
0-2 years completed in District	148	3.02	2	1.58
* Lowest score; Suggestive of More QM/CI "Core Value" Influence				
**Highest score; Suggestive of Less QM/CI "Core Value" Influence				

Summary of Means: Administrators, General Population, Instructional, Support Function, Elementary, and Secondary Groups

One way to achieve a bird's eye view of the survey information is to chart the results by Core Value. Figure 5 reveals that among the administrators, instructional, support function, elementary, and secondary groups, the administrators consistently demonstrate the strongest directionality towards the "Continuous Improvement" end of the scale, and the support function employees the weakest. The administrators fit closest to the "significantly embraces the Continuous Improvement Values" point (point #2) on the Likert scale for all Core Values, except for Core Value #2 (Determination of Educational Needs) and Core Value #9 (Results and Resources) which fit closer to the "somewhat embraces the Continuous Improvement Value" (Likert scale point #3).

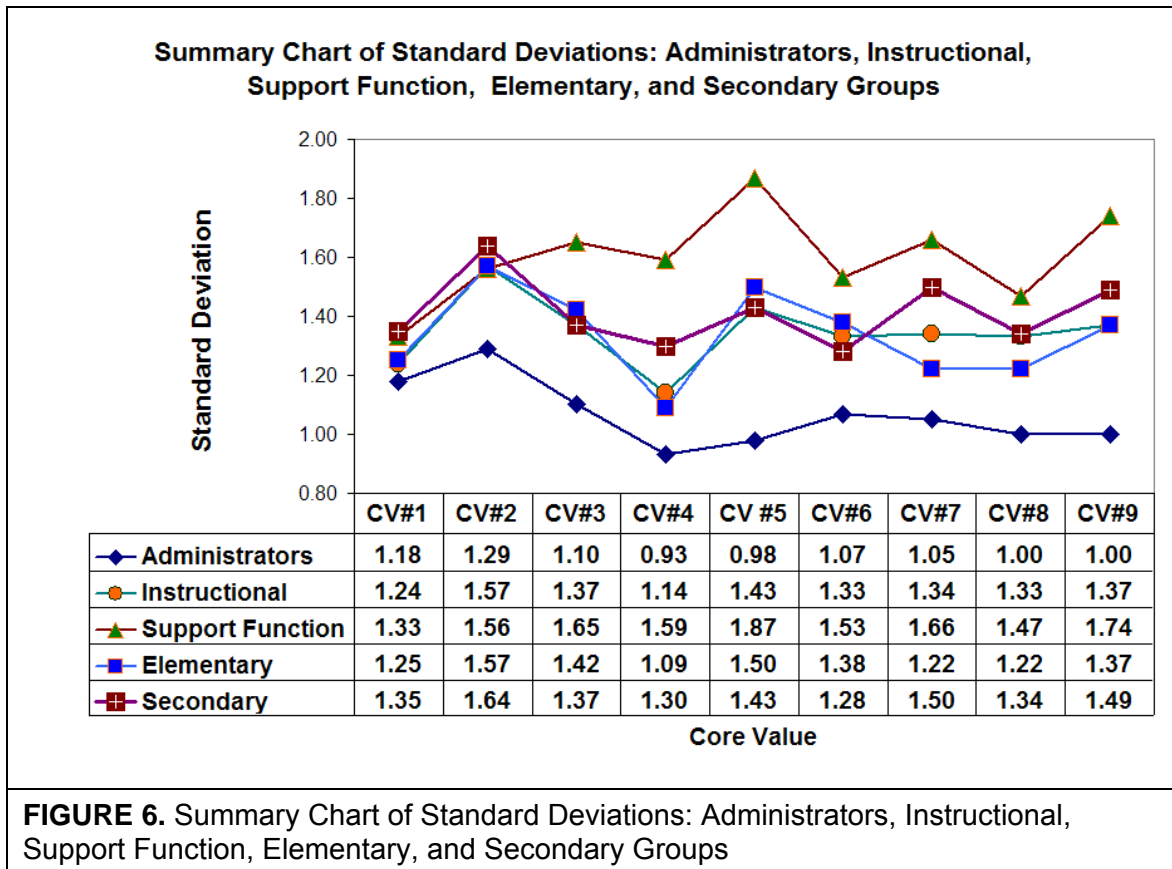


The Support Function employees generally group closer to Likert Scale point #3, “somewhat embraces the Continuous Improvement Values”, except for CV #3 (Long and Short-term Commitments) and #8 (The Source of Problems), where the scores are at the midway point between point #3 “somewhat embraces the Continuous Improvement Values” and Likert scale point #4, “split down the middle between the Continuous Improvement and Traditional Values”. The least variance of the means among all groups occur for CV #1 (The Role of Vision),

and CV #2 (Determination of Educational Needs), with the largest variance in the means represented by CV #3 (Long and Short-term Commitments) and CV #8 (The Source of Problems). The professional educators which include Administrators, Instructional, Elementary, and Secondary educator groups, are essentially aligned for CV #4 (Managing Change), and recorded mean scores which are clustered relatively close together for CV #1 (The Role of Vision), #2 (Determination of Educational Needs), #6 (Collaboration and Autonomy), and #9 (Results and Resources). The overall higher means of the “Secondary” educator group for CV #7 (Decision-making Environment) creates the highest mean difference among the “educator” groups, and the “Elementary” group scores across the Core Values trend the closest to the Administrators. The data from Figure 5 suggest that as a collective response across the groups, Core Value #2 (Determination of Educational Needs) is the most weakly endorsed Core Value and Core Value #4 (Managing Change) the strongest. The “instruction” related groups and administrators scores generally range between “significantly embraces” to “somewhat embraces” the Core Values, and the SF group responses oscillate about the “somewhat embraces” category (Point #3) on the Likert scale.

Summary of Standard Deviations for Administrators, Instructional, Support Function, Elementary, and Secondary Groups

The Administrators recorded the lowest standard deviations among the groups (Figure 6) and several standard deviations reached 1.00 or less, i.e. CV #8 (The Source of Problems), CV #9 (Results and Resources), CV #4 (Managing Change), and CV #5 (Decision-making Involvement). The collective standard deviations vary the least for Core Value #1 (Role of Vision) and the most for Core Value #5 (Decision-making Involvement). These results suggest the idea of “sharing a common vision” (Core Value #1) varies less across the District for all employee groups, while “employee involvement in making decisions” (Core Value #5) varies the most. Core Value # 2 (Determination of Educational Needs)

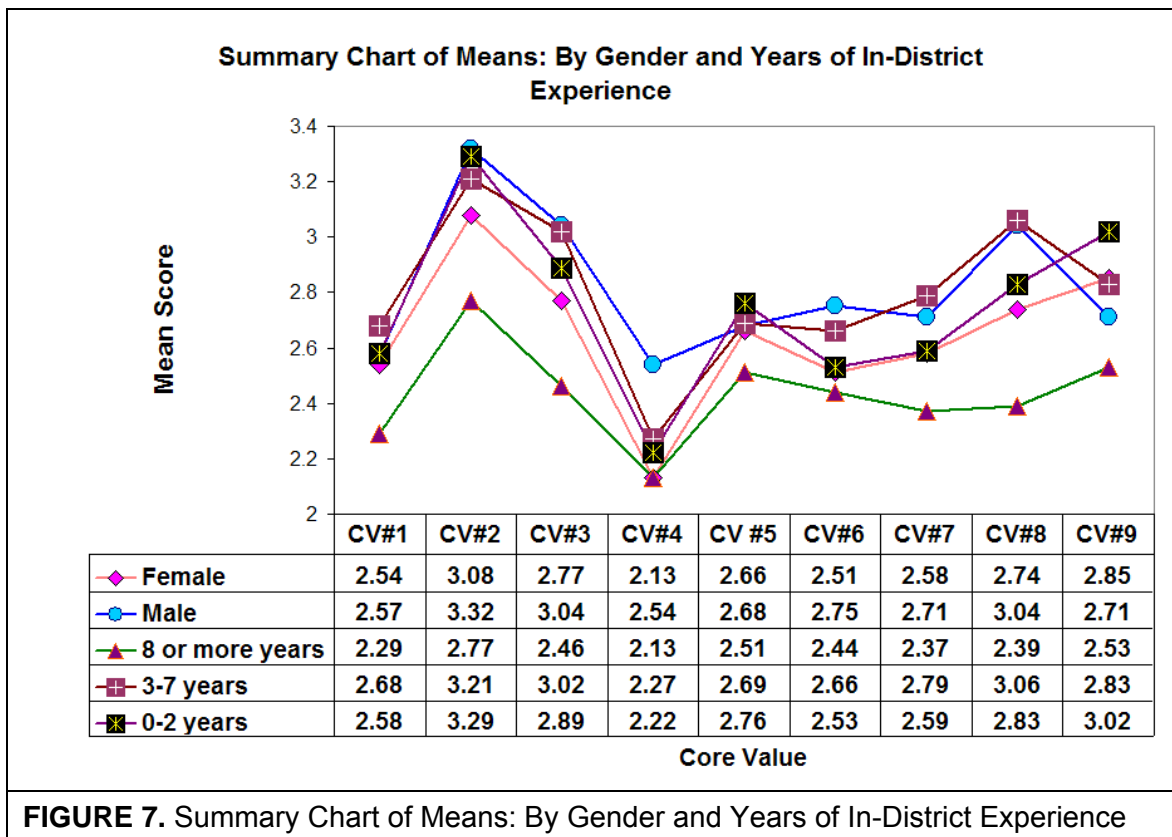


demonstrated the highest standard deviations for instruction-related employees and administrators, with Core Value #4 (Managing Change) representing the lowest.

Summary Chart of Means: By Gender and Years of In-District Experience

The male and female mean scores (Figure 7) stay within a 0.3 point differential, with the exception of CV #4 (Managing Change). The ‘female’ demographic profile generally scored somewhat more strongly towards the

Continuous Improvement end of the scale than the males with the exception of CV #9 (Results and Resources), but the 'males' category included a disproportionately higher percentage of SF employees, the female group consisting of 46/304 = 15.13%, and the male group 29/76 = 38.16%, which as depicted in Figure 7, suggests that the 'male results' may be influenced by this factor.



Similar to the educator groups and administrators results reported in Figure 5, Figure 7 indicates the same trends by gender and years of in-district

experience for Core Value #2 (Determination of Educational Needs) and Core Value #4 (Managing Change). Core Value #2 generally fits at or above the “somewhat embraces the Continuous Improvement Value” category (position 3 on the Likert scale), while CV #4 appears closer to the “significantly embraces the Continuous Improvement Value” which is represented by position 2 on the Likert scale. The experience group with “8 or more years” of in-district experience demonstrates the strongest directionality towards Continuous Improvement for all Core Values, and the intermediate experience group (3-7 years) mean scores are higher than the least experienced group (0-2 years) for six of the nine Core Values, the effect being most pronounced for Core Values #7 (Decision-making Environment, i.e. making decisions based on fact rather than personal experience) and #8 (The Source of Problems, i.e. focusing on processes rather than people).

The researcher anticipated that employees with 8 or more years of in-district experience would exhibit greater directionality towards the Continuous Improvement end of the scale. Through Continuous Improvement training and professional development over time, employees should acquire a repertoire of knowledge and skills that provide greater perspicuity in recognizing, applying, and evaluating Continuous Improvement philosophy and strategy. Also, over time, the ‘experienced’ employees would have had more opportunities for this knowledge to be reinforced through formal and informal practices, and the acquisition of culturally related understandings that help define what is

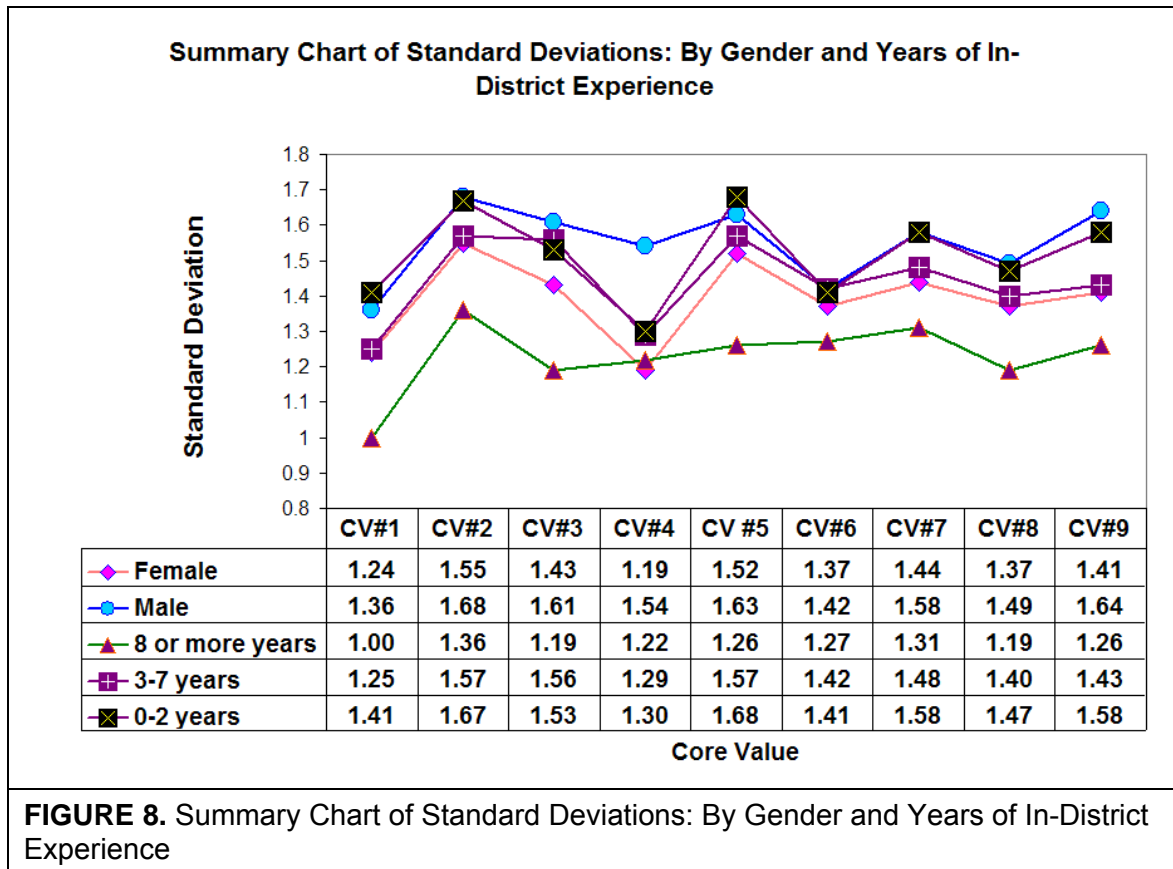
appropriate and meaningful (Zucker, 1983; Martin, 2002). Detert, Louis, and Schroeder conjecture that the “Nine Core Values” form the structural lattice that frames Continuous Improvement culture and practice (2001). The researcher anticipated that the ‘seasoned hands’ would possess a greater understanding in recognizing and interpreting CI practice in the District, but was somewhat surprised by the extent of directionality of this group’s mean scores towards the Continuous Improvement end of the Likert scale compared to that of the other ‘experience’ groups. Not only was this group’s mean scores consistently lower than the other groups depicted in Figure 7 (except for CV #8, “The Source of Problems” which tied with the “Female” group), but Core Value #2 (Determination of Educational Needs) was actually lower (2.77) than that of the administrators’ score depicted in Figure 5 (2.91). Figure 7 suggests that the District’s professional development education, training, and acculturation efforts are effective over time.

There were differences between the “0-2 years” and “3-7 years” groups, with the latter demonstrating weaker vectors towards the Continuous Improvement end of the scale for six of the nine Core Values. The researcher anticipated that the “0-2 years” experience group would consistently record weaker vectors towards Continuous Improvement, and thus the results from the “3-7” years-of-experience group presented unexpected anomalies.

Summary Chart of Standard Deviations: By Gender and Years of In-District Experience

The “8 or more” years experience group recorded the lowest standard deviations except for CV #4 (Managing Change) where the “Female” group marginally prevailed (Figure 8). Furthermore, the “8 or more” years experience group recorded the lowest standard deviation for CV #1 (Role of Vision), posting a lower SD for this CV than even the administrators. The “Male” group and the “0-2 years” experience group posted the highest standard deviations. However, any interpretation of the “Male” group results must be tempered with the understanding that this group includes a much higher proportion of SF employees, as compared to the “Female” group.

The higher standard deviations for the “0-2” years of experience employees is consistent with the greater variation in responses that one might expect from a group whose members have had fewer opportunities for professional development and training in Continuous Improvement and who have not had the range of opportunities to understand how the philosophy and associative practices are lived out.



Descriptive Statistics for 1st and 2nd Survey Distributions

One other set of descriptive statistics involved the two survey distributions used for the Randomized General Employee List (Table 23). The 1st distribution was delivered on January 20th 2005, but because the number of returned and completed surveys remained below that required by the Krejcie and Morgan table, a 2nd distribution was deemed necessary and delivered on March 3rd. The 2nd distribution generally produced lower means (with the exception of CV #2,

Core Value	1 st N	2 nd N	1 st Mean	2 nd Mean	1 st Mode	2 nd Mode	1 st SD	2 nd SD
#1	213	167	2.66	2.40	2	2	1.29	1.22
#2	213	167	3.10	3.16	2	2	1.63	1.50
#3	213	167	3.00	2.59	2	2	1.45	1.47
#4	213	167	2.39	1.99	2	1	1.31	1.19
#5	213	167	2.76	2.56	2	2	1.57	1.50
#6	213	167	2.77	2.28	2	2	1.45	1.23
#7	213	167	2.83	2.32	2	1	1.48	1.34
#8	213	167	2.96	2.59	2	2	1.39	1.38
#9	213	167	3.09	2.49	2	2	1.47	1.38

Determination of Educational Needs) and had a different mode score for Core Values #4 (Managing Change) and #7 (Decision-making Environment). The descriptive statistics suggest moderate to substantial differences in the means between the 1st and 2nd distributions with the exception of Core Value #2, and the greatest difference occurring for Core Value #9.

Core Value Ranking by Means

The final descriptive analysis consisted of arranging the groups in order of lowest to highest mean scores to gather some sense of which Core Values possessed the greatest and least vectors towards Continuous Improvement (Tables 24, 25, 26, & 27).

TABLE 24. Core Value Ranking by Means for Administrators, Randomized General Population List, and Distributions

Administrators			Randomized General Population			1 st Distribution			2 nd Distribution		
Means	SD	CV	Means	SD	CV	Means	SD	CV	Means	SD	CV
2.00	0.93	#4*	2.22	1.27	#4*	2.39	1.31	#4*	1.99	1.19	#4*
2.12	1.05	#7	2.54	1.26	#1	2.66	1.29	#1	2.28	1.23	#6
2.21	1.00	#8	2.56	1.38	#6	2.76	1.57	#5	2.32	1.34	#7
2.27	1.07	#6	2.60	1.44	#7	2.77	1.45	#6	2.40	1.22	#1
2.28	1.18	#1	2.67	1.54	#5	2.83	1.48	#7	2.49	1.38	#9
2.29	1.10	#3	2.80	1.40	#8	2.96	1.39	#8	2.56	1.50	#5
2.30	0.98	#5	2.82	1.47	#3	3.00	1.45	#3	2.59	1.38	#8
2.65	1.00	#9	2.82	1.46	#9	3.09	1.47	#9	2.59	1.47	#3
2.91	1.29	#2**	3.13	1.57	#2**	3.10	1.63	#2**	3.16	1.50	#2**

Note: * Denotes Lowest Group Mean
Note: ** Denotes Highest Group Mean

TABLE 25. Core Value Ranking by Means for Gender, Instruction, and Support Function

Female			Male			Instruction & Instructional Others			Support Function		
Means	SD	CV	Means	SD	CV	Means	SD	CV	Means	SD	CV
2.13	1.19	#4*	2.54	1.54	#4*	2.07	1.14	#4*	2.82	1.33	#1*
2.51	1.37	#6	2.57	1.36	#1	2.45	1.34	#7	2.82	1.59	#4
2.54	1.24	#1	2.68	1.63	#5	2.46	1.33	#6	2.92	1.53	#6
2.58	1.44	#7	2.71	1.58	#7	2.47	1.24	#1	3.09	1.87	#5
2.66	1.52	#5	2.71	1.64	#9	2.56	1.43	#5	3.13	1.74	#9
2.74	1.37	#8	2.75	1.42	#6	2.63	1.33	#8	3.20	1.66	#7
2.77	1.43	#3	3.04	1.49	#8	2.65	1.37	#3	3.25	1.56	#2
2.85	1.41	#9	3.04	1.61	#3	2.75	1.37	#9	3.49	1.47	#8
3.08	1.55	#2**	3.32	1.68	#2**	3.10	1.57	#2**	3.50	1.65	#3**

Note: * Denotes Lowest Group Mean
Note: ** Denotes Highest Group Mean

8 or more years of District experience			3-7 years of District Experience			0-2 years of District Experience		
Means	SD	CV	Means	SD	CV	Means	SD	CV
2.13	1.22	#4*	2.27	1.29	#4*	2.22	1.30	#4*
2.29	1.00	#1	2.66	1.42	#6	2.53	1.41	#6
2.37	1.31	#7	2.68	1.25	#1	2.58	1.41	#1
2.39	1.19	#8	2.69	1.57	#5	2.59	1.58	#7
2.44	1.27	#6	2.79	1.48	#7	2.76	1.68	#5
2.46	1.19	#3	2.83	1.43	#9	2.83	1.47	#8
2.51	1.26	#5	3.02	1.56	#3	2.89	1.53	#3
2.53	1.26	#9	3.06	1.40	#8	3.02	1.58	#9
2.77	1.36	#2**	3.21	1.57	#2**	3.29	1.67	#2**

Note: * Denotes Lowest Group Mean
Note: ** Denotes Highest Group Mean

Elementary Instruction & Elementary 'Others'			Secondary Instruction & Secondary 'Others'		
Means	SD	CV	Means	SD	CV
2.07	1.09	#4*	2.12	1.30	#4*
2.29	1.22	#7	2.48	1.28	#6
2.52	1.25	#1	2.60	1.35	#1
2.57	1.38	#6	2.60	1.43	#5
2.59	1.37	#8	2.81	1.37	#3
2.65	1.42	#3	2.83	1.34	#8
2.67	1.50	#5	2.86	1.49	#9
2.76	1.28	#9	2.88	1.50	#7
3.16	1.57	#2**	3.20	1.64	#2**

* Lowest score; Suggestive of More QM/CI "Core Value" Influence
**Highest score; Suggestive of Less QM/CI "Core Value" Influence

With the exception of the Support Function employees, all demographic profiles demonstrated the strongest vector towards Core Value #4 (Managing Change and the weakest for Core Value #2 (Determination of Educational

Needs). The Support Function employees viewed Core Value #1 as the strongest and #3 as the weakest. The SF employees' mean score for Core Value #2 of 3.25 was still relatively high, but marginally lower than the Randomized General List 'male' score of 3.27, and the RGL '0-2 years of experience' group score of 3.29.

Summary of Descriptive Statistics

The administrators had the lowest mean scores, with the exception of Core Values #2 (Determination of Educational Needs) and # 9, (Results and Resources), the SF employees the highest (with the exception of Core Value #2), and the "8 or more years" employees were consistently the lowest among the 'experience groups'. Indications of a stronger affiliation with and affinity for the Continuous Improvement philosophy from the administrators was anticipated by the researcher, as the earlier QM literature emphasized the role of "top management commitment" (Crosby, 1979; Garvin, 1988; Jablonski, 1992; Ahire, et al 1995; Deming, 1995; Hackman & Wageman, 1995), which was highlighted through Deming's "14 Points of Management" (Deming, 2002, p. 23).

Additionally, school administrators and leaders may serve in a number of important symbolic roles, exemplified by one or more of several functions: historian, anthropological sleuth, visionary, symbol, potter, poet, actor, and healer (Deal & Peterson, 1999). These roles imply that the 'leader' is more intimate with the organization's culture and possesses the commitment,

knowledge, skills, and experience to understand, promote, and pass the culture along to others. Because the philosophy of Continuous Improvement has survived in the Leander ISD for over 15 years, it is reasonable to assume that key management personnel generally believe in the philosophy, and are knowledgeable about and encourage and support it, and the descriptive statistics generally bolster this assumption.

The 'female' demographic profile generally scored more strongly towards the Continuous Improvement end of the scale than the 'male', but the 'male' category included a disproportionately higher percentage of SF employees, the female group recording $46/304 = 15.13\%$, and the male group $29/76 = 38.16\%$. The administrator group posted the lowest standard deviations for all but Core Value # 1 (Role of Vision), where the "8 or more years" employees from the randomized general population recorded the lowest SD. The SF employees had the highest Mode scores of "4" for Core Values #7 (Decision-making Environment) and #8 (The Source of Problems), and the Secondary Instructional group also recorded a "4" for Core Value #7. The mean scores for all groups and for all Core Values were less than the midpoint of the Likert scale with the majority of the scores falling between "significantly embraces" and "somewhat embraces" the associative Continuous Improvement Values; Core Value #4 (Managing Change) received the most favorable QM/CI scores and Core Value #2 (Determination of Educational Needs) the least, which suggests the

employees of the District are relatively open to accepting change and comparatively less accepting of input from 'outside' stakeholders.

Between the two distributions of the Randomized general population surveys, the first group generally had higher means, suggesting the scores were not as strongly inclined towards the CI end of the scale. The 1st Distribution surveys were delivered to the District on January 20, followed by a re-send to those who had not returned a survey some six weeks later on March 3rd, accompanied by a 2nd Distribution that was delivered on the same day. According to the District calendar, the TAKS Field Test window for that year was scheduled for January 17th through the 28th, and the 4th and 7th Grade Writing, 9th Grade Reading, 10th and 11th Grade English Language Arts, and the Exit tests were scheduled for February 21-24. The 3rd Grade Reading and 5th Grade Reading and Math were scheduled for March 2-3. By the time the 2nd Distribution was delivered on March 3rd, the bulk of the TAKS tests were finished. The results suggest that the 1st survey distribution was clearly in competition with, and possibly 'upstaged' by TAKS tests and activities in the District.

Inferential Statistical Analyses

Internal Consistency

Embedded within the quantitative portion of the study were efforts to see if the Core Value survey attributes possessed some measure of internal

consistency, and to explore and compare the relative conceptual absorption of the Nine Core Values between various demographic profiles identified in the research setting. The first inferential test conducted was for internal reliability for the “Randomized General Employee List”, determined by deriving estimations of Cronbach Alpha through SPSS 16.0, for all nine variables or Core Values (Tables 28 and 29).

		N	%
Cases	Valid	380	97.2
	Excluded(a)	11	2.8
	Total	391	100.0
(a): List-wise deletion based on all variables in the procedure			

Cronbach's Alpha	N of Items
.841	9

The second inferential test conducted was for internal reliability for the “Administrator List”, determined by calculating Cronbach Alpha using SPSS 16.0, for all nine dependent variables or Core Values (Tables 30 and 31).

TABLE 30. Case Processing Summary for Administrator List

		N	%
Cases	Valid	82	95.3
	Excluded(a)	4	4.7
	Total	86	100.0

(a): Listwise deletion based on all variables in the procedure.

TABLE 31. Reliability Statistics for Administrators

Cronbach's Alpha	N of Items
.902	9

Internal consistency is a measure of how well the items used to measure a concept “hang together” (Kent, 2001, p. 209). A cutoff value of 0.70 or above is considered an adequate scale for internal reliability (Nunnally, 1978), and a value of 0.80 is considered by many researchers to be a good scale (Bernard, 2000). Overall, the Cronbach Alpha scores suggest that the survey was consistent in measuring the construct attributes for which it was designed.

Hypothesis Testing

Hypothesis testing is at the heart of inferential statistics, and follows the logic of establishing two hypotheses that cover all the possibilities about a parameter. The first is usually a hypothesis of equality or “no difference”, called

the null hypothesis, while the second or alternative hypothesis conversely states the parameter is not equal or that there is a difference (Ary, Jacobs, & Razavieh, 1990; Spatz, 2001). The dependent variables are the Nine Core Values and the demographic profiles constitute the independent variables such that the variance of group means between and within profiles can be measured and compared through inferential statistical analyses. The researcher decided to develop null and alternative hypotheses for the inferential statistics as follows:

H₀: There is no statistically significant variation of group means between the major demographic comparison profiles of the District for any of the Nine Core Values at the $\alpha=.05$ level.

H₁: There is statistically significant variation of group means between one or more of the major demographic comparison profiles for one or more of the Nine Core Values at the $\alpha=.05$ level.

The major demographic comparison profiles were grouped by gender, service function, campus or responsibility assignment, and years of experience in the District. The researcher applied a decision or significance rule of $\alpha=.05$ for all tests which is considered the most conventional level for determining significance in the field of education (Ary, Jacobs, and Razavieh, 1990; Muijs, 2004).

There was no intent by the researcher to develop or promote the survey as a standardized metric because this would have required trials and macro analyses across multiple school districts and settings which would have exceeded the researcher's available time, resources, and reached beyond the purpose of the study.

Inferential Statistical Analyses: Methodology

The SPSS General Linear Model (GLM) for Multivariate Analysis was the statistical tool of choice used to test for between-group variation of the dependent variables (Nine Core Values), while using gender, various classifications of job and campus assignments, and years of experience in the District as the distinguishing independent variables. The SPSS GLM multivariate analysis allows for simultaneous univariate analysis for each dependent variable or Core Value against selected independent variables using the Type III Sum of Squares estimate for either balanced or unbalanced models with no empty data cells (SPSS Library, 2009), which fit appropriately with the assumptions and data sets of this study. Partial Eta Squared (effect size) and Observed Power were two optional post hoc SPSS analyses the researcher chose to include in the statistics to possibly add explanatory depth in the decisions to retain or reject the null hypothesis and to provide comparison measures for future studies (Muijs, 2004).

Partial Eta Squared (η^2_{partial}) represents the proportion of variance in the dependent variable explained by the grouping factor (Levine, Page, Braver, & MacKinnon, 2003) and is formulaically defined as:

$$\eta^2_{\text{partial}} = \text{SS}_{\text{between}} / (\text{SS}_{\text{between}} + \text{SS}_{\text{error}})$$

where “ SS_{between} ” is the between-treatments sum of squares and “ SS_{error} ” is the error sum of squares, which represents the sum of the variability within each of the groups (Levine & Hullett, 2002; Pierce, Block, & Aquinis, 2004).

According to Cohen, the power analysis “exploits the relationships among the four variables involved in statistical inference, sample size (N), significance criterion (α), population effect size (ES), and statistical power” (1992, p. 156), such that a statistical relationship exists wherein each is a function of the other three (Cohen, 1992). Given a sample size of N , a significance criterion of α , an effect size of ES, the statistical power ($1-\beta$) of a ‘significance test’ represents the long-term probability of rejecting H_0 (Cohen, 1992). Power is often viewed as the probability that a researcher will find a relationship or difference that actually exists (Onwuegbuzie & Leech, 2004), which is the value expressed by “ $1 - \beta$ ” and indicates the probability of rejecting a false null hypothesis (Cohen, 1992), where β represents the probability of retaining a false H_0 (Spatz, 2001). The goal of the researcher was to include all four determinants involved in statistical inference, two of which were predetermined, the sample size in accordance with the Krejcie and Morgan Table, and a significance or alpha level of .05. The researcher deferred to the conventional practice of using ‘ $1 - \beta$ ’ power values of .80 or greater for rejecting the H_0 (Cohen, 1992), and assigning to Partial Eta Squared results, insignificant, small, medium, or large effect sizes, corresponding respectively to cutoff values of $<.01$, $\geq .01$, $\geq .06$, and $\geq .14$ (Brace, Kemp, and Snelgar, 2003; Pallant, 2007). For making informed null and

alternative hypothesis decisions, the prudent researcher will take into consideration all four inferential determinants (Cohen, 1992), and in this study rejecting the null hypothesis, requires a 'p' of $<.05$, and an 'observed power' value $\geq .80$ or an 'effect size' $\geq .14$. And as a final note, this study was essentially based on confirmatory statistical tests and procedures, and was not designed as an experimental study. Armed with SPSS 16.0, the researcher proceeded to conduct the inferential analyses, beginning with the District Administrators (Tables 32 and 33).

Tests of Between-Subjects Effects of the Administrator Group by Gender

Administrators are generally associated with the leadership and management of an organization and the early QM gurus such as Deming and Juran placed a premium on management responsibility (Juran, 1989, Deming, 1994). The researcher chose to separate the administrators from the general employee population because the organizational leaders are generally viewed as having the responsibility to "walk ahead" (Senge, 1999, p. 19), and to lead by example.

Although the 'male' administrator sampling size of $N=27$ (Table 32) falls just short of the $N\geq 30$ threshold, it exceeds the 'minimum' sample size of $N=26$ extrapolated from the Krejcie & Morgan Table (1970) for a population of $N= 29$

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	55	67.1	67.1	67.1
	M	27	32.9	32.9	100.0
Total		82	100.0	100.0	

(the total number of male administrators in the District). The resultant analysis (Table 33) indicates that there was no statistically significant variation by gender for the Administrator Group at the $\alpha=.05$ level. The researcher used a 'rule of thumb' for all of the effect size estimates wherein Partial Eta Squared (η^2) is considered insignificant for values $< .01$, and small, medium, and large respectively for values of $\geq .01$, $\geq .06$, and $\geq .14$ (Brace, Kemp, and Snelgar, 2003; Pallant, 2007). Based on the aforementioned assumptions and the resulting statistical results, H_0 is retained for the Administrator group by Gender. The Partial Eta Square values indicate a small predictive effect for Core Values

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Gender	Core Value #1	.046	1	.046	.033	.856	.000	.011
	Core Value #2	.000	1	.000	.000	.989	.000	.010
	Core Value #3	.033	1	.033	.026	.872	.000	.011
	Core Value #4	1.776	1	1.776	2.052	.156	.025	.120
	Core Value #5	1.634	1	1.634	1.717	.194	.021	.098
	Core Value #6	1.249	1	1.249	1.076	.303	.013	.060
	Core Value #7	2.246	1	2.246	2.059	.155	.025	.121
	Core Value #8	.769	1	.769	.749	.389	.009	.042
	Core Value #9	.001	1	.001	.001	.978	.000	.010

#4 (Managing Change), #5 (Decision-making Involvement), #6 (Collaboration and Autonomy), and # 7(Decision-making Environment), but no practical information or predictive effects for the remainder. The SPSS Observed Power results, indicating '1- β ' values of .120 or less, were consistent with the "p" values and support the decision to retain the null hypothesis for this particular demographic profile comparison. The argument to retain H_0 is strongest for Core Value # 2 (educational needs should be determined by parents, community groups, students, and other stakeholders) where the F ratio is the lowest of the Core Values indicating little to no difference between the "between group" and "within group" variation.

Tests of Between-Subjects Effects of the Administrator Group by Assignment

The next task was to search for any significant statistical variation in role assignment between the Central Office administrators, principals, and assistant principals. Because N for both the CO administrators (N=24) and principals (N=23) was below the $N \geq 30$ criterion, the researcher made the decision to combine the two (N=47) and compare the variation in responses of the combined group with the assistant principals (N=32). Three of the administrator respondents were coded in such a manner as to render incompatibilities with the classifications of Central Office, Principal, or Assistant Principal and were omitted from this analysis, which created a lower total 'N' of 79 (Table 34).

TABLE 34. Between-Subjects Factors by Assignment for Administrator List		
		N
Admin. Assignment	CO Admin & Principals	47
	Assistant Principals	32

Combining the central office administrators with the principals (N=47), and examining this grouping against the assistant principals (N=32), produced no statistically significant variation for the nine Core Values at the $\alpha = .05$ level (Table 35). Because none of the SPSS "Sig" or "p" values were below .05

TABLE 35. Tests of Between-Subjects Effects of the Administrator Group by Assignment: CO Administrators and Principals versus Assistant Principals

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
Admin. Assignment	Core Value #1	.012	1	.012	.010	.921	.000	.010
	Core Value #2	.040	1	.040	.024	.877	.000	.011
	Core Value #3	.641	1	.641	.596	.442	.008	.035
	Core Value #4	.002	1	.002	.003	.959	.000	.010
	Core Value #5	.040	1	.040	.042	.838	.001	.012
	Core Value #6	3.622	1	3.622	3.451	.067	.043	.224
	Core Value #7	.030	1	.030	.027	.869	.000	.011
	Core Value #8	.393	1	.393	.385	.537	.005	.025
	Core Value #9	.179	1	.179	.160	.690	.002	.016

and none of the Observed Power statistics reached Cohen's suggested .80 or above criterion (Cohen, 1992), the null hypothesis by administrator group assignment is retained. The effect sizes indicate no predictive potential with the exception of Core Value #6, which would be classified as "small".

Tests of Between-Subjects Effects of the Administrator List by Experience

The final analysis for the administrator group examined the experience factor. None of the central office administrators or principals had 2 or fewer years of completed experience in the District, and only 13 of the assistant principals fit into this category. However as individual categories, the "2 or fewer years" (N=13) and "3-7 years" (N=22) groups failed to meet the $N \geq 30$ criteria.

For analysis purposes the two were combined (N=35) and examined against the “8 or more” (N=47) years of in-District experience category (Table 36).

TABLE 36. Between-Subjects Factors by Experience for Administrator List			
		Value Label	N
Experience Groups	1	8 or more years	47
	2	0-7 years	35

The between-subjects measures reveal no statistically significant variation at the $\alpha=.05$ level, between those with 8 or more years of District experience to those with “0-7 years” for all Core Values (Table 37). Core Values #3, #7, and #8 have small predictive potential, while the remaining values are insignificant, and none of the Observed Power values would dissuade the researcher from retaining the null hypothesis for the administrator “experience” groups at the $\alpha=.05$ level. The argument to retain H_0 is strongest for Core Value # 2 where the F ratio is the lowest of the Core Values indicating little difference between the “between group” and “within group” variation.

Summary Inferential Analyses for the Administrator Groups

For the Administrator Groups, there are no statistically significant variations in the means for gender, administrative assignment, or years of experience in the District, at the $\alpha=.05$ level for all of the Nine Core Values

and the null hypothesis for each of the three tests is retained. Unlike the “Randomized General Population” List, there was no 2nd Distribution of surveys

TABLE 37. Tests of Between-Subjects Effects of the Administrator List by Experience

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Experience	Core Value #1	.812	1	.812	.586	.446	.007	.034
	Core Value #2	.110	1	.110	.065	.800	.001	.012
	Core Value #3	3.458	1	3.458	2.884	.093	.035	.181
	Core Value #4	.330	1	.330	.374	.543	.005	.025
	Core Value #5	.180	1	.180	.186	.667	.002	.017
	Core Value #6	1.569	1	1.569	1.356	.248	.017	.076
	Core Value #7	2.660	1	2.660	2.450	.121	.030	.149
	Core Value #8	3.328	1	3.328	3.347	.071	.040	.216
	Core Value #9	.722	1	.722	.654	.421	.008	.038

for the administrator group, although there were a few surveys that were lost or “misplaced” for which replacements were provided. Inferential analyses of Administrator groupings by service function and campus or department were not conducted because none of these combinations met the $N \geq 30$ threshold or the Krejcie and Morgan Table sample-size recommendations.

Randomized General Population

In order to meet the recommended sample size in accordance with the Krejcie and Morgan table (1970), the researcher sent out a 2nd distribution of surveys to the randomized general population. The 2nd sample distribution was

determined using the Macro Systems Random Number Generator to parse a new 650 block of participants from the general population, less the 650 participants selected from the first distribution. The first distribution produced 214 complete surveys, and the second yielded 166 (Table 38).

	Value Label	N
Survey Distributions	1	214
	2	166

One of the analyses under the descriptive statistics (Table 23) created some nagging doubts about the statistical variation that might exist between the two distributions of surveys that were collected from the non-administrative employees of the District. Therefore, the next task selected was to determine if there was any statistically significant variation among the dependent variables or 'Core Values' for the two distributions (Table 39).

The difference between the First and Second Distributions is statistically significant for the between-subjects effects at the $\alpha=.05$ level, for Core Values #3 (Long and Short-term Commitments), #4 (Managing Change), #6 (Collaboration and Autonomy), #7 (Decision-making Environment), #8 (The Source of Problems), and #9 (Results and Resources). The results indicate that the chances of committing a Type II error, of retaining a false null hypothesis, is

small for Core Values #4, #6, #7, and #9, as indicated by the respective Observed Power values, while the effect sizes for the Core Values do not rise beyond “small” and therein provide little predictive authority.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
Distributions	Core Value #1	6.156	1	6.156	3.877	.050	.010	.502
	Core Value #2	.271	1	.271	.110	.741	.000	.063
	Core Value #3	14.878	1	14.878	6.987	.009*	.018	.751
	Core Value #4	14.503	1	14.503	9.140	.003*	.024	.854**
	Core Value #5	3.450	1	3.450	1.454	.229	.004	.225
	Core Value #6	22.806	1	22.806	12.332	.000*	.032	.939**
	Core Value #7	22.671	1	22.671	11.183	.001*	.029	.916**
	Core Value #8	12.631	1	12.631	6.552	.011*	.017	.723
	Core Value #9	33.225	1	33.225	16.269	.000*	.041	.980**

Note: * p<.05
Note: ** 1-β ≥ .80

The “two distributions” do not represent any particular demographic profile of the District, but the analyses indicate that variation did occur at a statistically significant level for at least Core Values #4 (Managing Change), #6 (Collaboration and Autonomy), #7 (Decision-making Environment) and #9 (Results and Resources) according to the “p” and “1-β” values, and for all but CV #1 (Role of Vision), #2 (Determination of Educational Needs) and #5 (Decision-making Involvement) based on the “p” values alone, due to one or more factors associated with the dates the surveys were distributed. Inspection

of the estimations reveals that Core Value #2 again has the lowest F ratio, highest 'p', and lowest η^2 and Observed Power values, and is therefore the most resistant of the Core Values to H_0 rejection. Overall, the results suggest that H_0 should be rejected for core values #4 (Managing Change), #6 (Collaboration and Autonomy), #7 (Decision-making Environment) and #9 (Results and Resources), considering both the "p" and "1- β " values. Consequently, all subsequent GLM multivariate analyses for the "Randomized" demographic profiles, divide the Core Values into separate tables, one for Core Values #1, #2, #3, #5, and #8 which failed to generate statistically significant values for rejecting H_0 based on 'p', and ' η^2 ' or '1- β ' calculations, and a second using 2-factor factorial analysis which adds the "Distribution" fixed factor and "Interaction" analysis in the GLM calculations to correct for possible response bias for Core Values #4, #6, #7, and #9.

Tests of Between-Subjects Effects and Two Factor Factorials for the Randomized General List by Gender

The next analysis for the Randomized General employee list, examines variation by gender and Table 40 delineates the sample sizes.

		Value Label	N
Gender	1	Female	304
	2	Male	76

The results from the interaction factorial table (Table 42) indicate that “Distribution” bias does not affect analysis of variation by Gender at the $\alpha=.05$ level for Core Values #4, #6, #7, and #9. Among the two tables (Tables 41 & 42), the only Core Value exhibiting statistical significance of variance was #4 (Managing Change), but the observed power value did not reach the .80 level. All effect sizes were insignificant except for #4, which was small. Overall, the data suggests that H_0 should be retained for all of the Core Values by gender, with Core Value #5 (Decision-making Involvement, i.e. employee involvement in making decisions) being the most resistant to H_0 rejection, based on an F ratio of 0.010, and insignificant effect size, and low observed power.

TABLE 41. Tests of Between-Subjects Effects for the Randomized General List by Gender

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Gender	Core Value #1	.053	1	.053	.033	.855	.000	.011
	Core Value #2	3.411	1	3.411	1.385	.240	.004	.080
	Core Value #3	4.532	1	4.532	2.101	.148	.006	.129
	Core Value #5	.024	1	.024	.010	.921	.000	.010
	Core Value #8	5.568	1	5.568	2.861	.092	.008	.186

TABLE 42. Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Gender

DV	Source of Variation	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
CV #4	Gender	8.607	1	8.607	5.505	.019*	.014	.648
	Distribution	15.112	1	15.112	9.665	.002	.025	.873
	Interaction Analysis	1.999	1	1.999	1.278	.259	.003	.204
	Error	587.914	376	1.564				
CV #6	Gender	3.553	1	3.553	1.921	.167	.005	.282
	Distribution	14.007	1	14.007	7.573	.006	.020	.784
	Interaction	.014	1	.014	.008	.930	.000	.051
	Error	695.464	376	1.850				
CV #7	Gender	.847	1	.847	.417	.519	.001	.099
	Distribution	18.586	1	18.586	9.141	.003	.024	.854
	Interaction	.710	1	.710	.349	.555	.001	.091
	Error	764.536	376	2.033				
CV #9	Gender	1.489	1	1.489	.727	.394	.002	.136
	Distribution	26.272	1	26.272	12.829	.000	.033	.947
	Interaction	.734	1	.734	.358	.550	.001	.092
	Error	769.978	376	2.048				

Note: p<.05 by Gender

Tests of Between-Subjects Effects and Two Factor Factorials for the Randomized General List by Service Function

In order to maximize the sample size determinant and observed power levels for the Service Function analysis, the “Others” (Instructional support) category was combined with “Instruction” (N=304), and the support function categories of Food Services, Maintenance, and Transportation were combined as a second group designated as “Support Function” employees (N=76), the respective sample sizes of which are reflected in Table 43.

TABLE 43. Between-Subjects Factors for the Randomized General List by Service Function			
		Value Label	N
Service Function	1	Instruction and Instructional Others	304
	2	Support Function Employees	76

Tables 44 and 45 suggest that there was statistically significant variation between the instruction-related employees and the support function employees at the $p < .05$ level and with power levels of .80 or greater for Core Values #3 (Long and Short-term Commitments), #4 (Managing Change), #7 (Decision-making Environment) and #8 (The Source of Problems). Furthermore, the effect size for CV #8 exceeded .06 which suggests a “medium” level of predictive potential. Therefore, H_0 is rejected by Service Function groupings, for these

TABLE 44. Tests of Between-Subjects Effects for the Randomized General List by Service Function								
Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Service Function	Core Value #1	7.116	1	7.116	4.489	.035*	.012	.561
	Core Value #2	1.453	1	1.453	.589	.443	.002	.119
	Core Value #3	43.792	1	43.792	21.331	.000*	.053	.996**
	Core Value #5	17.053	1	17.053	7.299	.007*	.019	.769
	Core Value #8	45.161	1	45.161	24.518	.000*	.061	.999**
<i>Note:</i> * $p < .05$								
<i>Note:</i> ** $1-\beta \geq .80$								

Core Values, with CV #8, “The Source of Problems” indicating the strongest rejection potential using the three primary indicators of “p”, “1- β ” and “Partial Eta Squared”. Core Value #2 (Determination of Educational Needs) is again the most resistant to H_0 rejection.

The researcher did not initially plan to include support function employees in the qualitative interview portion of the study, but the results from this analysis prompted their subsequent representation. The goal of a good qualitative study is to include diverse viewpoints and perspectives (Schein, 1992; Erlandson, et al, 1993; Denzin & Lincoln, 2005), and the indicators from this analysis suggested that the support function employees might provide the diversity of

TABLE 45. Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Service Function								
DV	Source of Variation	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
CV #4	Service Function	31.323	1	31.323	20.722	.000*	.052	.995**
	Distribution	.900	1	.900	.595	.441	.002	.120
	Interaction SrvFnct & Dist.	3.325	1	3.325	2.199	.139	.006	.316
	Error	568.370	376	1.512				
CV #6	Service Function	6.536	1	6.536	3.557	.060	.009	.469
	Distribution	10.753	1	10.753	5.851	.016	.015	.675
	Interaction	.025	1	.025	.014	.907	.000	.052
	Error	691.001	376	1.838				
CV #7	Service Function	6.581	1	116.581	8.453	.004*	.022	.826**
	Distribution	16.064	1	16.064	8.189	.004	.021	.814
	Interaction	2.818	1	2.818	1.437	.231	.004	.223
	Error	737.565	376	1.962				
CV #9	Service Function	4.077	1	4.077	1.997	.158	.005	.291
	Distribution	14.806	1	14.806	7.253	.007	.019	.766
	Interaction	.045	1	.045	.022	.882	.000	.053
	Error	767.524	376	2.041				
<i>Note:</i> *p<05 by Service Function <i>Note:</i> ** 1-β ≥.80								

opinion that otherwise might be overlooked. Another observation regarding both the “Gender” and “Service Function” analyses is that the sample size numbers (304 and 76) are the same for both sets of groupings, which is solely attributable to chance and not to some transposition or counting error.

*Tests of Between-Subjects Effects and Two Factor Factorials for the
Randomized General List by Campus Assignment: Elementary and Secondary*

The next analysis examined Campus instructional assignment at the elementary and secondary levels. Elementary and secondary teachers are often viewed as being fundamentally different (Firestone & Herriott, 1982), with the former more closely associated with instructional processes and often teaching multiple subjects, the latter specializing in or focusing on specific subject content (Marston, Brunetti, & Courtney, 2004). Additionally, there is the notion that elementary and secondary teachers are different in their respective “emotional geographies” (Hargreaves, 2000, p. 815).

Elementary teaching is characterized by physical and professional closeness which creates greater emotional intensity...Secondary teaching is characterized by greater professional and physical distance leading teachers to treat emotions as intrusions in the classroom (Hargreaves, 2000, p. 811).

Given these distinctions, the researcher was particularly interested in discovering if there were any differences between elementary and secondary educators in their respective accommodation of and attachment to the philosophy and practices of Continuous Improvement. Table 46 delineates the respective sample sizes for the Elementary and Secondary groups.

TABLE 46. Between-Subjects Factors by Campus Assignment for the Randomized General List		
	Value Label	N
Campus Assignment	1 Elementary + Elementary Others	169
	2 Secondary + Secondary Others	141

From Tables 47 and 48, only CV #7 (Decision-making Environment) is statistically significant but does not reach the power threshold of .80. The effect sizes are all insignificant except for CV # 7 which is small. Because of the weak effect size and power levels of CV #7, the researcher is reluctant to declare rejection of the null hypothesis for this dependent variable in the elementary/secondary analysis of variance. There may be something other than statistical noise contributing to the low “p” value for CV # 7, which represents the metric for “Decision-making Environment” – making decisions based on fact versus making decisions based on experience.

TABLE 47. Tests of Between-Subjects Effects for the Randomized General List by Campus Assignment: Elementary/Secondary

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Campus Assignment Elem/Sec	CV #1	.176	1	.176	.109	.742	.000	.062
	CV #2	.000	1	.000	.000	.989	.000	.050
	CV #3	1.305	1	1.305	.620	.432	.002	.123
	CV #5	.115	1	.115	.051	.822	.000	.056
	CV #8	1.634	1	1.634	.853	.356	.003	.151

TABLE 48. Summary of Two Factor Factorials to Account for Distribution Response Bias for the Randomized General List by Campus Assignment: Elementary/Secondary

DV	Source of Variation	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
C #4	Elem/Sec	.167	1	.167	.113	.737	.000	.063
	Distribution	16.795	1	16.795	11.357	.001	.036	.919
	Interaction	5.009	1	5.009	3.387	.067	.011	.450
	Error	452.530	306	1.479				
C #6	Elem/Sec	3.552	1	3.552	1.851	.175	.006	.274
	Distribution	18.951	1	18.951	9.877	.002	.031	.880
	Interaction	.049	1	.049	.025	.874	.000	.053
	Error	587.096	306	1.919				
C #7	Elem/Sec	10.890	1	10.890	5.364	.021*	.017	.636
	Distribution	18.960	1	18.960	9.338	.002	.030	.861
	Interaction	1.179	1	1.179	.581	.447	.002	.118
	Error	621.265	306	2.030				
C #9	Elem/Sec	.278	1	.278	.139	.709	.000	.066
	Distribution	23.352	1	23.352	11.685	.001	.037	.926
	Interaction	.797	1	.797	.399	.528	.001	.096
	Error	611.493	306	1.998				
Note: * Elementary/Secondary p < .05								

The interaction factor between elementary and secondary campus assignment and survey distribution is not significant for Core Values #4 (Managing Change), #6 (Collaboration and Autonomy), #7 (Decision-making Environment), and #9 (Results and Resources) at the $\alpha=.05$ level (Table 48). At this point the researcher decided to narrow the investigation to include examinations of elementary-to-middle school, and elementary-to-high school analyses for Core Value #7 (Tables 50 & 52). The sample sizes are revealed in Tables 49 and 51. Survey Distribution is not a significant interaction factor in the analysis of variation for Core Value #7 between elementary and middle school, and elementary and high school estimations at the $\alpha=.05$ level (Tables 50 & 52). In comparing the two sets of results for Core Value #7, it becomes clear that the statistically significant “p” score between the elementary and secondary

TABLE 49. Between-Subjects Factors for Campus Assignment, Elementary and Middle School Instructional Groups: Core Value #7			
		Value Label	N
Campus Assignment	1	Elementary + Elementary Others	169
	2	Middle School + Middle School Others	68

TABLE 50. Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Campus Assignment, Elementary and Middle School Instructional Groups: Core Value #7								
DV	Source of Variation	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
CV #7	Elem/MS	.629	1	.629	.342	.559	.001	.090
	Distribution	5.253	1	5.253	2.854	.093	.012	.391
	Interactive	.081	1	.081	.044	.834	.000	.055
	Error	428.910	233	1.841				

TABLE 51. Between-Subjects Factors for Campus Assignment, Elementary and High School Instructional Groups			
		Value Label	N
Campus Assignment	1	Elementary + Elementary Others	169
	2	High School + High School Others	73

educators originates from the difference in variation between the elementary and high school instructional groups (Table 52). This finding somewhat complicates the decision regarding the null hypothesis. If the decision is based on elementary/secondary comparisons, the decision would be to retain H_0 for all Core Values, because the only p value to challenge this decision is Core Value #7, which lacks effect size and power. For the elementary to middle school comparison there is no statistical significance found for Core Value #7. However, for the elementary and high school analysis, the “p” and power values suggest that H_0 for Core Value #7 should be rejected. Core Value #2 again has the lowest F ratio and is the most resistant of the Core Values to H_0 rejection.

TABLE 52. Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Campus Assignment, Elementary and High School Instructional Groups: Core Value #7								
DV	Source of Variation	Type III Sum of Squares	df	Mean Square	F	P	Partial Eta Squared	Observed Power
CV #7	Elem/HS	22.046	1	22.046	11.036	.001*	.044	.911**
	Distribution	25.467	1	25.467	12.749	.000	.051	.945
	Interactive	5.652	1	5.652	2.829	.094	.012	.388
	Error	475.427	238	1.998				
Note: * Elementary/High School $p < .05$ Note: ** $1 - \beta \geq .80$								

Tests of Between-Subjects Effects and Two Factor Factorials for the Randomized General List by Years of Experience Completed in District

The last inferential analysis is for experience, depicted on the survey demographic sheet as a selection choice among three increments, 0-2 years of experience, 3-7 years, and 8 or more years (completed in the Leander ISD), and the sample sizes are depicted in Table 53. New employees to the District would not be expected to possess the same level of familiarity with Continuous Improvement as those with exposure to the culture and associative training provided in the District over an extended period of time, and the descriptive statistics indicate that the “8 or more years” employees consistently had lower means than the other two experience groups as determined by the analyses depicted in Figure 7.

		Value Label	N
Years of Experience in District by Group	1	0-2 years completed in district	128
	2	3-7 years completed in district	141
	3	8 or more years completed in district	111

Survey Distribution is not a significant interaction factor in the variation between “experience” groupings at the $\alpha=.05$ level for Core Values #4 (Managing Change), #6 (Collaboration and Autonomy), #7 (Decision-making Environment), and #9 (Results and Resources) (Table 55). There are no statistically significant variations between the experience groups for the Core Values, except for Core Value #8, which has a small effect size and a “1- β ” value of less than .80 (Tables 54 & 55).

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
Exp.	Core Value #1	1.919	2	.960	.599	.550	.003	.150
	Core Value #2	2.760	2	1.380	.559	.572	.003	.142
	Core Value #3	6.736	2	3.368	1.562	.211	.008	.331
	Core Value #5	1.712	2	.856	.359	.698	.002	.108
	Core Value #8	14.663	2	7.331	3.803	.023*	.020	.691

Note: * $p<.05$

TABLE 55. Summary of Two Factor Factorial to Account for Distribution Response Bias for the Randomized General List by Years of Experience Completed in District								
DV	Source of Variation	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
CV #4	Experience	.261	2	.131	.082	.922	.000	.062
	Distribution	14.827	1	14.827	9.271	.002	.024	.859
	Interaction	1.208	2	.604	.378	.686	.002	.111
	Error	598.155	374	1.599				
CV #6	Experience	.658	2	.329	.177	.838	.001	.077
	Distribution	23.740	1	23.740	12.747	.000	.033	.945
	Interaction	1.833	2	.916	.492	.612	.003	.131
	Error	696.524	374	1.862				
CV #7	Experience	6.532	2	3.266	1.618	.200	.009	.342
	Distribution	21.420	1	21.420	10.613	.001	.028	.901
	Interaction	4.151	2	2.075	1.028	.359	.005	.229
	Error	754.859	374	2.018				
CV #9	Experience	10.799	2	5.400	2.659	.071	.014	.527
	Distribution	31.488	1	31.488	15.506	.000	.040	.975
	Interaction	.948	2	.474	.233	.792	.001	.087
	Error	759.504	374	2.031				

The statistically significant “p” value for Core Value #8 (The Source of Problems, i.e. focusing on processes rather than people) prompted the researcher to carry the analysis further. Tables 56 and 57 examine the variation between the three experience groups.

TABLE 56. Tests of Between-Subjects Effects for the Randomized General List by Years of Experience Completed in District: “8 or More Years” and “3-7 Years”							
Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Core Value #8	13.254	1	13.254	7.608	.006*	.030	.785
Note: * $p < .05$							

TABLE 57. Tests of Between-Subjects Effects for the Randomized General List by Years of Experience Completed in District: “8 or More Years” and “0-2 Years”							
Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	p	Partial Eta Squared	Observed Power
Core Value #8	8.918	1	8.918	4.793	.030*	.020	.587
Note: * $p < .05$							

While the variation between “8 or more years” and “3-7 years” is greater than between “8 or more years” and “0-2 years”, both sets of analysis have small effect sizes and “1- β ” values of less than .80 for Core Value #8 (The Source of Problems, i.e. focusing on processes rather than people). H_0 is therefore retained for all Core Values by experience grouping for the Randomized General List. Core Value #4 (Managing Change) appears the most resistant to H_0 rejection, producing the lowest F ratio, the highest “p” value, and the lowest power statistic. This determination does not negate the possibility that the “3-7 years” between-group variation of the means, is in fact, significantly different

from the “8 or more years” employees for this Core Value, as the “p” value is conspicuously below .05, and the “1- β ” power estimate rises close to the .80 threshold (Table 56). Furthermore, retention of the null hypothesis does not prove that this decision is true, but simply that it is retained as one among many possibilities, nor does retention of the null hypothesis prove that by default the alternative hypothesis is necessarily false. To agree to use a sample to represent a population confers acceptance of some uncertainty about the results (Spatz, 2001).

Summary of the Inferential Analyses

The possible response bias that was discovered for Distribution had no effect at the $\alpha=.05$ level for any of the analyses. The null hypothesis was retained for all the administrator groupings, by gender, administrative position, and experience. From the Randomized General List, the null hypothesis was retained for Gender, the Elementary/Secondary educator groupings, and the Elementary/Middle School educator groupings. Null hypothesis rejection was determined for some of the Core Values and groupings as depicted in Tables 58 and 59.

Table 58. Hypothesis Results for Randomized General List by Service Function (Instructional vs. Support Function Employees)	
Core Value	H ₀
#3	Rejected*
#4	Rejected*
#7	Rejected*
#8	Rejected*
<i>Note: * infers H₁ is True</i>	

Table 59. Hypothesis Results for Randomized Sample List by Educator Campus Assignment: Elementary vs. High School	
Core Value	H ₀
#7	Rejected*
<i>Note: * infers H₁ is True</i>	

The remaining Core Values by Service Function and Elementary/High School grouping were retained. None of the effect sizes from the analyses exceeded “medium” and most were “small” or insignificant which indicate little information or authority for predicting generalizable distinctions according to group. The null hypothesis for the inferential portion of the study was designed as an ‘all or none’ proposition, that is, if any statistical variation was unearthed, H₀ is rejected. The researcher actually anticipated more variation than was revealed in the analysis, which influenced the rationale for configuring the null and alternative hypotheses as previously presented.

H_0 : There is no statistically significant variation of group means between the major demographic comparison profiles of the District for any of the Nine Core Values at the $\alpha=.05$ level.

H_1 : There is statistically significant variation of group means between one or more of the major demographic comparison profiles for one or more of the Nine Core Values at the $\alpha=.05$ level.

The rejection of the null hypothesis forms the basis for inferring that the statistical alternative hypothesis is true (Denis, 2001). Because H_0 was rejected for the Randomized General List by groupings and Core Values as described in the preceding analyses, there is justification to infer that the hypothetical alternative H_1 is true. However, this determination should be tempered as the bulk of the inferential analyses revealed insignificant statistical variation of the means for the majority of the Core Values and groupings, and the descriptive statistics also warrant consideration in any final analysis.

The descriptive and inferential analyses, when parsed by results, suggest that, (1). Core Value #4 (Managing Change) has the strongest directionality towards Continuous Improvement while CV #2 (Determination of Educational Needs) represents the weakest for all comparison profiles except the Support Function employees, (2). The Support Function employees have different Core Values represented as the strongest and weakest, namely Core Values #1 (Role of Vision), and #3 (Long and Short-term Commitments) respectively, (3).

Analyses of variance indicates statistically significant variation of the means between Support and Instructional Services for Core Values #3 (Long and Short-term Commitments), #4 (Managing Change), #7 (Decision-making

Environment), and #8 (The Source of Problems), (4). Analysis of variance indicates a significant variation of the means between elementary and high school educators for Core Value #7 (Decision-making Environment) with the elementary teachers demonstrating a stronger vector towards the CI end of the Likert scale, and (5). There were no statistically significant variations of the means for the administrators, by gender, responsibility assignment, or years of experience.

Selection of Participants for Qualitative Interviews

The last task charged to the quantitative portion of the study, was to provide information to support the qualitative interview selection process. For the Randomized General List representation, the researcher endeavored to derive a broad sampling by accumulative mean score of the Nine Core Values, while keeping a modicum of balance by gender and experience (Tables 60 & 61). Theoretically, the lowest summative mean score (Σ Scores/9) would be 1.00, and the highest 7.00, representing situations where the survey participants responded with nine 1.00s or nine 7.00s respectively and in accordance with the 7 point Likert scale. In reality, there were ten accumulative mean scores of 1.0, no 7.0s, and only 5 greater than 5.00, of the 380 'complete' surveys from the Randomized General List.

TABLE 60. Distribution Ranges by Gender and Mean Scores for Selected Qualitative Interviews: Randomized General Population			
Group	Female	Male	Summative Mean Score Range of Respondents
Elementary	4	0*	2.44 – 4.00**
Secondary	2	2	1.33 – 4.33
Support Function	2	2	1.11 – 4.00
Total	8	4	
Note: * Only 4.58% of the elementary teacher population was male. Note: ** Reduced range caused by “late” substitution			

TABLE 61. Selection Distribution Based on Experience			
Group	8 or more years	3-7 years	0-2 years
Elementary	1	3	0
Secondary	1	1	2
Support Function	1	1	2
Total	3	5	4

The extremes of the scores were discarded and the selection pulled from the remaining respondents whose summative mean scores ranged from > 1.00 to < 5.00.

With the work of the quantitative portion of the study established, the researcher possessed applicable triangulation information for the Chapter IV findings and Chapter V discussion and conclusions. The quantitative portion of the study is in essence, an exploratory probe for unearthing information for Research Question 2: How and to what extent are practices in the Leander ISD (TX) aligned with Detert’s Quality Management Core values and the philosophy

of Continuous Improvement? The qualitative portion that follows seeks to examine each research question in depth and explores the 'how's' and 'why's' of Continuous Improvement implementation and practice, and the extent these practices reflect Detert's Nine Core Values.

Qualitative Analysis

Methodological Bridge

The purpose of the survey was to reveal practices at the departmental and campus levels and focus on the perceived norms of behavior. Surveys can be useful for getting at the norms of behavior but should not be confused with the beliefs and underlying assumptions that influence the organization at the deepest levels (Schein, 1992). Because a respondent says a strategy, behavior, or practice is present in their department or on their campus, does not mean it actually is (Zbaracki, 1998). Only when espoused beliefs and values align with practice can theory be negotiated. Theory is of little use if it cannot be translated into meaningful action; theory and action are mutually interdependent (Argyris & Schön, 1974; Deming, 1994; Detert, et al, 2001). Theory, evolved from the reinforcing relationships between espoused values, confirmatory action, and associative successful practice, establishes meaningful values and allows us to move from 'talking the talk' to 'walking the talk'. How Continuous Improvement is manifested throughout the District and the variety of cultural and educational

mechanisms that complement and sustain it are salient issues that relate directly to the study. Having analyzed the survey findings, the study now proceeds with the qualitative presentation.

The purpose of the study is to identify the values, beliefs, and underlying assumptions present in the organizational culture of the Leander ISD (TX), and assess the extent they are consistent with Detert's Quality Management Values and reflected in practices and processes, personal experiences, and material artifacts and creations that sustain and promote the philosophy of Continuous Improvement. The qualitative portion of the study seeks to address all of the associative research questions, i.e., the extent Detert's QM Core Values are espoused, the extent the espoused QM Core Values are aligned with actual practice, how experiences meaningfully reflect CI practice, and how material artifacts and creations reflect CI-related beliefs, underlying assumption, and practice. The overall thrust of the qualitative portion of the study, in corroboration with the quantitative findings and guided by the four research questions, is to examine the extent particular cultural values hypothesized to be associated with Quality Management, are reflected in and transferrable to educational strategy and practice, and how these manifestations ultimately contribute to our understanding of Quality Management theory.

Instrumentation

The qualitative portion of the study consists of responses to an array of 24 interview questions, the first nine of which relate directly to Detert's Nine Core Values while the remainder are used to "fill in any blanks" or address inconsistencies with respect to the first nine (Appendix, A4). The researcher also depended on artifacts, documents, photographs, and digital recordings collected in the field, notes from phone conversations, impromptu conversations, emails, attendance at four Continuous Improvement Conferences, and an extensive review of the literature for extended referent material and intra-methodological triangulation. Multiple sources provide the intra-methodological triangulation necessary for a comprehensive naturalistic study (Erlandson, et al, 1993). The heart of the study rests in James R. Detert's Nine Core Values, and the first nine questions of the interview relate directly to them. The nine interview questions depicted in Table 62, serve as probes through which the qualitative analyses is presented and the Research Questions addressed. Accordingly, all interview responses are organized in consecutive order by Research Question, and Core Value Descriptor, with the associative interview question(s) driving the analyses.

Table 62. Core Value Descriptors and Corresponding Interview Questions		
	Core Value Descriptor	Interview Question(s)
Core Value #1	The role of vision: A shared vision and shared goals among faculty, staff, and administrators are critical for school success.	<u>Interview Question #1:</u> Can you share with me your understanding of the District's vision? Compare the influences of "shared" versus "personal" visioning and goal setting in your department and on your campus.
Core Value #2	Determination of Educational Needs: Educational needs should be determined primarily by parents, community groups, students, and other stakeholders	<u>Interview Question #2:</u> From your perspective, who determines student needs in the Leander ISD? Do all stakeholders (including students, parents, community, suppliers, etc.) have input in determining educational needs, or are the needs determined mostly by the professional educators in the District?
Core Value #3	Long and Short-term Commitments: Improving education requires a long-term commitment.	<u>Interview Question #3:</u> What kind of commitments do you believe are necessary for continuous improvement? To what extent do long term improvement goals influence what is done in your department and on your campus as compared to immediate pressures and needs?
Core Value #4	Managing Change: A school should strive to make continuous changes to improve.	<u>Interview Question #4:</u> How does your campus or department view and respond to change?
Core Value #5	Decision-making Involvement: Employees should be active in improving the overall school operation.	<u>Interview Question #5:</u> What role do you have in changing the way things are done in the District? Do you have a role in making important (educational – for instructional staff) decisions?
Core Value #6	Collaboration and Autonomy: Collaboration is necessary for an effective school.	<u>Interview Question #6:</u> How do you view collaboration efforts in the District and are these efforts necessary and

Table 62. Core Value Descriptors and Corresponding Interview Questions		
	Core Value Descriptor	Interview Question(s)
		effective for the kinds of results you seek in your job? To what extent, if any, is personal autonomy and freedom sacrificed through these collaboration efforts?
Core Value #7	Decision-making Environment: Decision-making should rely on factual information.	<u>Interview Question #7:</u> On what basis are decisions made in your department, your campus, and the District? To what extent do facts and data influence decisions as compared to personal and professional experience?
Core Value #8	The Source of Problems: Quality problems are caused by poor systems and processes, not by employees.	<u>Interview Question #8:</u> Explain whether the District's efforts in problem solving focus on processes or people.
Core Value #9	Results and Resources: Quality can be improved within existing resources.	<u>Interview Question #9:</u> Are existing processes, procedures, and methods optimized and further improvement possible only with additional resources and/or funding? Please explain.

Factors Influencing the Interview Environment and Entry into the Field

The invitation (A5) was a critical document for soliciting participation in the interview, and from the first fourteen email invitations, there was only one refusal, which was promptly filled. As indicated in the invitation, the intent was to set up an on-site meeting, to 'break the ice'. The researcher first sat down with

the respondent, and after exchanging greetings and off-subject pleasantries, briefly shared his work history of serving as a teacher and administrator for 30 years in public school education, why the research being conducted was considered important, and how it could conceivably inform educators as to how they could better leverage existing systems resources, in anticipation of and in response to, increasing accountability pressures from the public and governmental agencies. This process, consisting of a congenial introduction and sharing of mutual work histories, generally consumed 15 to 20 minutes. Afterwards, after given the option of scheduling a subsequent meeting for doing the questionnaire, or starting immediately, all teachers but one, chose the latter. Sharing a common language and similar backgrounds with respondents is often conducive to interview efficiency and effectiveness (Erlandson, et al, 1993). Additionally, and for the administrators and support function employees, a combination of a phone call, impromptu conversation, and/or email provided the means for scheduling the interview in advance.

In all instances, the researcher placed a premium on establishing a calm and non-threatening interview environment, and delivered the questions in conversational tones. Additionally, all participants were informed before the interviews that there was no 'right' or 'wrong' responses or answers to the questions. Confirmatory strategies and 'member checks' were often used, such as summarizing a respondent's answer(s), reviewing previous responses, and in some instances the use of query extensions with requests such as, "Could you

tell be a little more about that?" In instances where the respondent appeared to be having difficulty in answering the question, the question was rephrased. Establishing a non-threatening environment is essential for developing interview rapport and setting the respondent's mind at ease (Erlandson, et al, 1993; Yin, 2003; Denzin & Lincoln, 2005). All respondents were provided a copy of the interview questions to read from, as a check for understanding to accompany the actual verbal delivery.

The field of respondents consisted of four central office administrators, two campus level administrators, eight teachers, and four support function employees. The inclusion of two representatives from mid-management, a principal and an assistant principal, was considered necessary additions because of the critical role they serve in creating, nurturing, and transmitting culture and values (Deal & Peterson, 1990), and because the researcher was looking for a 'motivated insider' (Schein, 1992) at the campus administrative level and had been informed that the principal ultimately selected could conceivably fulfill this criteria. The four support-function employees were added after it was discovered that there were statistically significant variations in their survey responses compared to administrators and teachers, and reflects how emergent data can influence information-gathering strategies (Erlandson, et al, 1993). The interviews were scheduled at the respondents' convenience and were most often dependent on work schedules, with the majority of the teachers and assistant principal sessions lasting an hour to an hour and an half over

portions of two conference periods, two of the teacher interviews spanning close to two hours in single sessions, the central office administrators averaging 2 ½ hours, the support function employees from 1½ to 2½ hours, and the longest, with the elementary principal, lasting five hours.

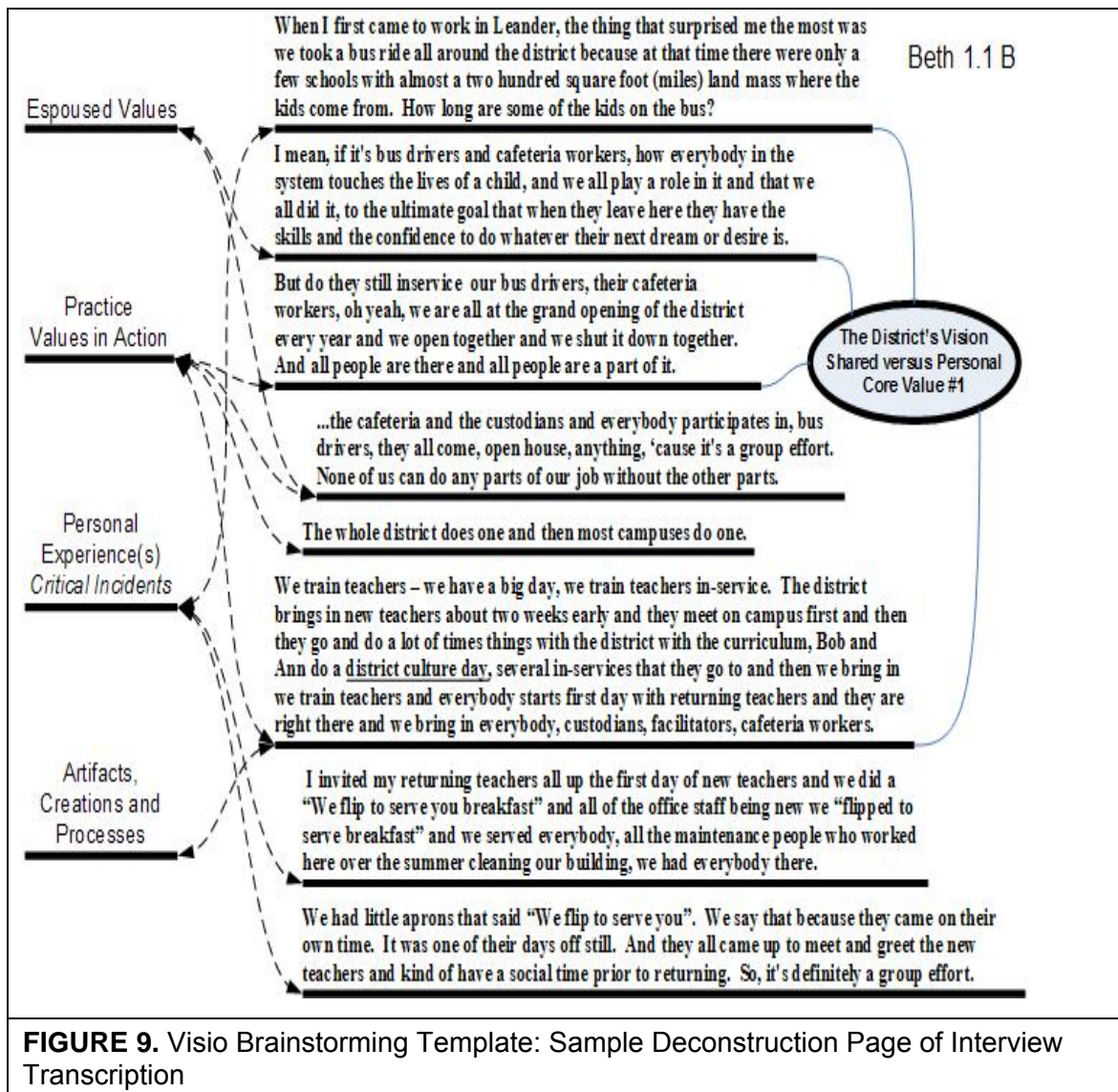
The first interview question block, pertaining to the 'shared vision', is actually broken down into two parts: the first part, "Can you share with me your understanding of the District's vision?", the second, "Compare the influences of "shared" versus "personal" visioning and goal setting in your department and on your campus" (Appendix A4). The second supporting question segment was added after responses to the lead-in question failed to address the issue of 'shared' versus 'individual' goal setting and visioning. Likewise, more directed support queries were added to interview questions 2, 3, 5, 6, and 7. This strategy was engaged when the researcher discovered from the emergent data that the responses did not correlate specifically enough with the research question intent. Second, "exit" interviews were conducted for the first six respondents to correct this oversight, and all of the questions were 'in place' for the remaining interviews. There were two limitations with respect to the 18 interviews. Ann, one of the central office administrators, was unable to participate in the "exit" interview because of personal reasons, and Donna, one of the support-function employees, was only available to respond to the first nine questions because of scheduling conflicts. In summary, 16 of the 18 interviews

were complete for all 24 questions, and 17 of the 18 were complete for the first nine core questions.

Coding Mechanisms, Clues, and Attributions

All of the interviews were transcribed which comprised 644 pages of material. The research questions were used as a means to code all of the participants' responses using Microsoft Visio which produced 735 pages of deconstructions, an example of which is depicted in Figure 5. The material was then reconstructed by Research Question, Core Value, group, and analyzed according to Core Value descriptor and corresponding interview question.

Complete deconstructions were run for all 24 questions for all but one of the respondents in accordance with the technique depicted in Figure 9; one of the respondents was not available for the second and third sets of questions due to scheduling conflicts. The qualitative analysis consisted of reorganizing the deconstructions by Research Question, and Core Value for Research Questions 3 & 4, with the addition of the 'group' category for Research Questions 1 & 2, and then looking for patterns, consistencies, and inconsistencies in the



responses to first nine interview questions pertaining to the Nine Core Values. The 2nd and 3rd sets of interview questions served as a reservoir for 'filling in the blanks' if information in the first nine questions appeared incomplete or inconsistent (Appendix, A4). Some of the supplementary questions in the 3rd question set were deemed inappropriate for the Support Function employees,

particularly questions four and five, and a parenthetical statement “(for instructional staff)”, was added (Appendix, A4).

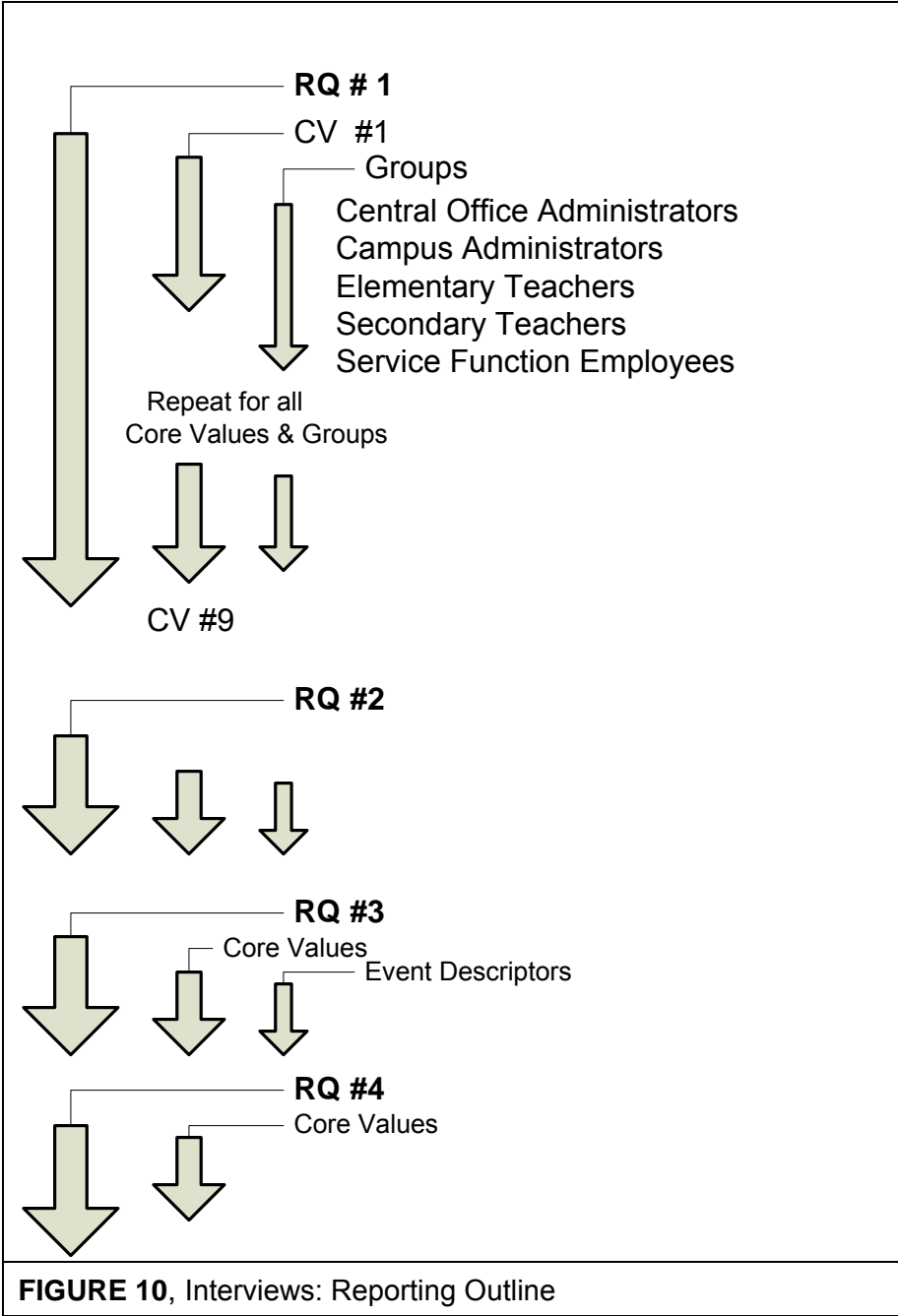
The analysis consisted of looking for key words, phrases, actions, events and artifacts. A text analyzer, *Textanz*, was used for the longer interviews to identify word-use tendencies and frequency. The key words for ‘triggering’ the identification of espoused values for Research Question #1 were “I believe”, “I think”, “from my perspective”, or in some instances expressions that conveyed conjecture or speculation. Espoused values reflect the ‘what ought to be’ assumptions of an individual or organization (Schein, 1992).

For the “values in action” or “practices” designated by Research Question #2, the researcher looked for action verbs that were associated with some identifiable action or result. Espoused values through repeated sharing and successful implementation become cognitively transformed into shared values and assumptions that shape the culture and practice of a group or organization (Schein, 1992; Detert, et al, 2001). Research question #2, focusing on “Values in action” or practices, contained the most reconstructed material, and was considered the most critical to the purpose of the study as it provides the connective tissue between the espoused values, critical incidents, material artifacts and creations, reveals manifestations of the underlying cultural assumptions, and triangulates more closely with the quantitative portion of the study. Practices are generally classified as cultural artifacts (Detert et al, 2001), but the researcher chose to view ‘practice’ as a separate subset from other

material artifacts and creations because organizational practices are generally manifested as purposeful actions or processes that conceptually fit within the Systems Perspective of Quality Management (Table 6, Core Concept # 6). Furthermore, many scholars and practitioners classify Quality Management as a paradigm (Amsden, et al, 1996; Foster, 2001; Berman, 2006), and Kuhn aggressively linked the 'paradigm' concept to practice (1970). Thus, the researcher chose to separate 'practice' or 'Values in action' from other material artifacts and creations that come under the purview of Research Question #4. 'Values in action', arguably mesh with Argyris and Schön's concept of "theories in use" (1974) which is defined as the "implicit assumptions that actually guide behavior" (p. 22), and behavior is often cast as observable practice.

Research Questions #1 and #2 of the qualitative portion of the study focused to a larger extent on responses by group, in order to more easily consolidate the analyses, and facilitate the assessment of within and between group consistencies and inconsistencies related to the espoused values (Research Question #1) and practices (Research Question #2) across the District (Figure 10). Qualitative research is an investigative process that seeks "to make sense of a social phenomenon by comparing, contrasting, replicating, cataloguing, and classifying the object of one's study" (Miles & Huberman, 1984, p. 37).

Research Question #3, examines 'personal experiences' and was designed to explicate critical incidents or events "that either highlight the normal



operation of the school organization or contrast sharply with it” (Erlandson, et al, 1993), and for the purposes of this study are best represented through some of the respondents’ stories. The purpose of this research question was to unearth contextual events that connect the philosophy of QM/CI to District practice. The interviewer did not anticipate that critical incidents would be reducible from every respondent or for every question, and after reconstructing the data discovered that Beth’s lengthy five hour interview provided, by far, the richest source for the ‘personal experiences’ research question. Separating the respondents by group was not followed in the same manner as was used for Research Questions #1 and #2 (Figure 10), and generated less material, because the shorter interviews were not conducive to sharing experiences at the ‘story level’, and/or newer employees were less likely to have had enough time to gather memorable experiences or to see significant events unfold. However, the critical incidents that were uncovered provided rich detail.

Research Question #4 (RQ #4) examines the ‘material artifacts and creations’, i.e. the ‘surface’ phenomena, that include the material objects and patterns that communicate an organization’s beliefs, values, assumptions, and ways of doing things, often represented through various physical structures, language, and symbolism, e.g. physical environment, rituals and ceremonies, mission statements, clichés, history and traditions (Ott, 1989, Schein, 1992; Deal & Peterson, 1999). For the entire panoply of things seen, heard, and the many events that litter the landscape of an organization, some are unique to and direct

descendents of the reigning culture while many are not (Goodenough, 1981). Sign-in/sign-out sheets, school buses, musical instruments and band halls, athletic fields, the general layout and provisioning of libraries, lunchrooms, and restrooms, and the many other mundane or commonplace material objects characteristic of public schools, usually serve the same function, follow similar forms, and are arguably indistinct from district to district and campus to campus, except in age and/or the level of maintenance, or target population adaptation. While several of the literary references for this study make compelling arguments regarding the importance of architecture and building layout and design, and highlight them as significant identifiable artifacts (Schein, 1992; Deal & Peterson, 1999), such emphasis is not a primary concern in this study. Rather, the material artifacts and creations that draw from, support, have a strong relationship with, or are the by-product of QM/CI practice, form the basis of analysis for this research question. Finally, Research Question #4 focuses to a large extent on the historical development of the District's material artifacts, creations, and processes, in order to better understand their origins, intended purpose, and current contexts of use.

There were no expectations that every interview question would reveal artifacts of interest or that all respondents could provide relevant information even with question probes and extensions. If an artifact emerged from a question that suggested relevant connectivity to the Nine Core Values, Continuous Improvement concepts, or visible practice, an attempt was made to

understand the relationship through question extension and the use of supplementary research and triangulation material. Once descriptions and definitions of artifacts were explored in Research Question #4, an effort was made to limit repeating the material in the analyses to subsequent responses, although reoccurrences might warrant additional scrutiny if a new context appeared to alter, extend, challenge, or appreciably redirect the original meaning.

There were two refinements during the reconstruction/writing and cataloging processes, both of which involved successive cuts or reductions in material to eliminate non-relevant information and comments. The researcher believed that further reductions would detrimentally impact the thick descriptions rendered by the respondents or marginalize the connections through which they related particular aspects of their experiences across the research/interview question combinations. Another issue is that Research Question #2 addressing 'values in action' or 'practices' and Research Question #4 which focuses on material 'artifacts and creations', are sometimes difficult to separate as the former is often manifested as the latter. This caused some phenomena to appear as being 'double-reported', once under Research Question # 2, and again in Research Question # 4. An effort was made to examine the context more closely in those instances where the elements of a response could fit either way, in the interest of separating the characteristics of a phenomenon according to Research Question intent. In those instances where the same

information emerged from different participants for any given research/interview question combination, the researcher chose to report the responses allowing the questions to reveal the unfolding nature of the Core Values. The researcher consolidated the key findings for each Research Question/Core Value combination into a summary at the end of each Core Value Analysis that was later posted to a table for personal use in assembling the Discussion and Conclusions for Chapter V.

Third person singular or plural subject nouns were purposefully used in some instances to compress conclusions and summaries, and in other instances to more deeply shield the identity of the respondent. Although pseudonyms were assigned to every respondent (Table 63), some of the participants might be identifiable through their responses or the contexts revealed. For this reason, the researcher alerted those whose comments might be traceable, and received permission to proceed with the analysis as planned and with the identity shields

TABLE 63. List of Respondents by Group	
Central Office Administrators	Bob, Ann, Cathy, Paul
Campus Administrators	Beth, Lana
Elementary Teachers	Gwen, Helen, Elle, Rita
Secondary Teachers	Marilyn, Mike, Ken, Nan
Support Function Employees	Donna, Fran, Ben, David

outlined. The researcher purposefully selected teachers representing a wide range of assignments. The 'Elementary Teachers' consisted of two 'special programs' teachers and two 'regular' teachers whose assignments ranged from early childhood, up through the regular elementary grades. The "Secondary Teachers' included a representative each from four separate academic programs and were split evenly between middle school and high school. The Support Function employees were drawn from the Custodian, Maintenance, and Child Nutrition Services departments.

All respondents were provided copies of their interview transcripts and the opportunity to make corrections as a 'first' members-check. None of the respondents suggested any revisions to their respective transcripts. The researcher also completed 'second' members-checks for 16 of the 18 respondents, to verify that the comments and paraphrasing selected for publication accurately reflect the contents of the transcriptions. One of the participants, Gwen, had moved from the District and left no forwarding information the researcher could use in reestablishing communication, without contacting District officials which would have revealed her identity and participation in the study. Additionally, the researcher was unable to obtain a second members-check from Mike. In effect, the comments from 16 of the 18 respondents reside in the study as confirmable contributions, having sustained both rounds of post-interview members' checks.

First Impressions

The researcher previously visited the Leander ISD during the fall of 2001, to collect information about TQM implementation and practice, for the purpose of writing a paper in partial fulfillment for a graduate studies course. Interviews were arranged and subsequently conducted with an elementary principal, a high school principal, and the District's Continuous Improvement Coordinator. All of the central office personnel were housed in portable buildings, located not far from the District's northernmost border. The interview respondents' secretaries were cordial and accommodative, and the researcher was warmly received by the respondents, who each gave an hour of their time to answer the researcher's questions.

Two and a half years later, the researcher traveled back to the District to secure research site approval for the dissertation, and experienced somewhat of a surprise when driving into the Central Office parking lot. Instead of rows of portable buildings, a large, red-brick, two-story, formidable structure greeted the researcher. The following impressions were recorded later that day.

Researcher: "After entering through the glassed-in entry vestibule, one encounters the reception lobby, outfitted with racks containing a myriad of tracts, leaflets, and sheets providing District school information regarding enrollment procedures, the Kindergarten program, campus information booklets, school supply lists, and copies of the District Newspaper. Located to the left of the lobby is an alcove containing computers for finding a list of current job openings, and provisions to do on-line applications. The lobby is manned by two receptionists who greet visitors, route incoming phone calls, answer routine questions, and who watch and to some extent monitor entry into the general office complex. The receptionists also set the tone for cordiality, despite having

to juggle what seemed to be an endless stream of incoming phone calls and messages. On the wall behind the receptionists' desk, were two engraved panels depicting the Graduate Profile and the Ten Ethical Principles, the former to the left, and the latter to the right of a large bronze 'Leander Independent School District' seal. The interior looked new and the lobby activity conveyed the sense that a lot was happening behind the main entry door to the interior".

After gaining access to the central office complex, the researcher observed that many of the offices lined the interior perimeter, with the chief executive offices located at northeast and southwest corners of the second story, with open work-cubicles occupying the central area. The general interior layout of the building was not unlike what one might find at any comparably sized corporate level headquarters. This building is where the first Central Office interviews were conducted, which began April 5, 2005. The remainder of the qualitative portion focuses on and is arranged by the research questions posed for the study.

Research Question #1: "What Are the Espoused Values and Beliefs in the Leander ISD (TX) and to What Extent Are They Consistent with Detert's Quality Management Core Values?"

"Espoused values are the articulated, publicly announced principles and values that a group claims to be trying to achieve" (Schein, p. 9). Values at the conscious level are often reflected in what we 'say' or espouse, sometimes expressed as conjecture, supposition, or articulated belief, and may or may not be attached to what we actually do "in situations where those values should, in

fact, be operating” (Shein, 1992, p. 21). This research question was designed to unearth what the employees say or espouse, often articulated as belief, conjecture, or supposition, with regard to each Core Value.

Core value #1. The Role of Vision: “A Shared Vision and Shared Goals among Faculty, Staff, and Administrators Are Critical for School Success”

This Core Value is a reflection of the power of coordinated action and Deming’s “constancy of purpose” theme (Detert, et al, 2001, Deming, 2002). While it does not appear in the Baldrige Educational Criteria, it does appear in the ‘quality literature’ and was highlighted by Detert’s NGT discussion group (Detert, et al, 2001). The idea associated with this Core Value is that “a shared vision and shared goals require that all staff members know and understand the organization’s vision and are willing to align their behavior accordingly” (Detert, et al, 2001, p. 193).

Central office administrators. The Central Office Administrators were assigned the pseudonyms of Bob, Ann, Cathy, and Paul and all of the interview sessions were held in their respective offices. The interviews were between two to three hours in length and conducted through two separate sessions for each respondent. Additionally, there were numerous impromptu conversations held with the four CO administrators during the 2005, 2006, and 2008 Continuous Improvement Conferences, as well as emails and phone conversations after the field study portion of the study was finished.

The central office administrators were consistent in their beliefs and what they considered important for the stakeholders in the District. Paul specifically mentioned the Graduate Profile and the Ten Ethical Principles as central representations of the District's vision. Although the Leander Way was not specifically mentioned in the responses to this question, many of the goals of the document were revealed and rendered reflexively with no hesitation. They all believed that sharing, collaboration, and collegiality were critical attributes for maintaining the culture of Continuous Improvement, and "Doing what's best for kids", "Life long learning", "Building relationships of trust" and "Driving out fear", were the most often used expressions. There were no personal conflicts expressed between the CO administrators and the District's vision or among their own respective visions and as Bob volunteered, "shared and personal visions are reconciled". The shared visions within the quartet were believed to be cohesive and influenced most of what they did and how they worked together. However, Ann believed, that aside from the vision cohesiveness among the executive administrators, the District's vision is probably unevenly realized in the organization and that not everyone could articulate the full vision with clarity.

All four of the central office administrators mention or refer to "learning" somewhere in their responses, as opposed to "teaching". In fact, not once did the focus of any of the responses to this question address the science or art of teaching. All four of the administrators clearly identify "students" as a primary

focus. The strategies, short and long-term goals, and general mission of the School District are clearly student focused with Cathy contributing the notion that both students and teachers (in the broader professional sense) are learners and that the overarching thrust of the District is to maximize achievement for both. The common threads in their individual beliefs, their repeated references to the same expressions and District goals were observed to be essentially coterminous. Bob and Ann were mentioned as inspirations.

Campus administrators. The two campus administrators were assigned the pseudonyms of Beth and Lana, and the interviews for both held in their respective offices. Beth's five hour long interview was the longest of all the respondents and consisted of many active interchanges and question extensions that altogether filled 77 pages of transcript.

Beth believes that the Graduate Profile and the Four Challenges reflect much of the District's vision, but gave somewhat more emphasis to the latter. She believes the District and her campus labor diligently to include all employees in celebrations and events and that everyone makes meaningful contributions to the education of the students. Beth believes that everyone has their own personal vision, but through authentic experiences the District's vision becomes incorporated to some extent in the employees' vision. The vision and associative values, beliefs and practices are at times incorporated whole, sometimes partial, and for some people and under certain conditions, there may be no adoption. To the extent that some level of adoption occurs, the vision

becomes ingrained in the form of personal commitment (Schein, 1992). Beth believes the 'level of capture' of the District's Vision is relatively high and that eventually most teachers 'buy in' to the bulk of the vision, and that it tends to "merge" to some extent with the personal vision.

Lana believes the focus of the District's vision is to "put kids and relationships first", to take children where they are and then move them forward, as guided by The Graduate Profile and the Ten Ethical Principles. She also thought that at the District level, the vision for children and for employees is well articulated as manifested in and through all of the Guiding Documents which also include the Four Challenges and the Leander Way. Through her experiences thus far in the District, Lana adds, "I think the families really feel like the district is totally accessible".

Both Beth and Lana appear to be in agreement that a District's vision and the employees' visions are separate significations. Beth's emphasis is on the convergence of the District's vision with the vision of the individual employee, while Lana's focus is on the "fit" between them. Beth's approach tends to highlight congruence, Lana's incongruence. Regardless, both feel comfortable with how their own personal vision meshes with that of the District's, and from their own individual perspectives, the personal and District visions are mutually supportive and not incongruent.

Elementary teachers. The four elementary teachers are assigned the pseudonyms of Gwen, Helen, Elle, and Rita, all come from different elementary

schools, and all the interviews were held in the teachers' classrooms during their conference periods. Two of the interviews required accumulatively an hour to an hour and a half, over two sessions. Introductory conversations usually consumed 20 minutes of the first conference period session which necessitated a second session to finish. Two of the interviews consisted of a single session, one lasting an hour and an half, the other two hours.

Gwen believes that the teachers work towards a common goal, one that includes preparing children to be "life-long learners", "productive members of society", and "good citizens", particularly as encouraged through the Ten Ethical Principles, and that teacher collaboration and continuing education contribute to how the vision is achieved. While there are common goals associated with District's vision, Gwen believes the teachers have the freedom to pursue individual goals, such that the common District vision and the individual vision are both important and equally important.

Helen views the District's vision as "creating a place where kids want to learn" and "where they are a part of their learning". The District's vision also strives to help students become independent and productive members of society. Helen believes character development is important and highlights the Ten Ethical Principles, but when asked through an extension to the question about the Graduate Profile and the Four Challenges, responded by saying that she believed all three were interrelated, and important. Helen described these three Guiding Documents through either a specific attribution, or in terms of

system-wide importance. For the Four Challenges, she mentioned singularly the first goal, “Eliminate the link between economic disadvantage and low achievement”. For the Ten Ethical Principles, she intoned, “That starts from Kindergarten on”. The Graduate Profile is viewed as being for everyone, “not just for some schools or kids”, and it is important to teachers that the graduates achieve all of the skills, knowledge, and character development traits promoted within.

Elle believed she had a limited understanding of the District’s vision because of a “dichotomy” she perceives to exist that separates regular and special programs.

And so being a (special programs) educator I feel a little bit like I don't quite know the district vision, other than the kind of standard things like, you know, relationships, collaborative relationships, or community relationships, or lifelong learners or all those kind of catch phrases that every district probably has.

She also believed that in the more general sense, teachers on her campus did not collaborate in the manner that Continuous Improvement suggests. However, within her program and classes, she believed there was a shared vision and practice that was harmonious with her own.

Rita viewed the campus vision as striving to have all children reading on grade level and recognizing and celebrating the growing cultural diversity in the District, and believed the Ten Ethical Principles played an important role in the vision. She also believed the District was very accommodating to parents and children and that it seeks to “please as many people as they can”, which is driven by the District’s philosophy of “customer satisfaction”. She further adds

that these efforts do not compromise the support for teachers as she believes the District “stands behind their teachers”. She believes that her campus and grade-level support the concepts of teaming and collaboration, and considers these aspects of the teaching and learning environment as very important, and likes knowing she has the support of her team and that “everybody is on the same page”.

Secondary teachers. The four secondary teachers interviewed were assigned the pseudonyms of Ken, Marilyn, Mike, and Nan and three of the interviews were held in the teachers’ classrooms during their conference period, and Mike’s was held in both the teacher’s classroom during one session, and a conference room for the second. Most of the interviews required an hour to an hour and a half, but Mike’s lasted just over two hours.

Marilyn perceives the teachers working with two visions: the goals for the graduates reflected in the Graduate Profile, and ‘a separate’ vision which is more for the administrators and teachers and the instructional side, i.e. increasing the number of students who are successful in advanced coursework, which is one of the goals from the Four Challenges. Marilyn believes there is room for both shared and personal vision. From Marilyn’s perspective, there is the district-wide vision from the ‘higher powers’ and another established by the campus administration with advice and influence from the teachers, which is more relevant for daily instructional purposes.

Mike doesn't teach just one way because all kids are different and the teachers' goal is to reach every child, not just a handful or only the best ones. "We want to make it so the kids, every one of them, will succeed". Mike focused almost exclusively on this aspect of his teaching, and did not mention the District's Guiding Documents.

For Ken, the district's vision is "somehow a competitive deal to be, to outdo its surrounding districts or to be number one in the state or the nation; almost like a competitive thing through a variety of programs or works like Continuous Improvement, you know, and to meet all the needs of the children, of course". He believes that the District's vision is shared across the campuses and only a small minority of teachers in his subject field work in isolation. Most of the teachers in his subject field have "bought into the whole Continuous Improvement, Leander Way, of doing it".

Nan emphasized the importance of imbuing all students with the desire and ability to be life-long learners, and in imparting to all students the attributes listed in the Graduate Profile. She believes the Graduate Profile consists of valuable attributes, all of which contribute to preparing graduates for meaningful roles in society. Nan believes that she has to sometimes compromise the vision she has for her classes because the goals she believes should be emphasized are not always in alignment with those promoted by the administrators or parents, and campus-wide preparations for the TAKS tests can likewise interfere with what she aspires to accomplish. But Nan considers these constraints just

part of teaching, as are the typical behavioral immaturities of adolescents that have to be negotiated in the teaching and learning processes, and sees her job primarily as one of preparing students for the academic rigors of high school.

Support function employees. These employees were assigned the acronyms of Donna, Fran, Ben, and David. The interview lengths varied considerably. One of the interviews was abbreviated because of scheduling conflicts, consumed about an hour and 20 minutes, covered mainly the first nine critical questions, and was held in a conference room. The second lasted almost two hours and was also held in the same conference room. The remaining respondents' interviews were held in the employees' offices and consumed about two and a half hours each.

The Leander ISD operates under a contract with a food and facilities management firm with operations in the US, the United Kingdom, and France. All of the food services for the District are provided under the aegis of the corporation and all of the managerial staff and employees fall under its purview. Donna and Fran both work for the company.

Donna believes in treating every child with respect and secondly, that all children should be treated equally, and that her vision and that of the District are the same in this respect. When queried specifically about the Graduate Profile, the Ten Ethical Principles, and the Four Challenges, Donna deferred to the cafeteria's mission. Donna associates her vision with her responsibility to budget and plan meals so that the cafeteria does not run out of food, and that

the food is nutritious and presented in an appealing fashion. Donna sees the provision of nutritional meals, from a sanitary kitchen, for every child, as a “group effort”. Her personal credo is to share information and what she knows with others and strives to keep an “open door” for others. Fran associates her vision and that of the District’s with “giving children good meals so that they can learn, and the District is really big into learning”. From her experiences in the food service industry and in the District, “kitchens run better when you have a lot of teamwork and everybody works together”.

When queried about the Guiding Documents, Ben said that he believed the Graduate Profile was the most important. He views the District vision as challenging students and helping them to reach “beyond their goals”. His role is to help and support the students and the teachers by making sure “the air-conditioners are working, the doors stay locked, and the plumbing stays flowing”, and that the “teachers and students have a safe and functional facility so that they can do their job to achieve these goals...We are here for children”. Ben believed his vision was compatible with the District’s, and when asked specifically about the Ten Ethical Principles, responded by indicating they are just as applicable at home as they are at school.

David sees the District’s vision as one that enables all children to be educated from K through 12, and prepares children to meet every challenge. The District vision is lived out “when we all meet together and talk about Continuous Improvement, and we talk about student achievement, share ideas

and how we view the challenges for the future”. David believes everyone “needs to be on the same page”, including the people in his department and the mission they have. He also believes it is important to know “Why are we here?” and that each person should have an assessment of the role he/she plays in meeting the District’s vision and goals. Without prompting, David talked about the Ten Ethical Principles and how important he thought this document was in serving as a guideline for how his department operates.

Summary. The CO administrators believe that their own personal vision and that of the District’s are congruent and harmonious, as well as the vision they share regarding “what’s best for kids”. This group’s espoused vision beliefs were the most consistent and coherent. The other departments/campus groups appeared to emphasize some ‘Guiding Documents’ over others. The Ten Ethical Principles seems to be the ‘Document’ of choice for the elementary teachers, and the Graduate Profile for the secondary, although the Four Challenges was mentioned as important by the principal, an elementary teacher, and one of the secondary teachers. From the Four Challenges, the first goal “Eliminate the link between economic disadvantage and low achievement, while improving overall student performance” was the most often repeated component. One of the Support Function (SF) employees, when prompted by the researcher, stated that he believed the Graduate Profile was the most important vision Document. The Ten Ethical Principles was volunteered by another and the remaining SF respondents made no reference to any of the

Guiding Documents. However, all but one of the SF respondents mentioned sharing, collaboration, teamwork, or group effort somewhere in their responses to this question, which is a support goal for the Graduate Profile.

In reviewing the deconstructions from the interviews, there were no indications of conflict between the respondents' perception of the District's vision and personal visions, for all the administrators and teachers, and two of the SF employees. The two food services or CNS employees appeared to emphasize the vision and goals promulgated by the 'company'.

Both campus administrators, and one each from the elementary teachers, secondary teachers, and SF groups, indicated that personal vision was an important signification, which suggests that the concepts of 'shared vision' and 'personal vision' should not be viewed as bipolar opposites or as either/or propositions, but as distinct entities that mutually coexist. One of the secondary teachers believed that there were separate but somewhat overlapping visions at the District, campus, department, and individual employee levels. Another secondary teacher believed that the vision was inconsistent between the District, his/her campus, the administrators, the teachers, and the parents, in that all had somewhat different perceptions of which goals should be emphasized in the District's vision.

Although there were no significant conflicts individually reported between District and personal visions, the elementary teachers, secondary teachers, and SF employees emphasized different Guiding Documents from the District's

collective vision. These differences of emphases regarding the District's vision, as gleaned from the interviews and supplementary material, suggests the influence of several factors: (1). the span of the District's vision and the multiple documents that strive to define it, complicate interpretation and adoption, (2). the size of the District may complicate distribution efforts, and (3). the growth of the District with almost 300 new teachers every year creates a perennial dilution of the District's vision. While two of the respondents expressed a belief that "everyone needs to be on the same page", the 'shared' vision appears more akin to quilt work with the most repeated patterns consisting of collaboration, teamwork, or working together as a group, which is more reflective of Core Value #6. Portions of the District's vision are widespread, but the variability in the responses suggests that this Core Value, as manifested through an interrelated matrix of goals, may be difficult to achieve in a relatively large, high growth-rate district. Ann's speculation, that aside from the vision cohesiveness among the executive administrators, the District's vision is probably unevenly realized in the organization and that not everyone could articulate the full vision with clarity, proved to be an accurate reflection, considering the results from the deconstructions and associative analysis.

Core Value #2. Determination of Educational Needs: “Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders”

This Core Value focuses on the QM tenet of “customer-driven quality” and examines the interface between decision-making input and authority regarding students and their learning needs (Detert, et al, 2001). The idea conveyed is that “the needs and requirements of various stakeholders must be the primary determinant of organizational actions” (Detert, et al, 2001, p. 194), which borrows from the TQM dispensation that “Quality is what the customer says it is” (Marchese, 1993, p. 10).

Central office administrators. Ann considered this a “very complex issue”, Cathy replied, “It’s a gray answer”, and Bob referred to District decision-making as a “messy process”; all of the CO administrators were generally in agreement that the ‘needs’ of the District are identified through input from many different constituencies, by the board, the superintendent and the executive team, the principals, teachers, parents, students, and the local business community. The CO administrators view parents and students as clients, not customers, and in a client relationship, the school district’s goal is to provide services that are tailored to meet or exceed their needs. Ann’s response to the interview question provided a noteworthy caveat regarding constituent input.

So I think we need to be careful that we're tailoring the questions we are asking to each group according to the information that they have.

I think that when people discount the information you get from parents or communities, et cetera, it's because you're asking them the wrong questions. You're asking them process questions, questions about methodology et cetera, that they really don't have the background (to answer).

So making sure that when you're trying to get feedback from all those different groups about what their needs are, you need to make sure that you're asking them the right questions to get the right information.

I think it's the job of top leadership to synthesize those needs from a huge variety of sources and make sure that they blend together.

Asking the right questions is a strategy that undergirds the establishment of a quality focus (Scherkenbach, 1986; Hodgetts, 1996).

Campus principals. Both campus administrators believe that needs are determined through the input from multiple stakeholders. While Beth acknowledges that needs are guided to some extent by the TEKS and the associative TAKS results, both she and Lana indicate that student needs are also determined by other measures of academic skills performance and by teacher observation. Both believe the processes for uncovering student needs and the development of strategies to meet them invite teaming and collaboration (CV #6), among an array of stakeholders including parents.

Elementary teachers. Three of the four elementary teachers thought that parents have significant input into their children's education in the Leander ISD, but that decision making is driven by other factors as well, particularly the TEKS (Texas Essential Knowledge and Skills, <http://ritter.tea.state.tx.us/teks>) and the TAKS (Texas Assessment of Knowledge and Skills, http://www.tea.state.tx.us/index3.aspx?id=948&menu_id3=793). The general

feeling from Gwen and Helen was that decision-making is predominantly professional educator driven, but with considerable influences from state accountability, student academic Profile performance, and the parents. Rita believed that 'needs' are determined by everybody, professional educators and parents, which she considered "a good thing". Elle thought that many decisions regarding student needs, curricula decisions and textbook adoptions being specifically mentioned, were made by just a few people but that they "probably take many things into consideration". At her campus there was a lot of dialogue about shared decision-making and involvement of all stakeholders, but she had no way of knowing the extent that it actually happened.

Secondary teachers. All four of the secondary teachers believe that the Superintendent, the central office administration and staff, and the campus principals are the primary decision-makers in determining the educational needs of the district and for the respective campuses, with input from teachers and parents. One of the teachers believes that local businesses and industries contribute significantly to the identification of educational needs for Vocational and Technology education. Ken, another of the secondary teachers, provided the following perspective:

I think everybody has input, but its how much. Everyone's opinion is welcomed, everybody's vision is welcomed; however, I have a sense that the professional side, or administrative side, will have much more weight or credence attached to their concept of direction the district should be going in. Notwithstanding each individual parent's or each individual student's idea how they should be taught or methodology or instruction methods, et cetera, et cetera, there has to be some kind of overall picture, a big picture of how this should be going - which should be left up, I believe, to the professionals/administrative people, versus every little

individual having total input and weight and credence attached to that. Because we would be all over the place, so it's got to be, there's got to be a pilot steering the ship, basically.

Two of the four secondary teachers thought educational needs should be based on the needs of the students, while all agreed that parental input was a welcomed component in the determination of educational needs, but inferred it should be moderated in the interest of not losing sight of the 'big picture' and the District's broad vision, and for not dictating how teachers should teach. Three of the four teachers mentioned the collegiality and collaboration they enjoyed in their department or program and believed it strengthened their teaching.

Support function employees. The two male employees believed that District 'professionals' determine the educational needs and moreover had the opinion that they should. The two female respondents thought that the parents have significant input into their children's education, and resorted to explaining what they meant through personal experiences with their own child or grandchild, and what they had heard from other workers and people in their neighborhoods. They believed that the parents, teachers, and administrators working together, are all involved in determining the educational needs.

Summary. The deconstructions revealed a broad mixture of responses. Three of the CO administrators and the two campus administrators, either infer or believe that the educational 'needs' of the District should be determined by gathering input from all relevant stakeholders and instrumentalities, with the administration ultimately assigned the tasks of integrating the input into a

apprehensible whole and making the final decisions. One of the CO administrators viewed determination of educational needs as a “partnership” endeavor, and another emphasized that in soliciting input it is important to tailor questions that are appropriate to the individual’s or stakeholder group’s experience and knowledge base.

The general feeling from two of the elementary teachers was that decision-making regarding student needs is predominantly professional educator driven, but with considerable influence from state accountability guidelines, student academic Profile performance, and parents, while the third teacher thought that ‘needs’ are determined by everybody, professional educators, and parents, which she considered “a good thing”. The 4th elementary teacher thought that many of the decisions, such as textbook adoptions and curricula decisions are made by just a few people, but that “they probably take many things in consideration”. All four of the secondary teachers believed that the Superintendent, the central office administration and staff, and the campus principals consider input from teachers, parents, and other stakeholders, but ultimately make the final educational decisions. Two of the SF employees believed that the teachers, parents, and administrators worked together to determine the educational needs, while two believed the administrators/professional educators should make such decisions.

According to Detert, Louis, and Schroeder, Core Value #2 is “controversial among those who support more teacher and professional control

over the content and processes of school practice” (2001, p. 194), and Detert and Pollock report in a separate study that among the QM constructs, external customer focus generated the strongest negative response from teachers (2008). The beliefs rendered by the respondents do not consistently align with or support the Core Value #2 descriptor. The majority of the respondents believed that the professional educators should make the final decisions in addressing educational needs, after integrating and considering the input and information gathered from all relevant stakeholders.

Core Value #3. Long and Short-term Commitments: “Improving Education Requires a Long-term Commitment”

The “long-term” commitment value is not universally endorsed by the QM literature, but does convey an emphasis on a longer time horizon which is contrary to the struggles many teachers face in keeping students engaged on a daily basis and the emphasis on short-term improvements emphasized by state accountability tests (Detert, et al, 2001).

Central office administrators. Cathy expressed the belief that “continuously improving is not just an option; it’s a way of life”, which reflects a common sentiment voiced by aficionados of Continuous Improvement (Robson, 1991). According to Bob, “It means to continually learn, both for groups and individuals”. Continuous improvement, as far as the CO administrators are concerned, involves a long-term commitment to the vision and supportive goals,

as manifested through the Graduate Profile, the Four Challenges, the Ten Ethical Principles, and the Leander Way. The Central Office administrators were unwavering and consistent in voicing this sentiment. Continuous improvement requires belief in and commitment to both the Guiding Documents that articulate the District's vision and the Continuous Improvement philosophy that serves as a means to fulfill it. "Continuous Improvement", "continually improve", and "continuous improvement" are multiple reflections of the same general idea, with the first representing the philosophy, the second an action, and the last a product. The administrators emphasized the 'commitment' object noun of the descriptor as much as the 'long-term' adjective.

Campus administrators. Lana believes that for continuous improvement to work, "there has to be a really deep enrollment between all the people that are participating in it". Both campus administrators indicate that continuous improvement requires a deep and widespread commitment. Beth adds that stakeholders must give the strategies and processes for improvement time to work. For Lana, "Continuous Improvement" means continuous improvement for everything in the school environment, from student academic improvement, to textbook management, to all aspects of managing a school. Both campus administrators emphasized the 'commitment' element of the descriptor.

Elementary teachers. All of the elementary teachers believed that long term commitment is important, especially as it applies to life-long learning for students, but differed somewhat regarding the role of short term commitments

and the influences from immediate needs and pressures, particularly those related to seasonal TAKS preparation and testing. Two of the teachers thought that short term commitments and immediate needs and pressures can be used to bolster long term commitments and goals if they are integrated and addressed for that purpose, but also believed that the integration of these competing commitments towards a common goal is difficult to manage. And one of the teachers believed that she and others were driven to a large extent by short term results, and that it was sometimes difficult to wait on instructional strategies that required long incubation periods and that produced delayed results.

Secondary teachers. Marilyn and Ken perceived a direct connection between continuous improvement commitments and training; the more training in continuous improvement, the greater the likelihood of teacher buy-in and long term commitment to the philosophy. Marilyn also spoke of the importance of examining and analyzing the system, which she considers a long-term, unending process while Ken stated that to not have a long term focus would be “like a rudderless ship going all over the place”. Mike viewed long term commitment as the year in, year out, commitment to continuously adjust and improve his lessons to meet the individual learning needs of each student. His long term goal was to “get all of them to the same level”. One of the teachers spoke of her initial excitement over continuous improvement and how enabling the concept seemed to be, but objected to the way it was being implemented, “I see this district as

seeing what can we get as instantaneous results, now, rather than let's just wait and see how the kids are doing over the long term”.

Support function employees. The CNS employees both view commitment from the perspective of the central mission of their program, to provide nutritional meals for students in accordance with FDA, state, and company guidelines, and that satisfy the needs of the students, and ultimately the Leander ISD, and to accomplish this mission consistently day after day. There are immediate pressures and needs that arise, sometimes unexpectedly, but both CNS employees believed that the expertise among their own staff, with that of the school district administration, custodial, and plant services staff, are sufficient to address any problem that might arise. The emphasis from both employees was on providing high quality meals that the students, parents, and school officials expect, on time, consistently, day in and day out. Meeting governmental health and safety issues was one of Donna’s concerns within the context of meeting the needs of the students consistently from one day to the next.

From Ben’s perspective, his department exists to “put out fires” and deal with emergencies and unexpected equipment breakdowns, and to manage preventative maintenance chores. He believes that both short and long term commitments are necessary in order for his department to carry out its mission.

David perceives his department’s primary goal as that of daily serving the students, “Well I believe that the custodians that's on that campus goes in and has all these duties that they have to take care of, restroom care, classroom

care, hallways, cafeteria duty. They wouldn't be here if they didn't care for students". David believes that commitments are determined by answering the question, "Why are we here?" which as a query addresses long-term commitments.

Summary. One of the problems with this Core Value is that it is often difficult to discern if an improvement decision is having an impact on an organization or people until years later and it not uncommon for a strategy to yield little or even a negative effect in the short term (Deming, 1994). The feeling from the majority of the respondents is that continuous improvement implies by its very nature a long-term commitment. There were differences expressed regarding the role of short-term commitments, some believing that short-term commitments help in the reaching of long-term goals and commitments, but that it is often difficult to reconcile the two working in harmony. This Core Value was espoused by eight of the respondents, eight believed both short and long term commitments influence improvement, and two of the SF employees believed that weekly operations planning and targeted daily strategies were the primary driving forces. Core Value #3 highlights the competing nature of short-term and long-term commitments in the perspectives voiced by a sizeable segment of the respondents. Overall, the bulk of opinions acknowledged that long term commitments should have a role in driving educational improvement, either in the form of a contributory or controlling influence.

Core Value # 4. Managing Change: "A School Should Strive to Make Continuous Changes to Improve"

This core value "represents a mind-set in which things are never viewed as good enough" and the organization is constantly looking for ways to improve (Detert et al, 2001, p. 195).

Central office administrators. All of the central office administrators view change from a positive perspective and as a necessity for improvement. To quote Paul, "The vast majority of times change doesn't scare us...it's a good thing, an absolutely critical thing...we have to change in order to reach the vision we have. Not that at some times you are going to have resistance to change, we know that, but we've also seen that, that doesn't scare us off either". Bob adds, "We have to view change as our friend...Change isn't always bad, although at times it can be uncomfortable. We almost always turn change into a positive for our students and our community". As a team, they look for ways to turn change, even if is initially perceived in a negative light, into something positive, and they appear to be tenacious in voicing this opinion.

Campus administration. Both administrators believe that change begins with the data and planning. For Beth, you analyze the data to see where you are, devise an informed plan that holds promise for taking you where you want to go, jump in, do it, and commit to it for the purpose of collecting new data for analysis, revision, and improvement. Change occurs through intermediate steps of analysis and revision, with successive iterations informing stakeholders of the

extent the plan is working. For Lana, improvement occurs when the people in the organization want to make things better and realize change is the only way it can be accomplished. For change to occur, there needs to be solid indicators and evidence why a plan will work based on the data, and the people involved in implementation must agree on the breadth and direction of the plan. “If its change for the sake of change, the flavor of the week, people get tired of it. Parents and kids get tired of it”, because “they don’t see any authentic use for it in their lives”. Both campus administrators see commitment as essential to successful change.

Elementary teachers. Three of the elementary teachers say they like to learn new strategies and techniques, but they are cautious of broad, sweeping, whole-scale change. All of the teachers seem to feel more comfortable in ‘taking what works’, and fine-tuning or tweaking strategies to yield better results. They prefer to take the ‘tried and the true’ and ‘find ways to extend that good thing’ to the next level. And one teacher commented that it is good to “kind of mesh the old and the new together”. The overall attitude was that change is good, as long as it is thoughtfully and measurably implemented and in digestible ‘bites’.

Secondary teachers. Marilyn thought that her particular field of study is one that changes constantly and that this helps her in adjusting to change and makes it easier for her to understand systems and different perspectives. Mike believes the administration encourages change, but doesn’t force it on the teachers, and in this spirit his department complies with and generally accepts

campus-wide change efforts. Ken believed that the administration embraces change and encourages it throughout the District, and “that we do not absolutely want to reach a plateau and stay there”. Nan approaches change somewhat more cautiously and stated that “Sometimes change is good. It’s not always good, but it sometimes is”.

Support function employees. The main focus for Donna was on maintaining the kitchen schedule for the preparation and serving of meals. This perspective means applying the procedures and strategies that consistently provide good results and following through with them. There is some room for experimentation, but having adequate manpower to carry on the regular daily operations while experimenting with new presentations and products can be problematic. Donna seems to favor stability although she believes the company looks for ways to improve product and service quality. Fran believes in, and says her supervisor supports, changing or fine-tuning work routines to increase efficiency.

Ben lives in a sea of change and expects it every day due the nature of his work. Nothing in the District pertaining to his work has been constant. Making change involves monitoring and measuring its impact. Ben believes that with the growth in the District and the annual addition of new campuses, come additional responsibilities which make his job more difficult and which require more ‘office’ work and less time in the ‘field’. While Ben has come to ‘expect the unexpected’, he believes the continual growth in the District has made his job

more demanding. David believes his department must focus on meeting the needs of the customers, the children, teachers, and principals, and is best managed through collaboration and teamwork.

Summary. Change is inevitable and invites adaptation and innovation. How people respond and adapt to change varies, and the topic of organizational adaptation to change populates the business, marketing, sociology, and innovation diffusion literature. Earlier efforts to classify “adopter categories” employed a variety of expressions to describe how responsive individuals or members of a group are to change and innovation. The most innovative were ascribed descriptors such as, “progressists”, “high-triers”, “experimentals”, “lighthouses”, “advance scouts”, and “ultra-adapters”. “The least innovative individuals were called “drones”, “parochials”, and “diehards”” (Rogers, 1995, p. 257). Along a similar but more clearly apportioned classification scheme, Rogers arranged the adapter categories as the venturesome “Innovators”(2.5%), the respected by peers “Early Adopters” (13.5%), the deliberative “Early Majority” (34%), the skeptical “Late Majority” (34%), and the more isolated traditionalists or “Laggards” (16%), and proposed ‘typical’ research-based distribution percentages for each (in parenthesis) (Rogers, 1995, p. 262). Rogers clarifies the coinage of the “Laggards” expression by stating, “But it is a mistake to imply that laggards are somehow at fault for being late to adopt. System-blame may more accurately describe the reality of the laggards’ situation” (1995, p. 266). Rogers’s analysis draws attention to the reality that not

all members of an organization or group respond to change or embrace adaptation in the same manner, at the same time, or for the same reasons.

No other group in the District embraces change to the extent as that expressed by the Central Office administrators. This ebullient attitude about change does not consistently extend to the other respondents and variation exists among them, from analytically and purposefully predisposed in the planning for it, to laissez faire acceptance, to accepting it if in manageable 'bites', to reserved caution, to preferring a predictable and consistently stable production environment. Most of the respondents expect change, but had different beliefs as to how they frame and accommodate it. The CO administrators revealed beliefs that suggest they are the "change agents" of the District; the teachers were varied in their responses, some unconditionally receptive to change, some preferring change in moderation, while several were more cautious, and the SF employees had the greatest within-group variance, from preferring predictability, control, and stability, to struggling to stay abreast with change, to looking for little ways to improve daily, to exploring new ways to please the customers.

Variation in the responses to change among employees of an organization is not unexpected according to organizational change and innovation diffusion scholars (Rogers, 1995) and the CO administrators' responses were philosophically coherent with Deming's view of management's role and responsibilities (2002). Differences in perspective seemed to revolve

about either the pace of, or the rationale for change, with most of the respondents expressing a generally favorable opinion regarding the need to 'continually improve'.

Core Value #5. Decision-making Involvement: "Employees Should Be Active in Improving the Overall School Operation"

This Value stresses the importance of involvement by all employees in decision-making. However, the QM literature is somewhat divided with respect to how this should happen. One camp stresses the Deming Management Method where cooperation, learning opportunities, and employee fulfillment are emphasized (Anderson, Rungtusanatham, & Schoeder, 1994), another calls for teamwork (Dean & Bowen, 1994), while a third perspective cites professional development as the key component of valuing employees (Barth, 1990; Beck, 1994, as cited by Detert et al, 2001).

Central office administration. The executive administrators believe they have meaningful, contributory roles in the District with each suggesting complementary yet somewhat differentiated responsibilities. Bob sees his role as one of being an orchestrator or facilitator of change, Ann a scout listening and exploring what is happening in the District and influencing people through training that causes them to question the things they are doing, Paul creating an environment for cultivating leaders and helping them to grow in their leadership capacity, and Cathy analyzing data to determine the focus for education and

training needed by teachers, principals, and other employees to fulfill their roles. All of the CO administrators believed that they had important roles in decision-making at the District Level.

Campus administrators. The elementary principal believes she is very vocal but listened to because the District provides a safe environment for this to happen. She believes the District allows her to express her opinions and that she has a voice in making decisions and influencing what happens on her campus. Stakeholders have the freedom to respond or not to respond when they are asked for their opinion. The assistant principal believes that she is still in a 'learning mode' and has no significant role in making decisions because she is so new to the District.

Elementary teachers. All four of the elementary teachers believed that they had decision-making roles in influencing and improving campus instruction, and two believed their influence extended even to the District level. Gwen acknowledged that the TEKS objectives and TAKS tests influence everyone, and accommodations have to be made to address these demands. However once in the classroom, "you ultimately are the king or queen in your room and you make the final say in what you are trying to instill in your children, from day to day and from year to year". Gwen believes every classroom is different and the teacher must address the specific needs of their children and the District provides wide latitude in the tools and strategies that may be used for addressing those needs.

Helen believes that she has an important role in the sharing of classroom strategies, particularly those that are innovative and demonstrate real promise. She believes that she was selected for her job to do things differently and to share what she learns in the interest of improving instruction for others. Elle believes she has a pivotal role in improving instruction for her students and that she and her team members share and are willing to try new approaches and strategies. While she and her team have roles in improving instruction for her class and program, she does not feel that she has any role in improving instruction or the way things are done at the broader campus level. Rita believes that educational improvement happens regularly throughout the District and on her campus because teachers commonly and willingly share ‘best practices’ which ultimately influences instructional decision-making at the team level, grade level, and at the individual classroom levels.

Secondary teachers. Three of the four secondary teachers did not believe they had any significant role in changing things at the District level, but all four believed they had significant roles in making educational decisions in their teams and classrooms, and that instructional strategies to improve instruction were readily shared within their teams, departments, or programs and through the training they received. One of the teachers believed that parents are sometimes more influential than teachers in “changing things” and that some of the educational changes and decisions are “more top driven”, by “administrators and superintendent”.

Support function employees. Donna believes there are certain responsibilities that come with her job that are non-negotiable with which she must abide. She indicated that she can change menus but only within the guidelines established by the company and to the extent manpower can be mustered to accomplish the change. Both CNS employees believed their supervisors were always willing to listen and open to suggestions for improvement. Ben believes that the changing demands of his assignment and the sudden nature of many of the problem his department encounters, requires him to make the operational decisions. David believes the decisions he makes are based on input from multiple stakeholders.

Summary. This Core Value seems hampered to some extent by the imprecise nature of how “active”, “overall” and “school operation” are interpreted and how the Core Value descriptor is worded, “*Employees should be active in improving the overall school operation*”. There is considerable variation in the quality literature as to how ‘being active’ or ‘involvement’ is defined. It can be a little as ‘having input’ to as much as feeling the ‘freedom to take risks’ to make changes (Detert, et al, 2001). According to Detert et al, training and education can also empower people, giving them the knowledge to experiment, engage action, and take risks (2001). The descriptor verbiage used for this Core Value does not convey the full range of meanings Detert et al, intended.

The first question segment for Core Value # 5 was phrased to focus on the respondents’ perceptions regarding their impact at the District level, the

second at the more localized level which for teachers was further refined to address educational decision-making. The CO administrators all believed they had decision-making roles in improving education at the District-wide level, and the principal believed her influence extended to other campuses, which was expected. With the exception of one of the elementary teachers who believed her Continuous Improvement Conference presentation had a pedagogical impact in a specific content area for teachers across the District, most of the other respondents thought that they had little influence in impacting the overall operations at the District level. However, all but one of the 18 respondents believed that they had significant roles in influencing the operations in their classes, grade level teams, or department, the one exception believing that she had a role but that it was limited by operational guidelines and manpower.

One of the problems with this Core Value is that it is often difficult to discern if an improvement decision or strategy is having an impact on an organization or people until years later and it not uncommon for a strategy to yield little or even a negative effect in the short term (Deming, 1994). This may create a situation where employees are left wondering how effective their input and contributions are across shorter evaluation intervals. Another problem emerges with regard to how “overall school operation” is defined, and the descriptor omits an underlying component involving employee training and professional development. The teachers’ influence on decision-making appears to be realized more at the local classroom or team levels. In a similar manner,

the support function employees fashioned their responses to fit within their respective localized settings.

All of the CO administrators and the principal believed they had important decision-making roles at the district level. The remaining respondents believed that they had at least some influence at the more localized level. This Core Value is consistent for more localized decision-making, with the perception among the non-administrative respondents, that individual employee influence generally diminishes the further removed from localized settings.

Core Value #6. Collaboration and Autonomy: “Collaboration Is Necessary for an Effective School”

This Core Value “focuses on the belief that collaboration leads to better decisions, higher quality, and higher morale”, and is based to a large extent on the internal and external ‘partnerships’ established in the Educational Criteria of the Baldrige, and the internal and external networking emphases extolled in the QM literature (Detert et al, 2001, pp.197, 198).

Central office administration. All of the Central Office administrators consider collaboration as the most critical component of Continuous Improvement and believe that collaboration in the District has improved. Furthermore, the CO administrators expressed the opinion that collaboration in its most effective form crosses functional boundaries and extends across the system, appropriating input and expertise from virtually every department,

program, campus, and grade level. Collaboration depends on system-wide, effective communications and the building of relationships, and according to Ann, involves “asking the questions, not being afraid of the answers, developing processes, and continually redesigning processes so that communication can happen”. The executive administrators indicate they want to see collaboration employed in the proper context, not as a buzzword, flavor of the month, or to the exclusion of hearing diverse opinions, and that achieving the level of collaboration, co-operation, and teamwork indicative of true learning communities requires an intentional effort to build an environment of trust. Making experiences available for employees to engage in collaboration and effective teamwork is important to the executive administrators.

The Central Office respondents believe that through discussion, debate, and the expression of diverse opinions nurtured through supportive and trusting learning environments, the District acquires the information to develop and refine processes and achieve continuous improvement. The end goal of these conversations and discussions, as expressed by Ann, is “to get everyone on the same page” and headed in the same direction, as reflected in the District’s Guiding Documents. Bob believes formal organizational charts are restricting, inviting treks down the ‘trail of blame’ (Langford, 2005), and prefers to have rather indistinct lines of authority among his executive administrators. These “fuzzy” boundaries of authority encourage and contribute to cross-functional collaboration and teamwork. Problem solving is best accomplished through

multiple resources and talents that fuse together, the sum of which is greater than the parts. The idea of synergy, which comes from the Greek word, *sunergos*, meaning “working together” (Costello, 1997, p. 1376), obviously is not unique to Continuous Improvement, but meshes amenably with the philosophy and has emerged to become a Quality Management Core Concept (Table 6, Core Concept #5).

Campus administrators. Both campus administrators espouse and believe that there are many collaboration efforts occurring at many different levels in the District. Lana provided a brief perspective.

I think that there's lots of collaboration on lots of fronts. There's a great push to share information between departments, between special education, general education between the science department the language department, between elementary, middle school, and secondary.

Both administrators believe that the District accommodates divergent views and Lana believes because of this allowance, there is a willingness to allow individuals to take risks. Another common belief shared between the two campus administrators, is that there is consistency in the messages that stream from the various campuses and the central office, which can only happen through collaboration.

Elementary teachers. Collaboration is openly advocated and desired by all of the interviewed elementary teachers and all believe the District supports it. The elementary teachers also believe they have “a lot of autonomy”, and according to Elle, individual freedom in the classroom is not sacrificed or compromised through the District’s efforts to promote collaboration.

Secondary Teachers. All of the secondary teachers expressed enthusiastic support for collaboration and believed their teaching was or could be improved through it.

Support Function Employees. Donna believed her kitchen involved both collaboration and individual responsibility. People have individual job assignments and responsibilities, which when properly executed, come together as a group effort and contribute to the successful completion of the cafeteria's daily mission. Fran views her work as collaborative, in that the cafeteria workers are willing to contribute suggestions to each other to help the work flow more smoothly. Ben believes that collaboration is important, particularly as he coordinates activities with peers from other departments and in carrying out directives from his supervisor(s). David believes that collaboration is essential in order to coordinate activities within his department, with other departments, and with the Business and Operations Office.

Summary. Collaboration is consistently espoused throughout the District and among all respondents, although there is a general trend to associate collaboration more with peers, among the teacher and the SF respondents.

Core Value #7. Decision-making Environment: "Decision-making Should Rely on Factual Information"

This Core Value is based largely on the QM literature which strongly supports decision-making based on facts and data, and from that portion of the

organizational science literature that emphasizes “truth” and “rationality” and the “teacher-as-researcher” perspective (Detert, et al, 2001, p. 199).

Central office administrators. Bob and Cathy believe that both facts and data and professional and personal experience are needed to promote continuous improvement and meet the challenges of change, and that each informs the other. Paul believes “the vast majority of people in this district see a value in collecting data, analyzing data, making decisions from that data”, but that ,”there’s still going to be quite a bit of those personal experiences probably overriding data”.

Ann believes that over time and with the rapid and sustained growth and increasing complexity of the District, they have entered into a management era where they have less freedom to act on their own or make decisions in isolation. Ann further stated, “I think what we work to, if at all possible, if we are wise in the way we analyze the situation”, is to determine “whose brain we need when we are making this decision”, and “many times it’s not the brains in the central office...so rarely do I think that we do unilateral decisions”.

Campus administrators. Beth believes that both data and personal/professional experience influence decision-making at her campus. Lana thinks that the district is “very heavily data driven” and “the data is a way to give a fresh perspective on what you are doing and help guide you to what your next steps will be”. She believes the District and her campus have “a lot of history and a lot of tradition”. However, Lana opines that a key challenge to

administrators “is being very respectful and honoring the experiences the teachers have, including the bad ones”. There was little in this question that evoked “I believe”, “I think”, conjecture, or ‘my perspective’ statements, as most of the responses from the campus administrators revolved about “I see” statements, direct observations, or specific instances of practice.

Elementary teachers. All of the elementary teachers believe that data drives the District and their individual campuses and programs, and that it is a wise strategy to do so. Elle went so far as declaring the District as “data crazy” and added, “I think ninety percent of the time, we use data in the right way and think the other part, the other ten percent of the time, I think we might be measuring things that aren’t important and missing other things that are”. Gwen thought that data drove her campus more than some of the other campuses because of its being located in the most economically affluent area of the District and that the parents there had the highest expectations for their schools.

Secondary teachers. All four of the secondary teachers believe the District and their respective campuses are very data driven and consider data driven decision-making as important. Marilyn believes that the administrators on her campus value the teachers and their opinions because “we are the ones in the classroom working with those kids, getting the information across, so we have some credibility and get some suggestions in”. From this perspective, she believes her principal also values the teachers’ experiences. Ken believes that

competition and benchmarking was a prime motivation behind the District's data collection and improvement efforts.

Support function employees. One of the CNS employees believes that personal and/or professional experience determines what data is important, and how it is collected. The other CNS employee believes data drives the operation of the cafeteria. While the remaining two respondents believed that data influenced their operations, one believed that some jobs in his department were more heavily dependent on experience.

Summary. This question evoked mixed opinion among the administrators, with four of the six believing that professional experience and insight are contributing factors to problem solving in combination with data. Five out of eight of the teachers believed that data should drive District decision-making. The Support Function Employees were also divided, one believing that personal experience should drive decision-making, one believing data should drive decision-making, and the other two believing that both data and personal experience should contribute to making decisions.

The results from this question suggest that among some of the administrators and Support Function employees, there is 'room' to value both rationales for decision-making, data and personal experience. However, the four teachers who were in the 'crosshairs' of the TAKS tests, believe their educational decisions were strongly driven by data. This emphasis on the TAKS test was also mentioned by several teachers in Set 3 question 5, as a central

driving force for curriculum decisions. Replied one teacher, “I think, if it's not foremost in your mind every time you are going to do a lesson, it's at least in the back of your mind”. Another teacher opined that “There's a lot of onus, priority placed on doing well on the TAKS, hugely more so than I've ever been used to”. One teacher did note however, that she believed the elementary Student Profiles were the central driving force in curriculum and instructional decision-making for her campus and grade level.

The initial interview deconstructions, indicated nine respondents believe data should drive decision-making, eight believe decisions should be based on both data and personal/professional experience, and one believes personal experience should be the dominant driving force. This Core Value appears to cluster more strongly with those teachers who are in close proximity with and who must prepare for grade level or content area TAKS testing. Given the nature of the survey and interview questions emphasizing the comparison of the Continuous Improvement and “opposite” or “traditional” values, the espoused values were not aligned consistently with Core Value #7 across all groups. This variance in responses represents yet another of the Core Values that is difficult to express as an either/or proposition as almost half of the respondents believe personal/professional experience should contribute to decision-making. However, the across and within group variations do not negate the fact that 17 of the respondents believed that facts and data either drive decision-making, or in some way contribute meaningfully to it.

Core Value #8. The Source of Problems: “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees”

This Core Value is based on the premise that processes rather than people are the source of most problems (Detert et al, 2001).

Central office administrators. All of the central office administrators believe that the District focuses on systems processes, and that system processes should be analyzed before focusing on or blaming people, although as Bob conjectures, “Sometimes we backslide”. Ann believes that focusing on people instead of processes is inefficient, and what often appears as a ‘people’ problem, is usually a systems problem. Ann also conjectures that “if the mechanism you use in searching for problems is restricted to only looking for people and people problems, people problems are what you’ll find”. The subtleties behind the approach the central office administrators espouse is perhaps best expressed by Ann.

It's always tempting to look at that person and go “something's the matter with that person” and truly, I think we've begun to shift to say first, the first filter is, “Is there something the matter with the process? If you can honestly say no, then you can go to the people. It's the order in which you ask the questions, not that it's in either/or, and never going to be in either/or, and even Deming never said that it was never a “people” problem.

Campus administrators. Both the principal and the assistant principal believe that the primary responsibility is to first look at the process. Moreover, process improvement becomes especially important in a district experiencing

rapid growth. Lana believes that the District purposefully tries to improve processes, towards making the system more employee and parent friendly. As Lana inferred, happy employees can contribute to good communications, which can in turn evoke trust with parents.

Elementary teachers. All of the four elementary teachers believe the District and their campuses are more focused on processes. Helen believes that while the District emphasizes processes, listening to students and parents and focusing on their needs are important guiding processes and major contributors to improving student academic achievement.

Secondary teachers. Two of the secondary teachers believed the problem-solving focus in the District and on their campus was heavily weighted towards processes and systems thinking. One of the teachers believed that the situation influences whether or not the problem solving is focused on processes or people, but said the District and her campus leans much more towards processes. The fourth teacher believed that the problem-solving focus of the District was on people, because the ultimate goal of Continuous Improvement “is to help people”. Marilyn reasons that by focusing on processes rather than people, the District can better adjust to changes in personnel.

Support function employees. Two of the Support Function employees believe that the District’s efforts in problem-solving are based on both processes and people, but that greater emphasis is placed on the former. One believes that the emphasis is about equal, and one believes it should be based on people

commenting, “If you don’t have people that can work together, then processes aren’t going to work”.

Summary. Fifteen of the respondents believe that the District leans more towards focusing on processes. However one each from the secondary teacher and Support Function groups, believe the focus is or should be on people, while another of the SF employees believes the emphasis between the two is about equal. Most of the respondents were in agreement with this Core Value (15 of 18).

Core Value #9. Results and Resources: “Quality Can Be Improved within Existing Resources”

This Core Value is based on the premise that quality can be improved without adding additional resources by improving internal processes, focusing on customer needs, and/or by preventing quality problems from occurring in the first place. The educational component for this value is derived from the idea that it is less costly to prevent student learning problems rather than detecting and “fixing” failure late in the educational process. Detert’s research indicated that this Core Value is perhaps the most controversial and not universally acknowledged as an educational QM value (Detert, et al, 2001).

Central office administrators. None of the Central Office administrators believed that the processes in the District were optimized, and that achieving optimized processes is almost always a work in progress. Bob thinks that, “We

in education use funding as an excuse a lot of time for not improving when in reality we could improve lots of processes in our organizations without additional funding". Bob also believes that the emphasis on the TAKS is redirecting the way the District and the principals ordinarily use process improvement and that the time used in developing student-developed artifacts such as story boards is being circumvented to focus more on the state accountability measurements. He conjectured that this trend is "probably just a cyclical thing".

Ann stated, "I don't think probably that there are many processes that are truly optimized and can only be improved with additional resources or funding...I think that optimized processes are a fleeting moment and maybe that's because we are a rapidly growing district". Ann further believes that "the whole idea of feedback to students has to change" and that the District is not providing enough support for the elementary campuses that are most at risk. Cathy thinks that most of the time "We encourage groups to look at what they have and how they can be creative in using what they have in order to make the improvements they need to make", even when they believe their processes are optimized. Being "pretty good" does not mean that you cannot improve. Ann summarizes her opinions by stating, "When continuous improvement is a way of doing business, then it affects everything you are doing".

Campus administrators. Beth believes that "there are a lot of things we can end up improving that won't need resources" and "if you're only dependent on additional resources, more money, more people, then that isn't going to

happen”. Moreover, the extent one is willing to ask and honor what other people think, drives how resources are allocated. Lana believes the District examines both processes and resources, and bases final improvement decisions on the data, needs, and available funding.

Elementary teachers. The researcher amplified the question somewhat if the respondent had difficulty addressing the question, by using the analogy of “tweaking the system, or tweaking the processes” to help convey the idea that this is one way people try to optimize. All of the elementary teachers interviewed believed that teachers are very adept at doing more with less, often recycling materials and ideas to save money, and are generally willing to put in the extra time to get the job done. Ellie thought that “without additional resources, this District is able to do a lot”.

Secondary teachers. The researcher amplified the question somewhat if the respondent had difficulty addressing the question, by using the analogy of “tweaking the system, or tweaking the processes” to help convey the idea that this is one way people try to optimize. Marilyn and Ken linked continuous improvement to this question, viewing the concept as essentially promoting process optimization which they supported. Marilyn and Ken also thought that the District and their campuses were balanced in reconciling optimization efforts with requests for increased expenditures, and as expressed by Marilyn, were “on the right track”. Marilyn also added that money is not an issue on her campus because, “I think we are more self reliant and we have creative ways to handle

things”. Two of the teachers believed that the District changed strategies and processes too frequently, before giving the preceding emphasis time to mature or to become fully optimized.

Support function employees. The researcher amplified the question somewhat if the respondent had difficulty addressing the question, by using the analogy of “tweaking the system, or tweaking the processes” to help convey the idea that this is one way people try to optimize their work. Two of the respondents believed that additional resources and/or funding is needed for their respective work venues. Another believes that he is a “tweaker” and seeks to optimize his work and the department he works in, but that conditions are reaching a level where more help is needed. He is also a believer that “most people want to do the best that they can”. The fourth believes in trying to optimize the processes of the system and that there is always room to improve.

Summary. None of the CO administrators believed system processes were optimized and if they ever were, it was for only a fleeting moment. However, all of the administrators and teachers believed that many different kinds of efforts are made to get the most value from dollars spent. Two of the Support Function employees emphasized that efforts should first be directed towards optimizing processes, while the other two believed that all that could be done to improve processes had already been tried, and that it was time to allocate more funding and resources to their department. The administrators and teachers believe in optimizing processes before ‘throwing money at a problem’,

and believe the District makes a concerted effort to this end. However, the suggestion was made that more resources were needed for the 'at-risk' campuses. Three of the Support Function employees believed they either need more resources now or will need them soon. This Core Value is generally espoused by the administrators and teachers, with the SF Employees leaning somewhat towards a preference for 'needing more resources'.

Research Question #2: "How and to What Extent Are Practices in the Leander ISD (TX), Aligned with Detert's Quality Management Core Values and the Philosophy of Continuous Improvement?"

Research Question #2 examines what the people in an organization actually do, as reflected through the employees' decisions, actions, and modes of observable conduct, which collectively provide some sense of the values, norms of behavior, beliefs and underlying assumptions, cognitions, and/or tacit knowledge that collectively serve as the 'social glue' that binds an organization together (Rokeach, 1973; Smircich, 1983; Schein, 1992). Values become validated through repeated, successful, practices which are then transformed into the underlying beliefs and assumptions. Values that become embodied in the organization's philosophy, particularly if they are based on prior learning, guide the routine norms of behavior as well as serving "as a way of dealing with the uncertainty of intrinsically uncontrollable or difficult events" (Schein, 1992, p.

20). 'Practices' and 'norms of behavior' are closely linked as the former are routinely chosen or ignored based on the latter (March & Olsen, 1989). In effect, internalized values and underlying assumptions guide the norms of behavior which in turn, guide the practices. Thus, the researcher based Research Question #2 on the inference that repeated forms of practice represent norms of behavior, which in turn reflect group values and underlying cultural assumptions.

Core value #1. The Role of Vision: "A Shared Vision and Shared Goals among Faculty, Staff, and Administrators Are Critical for School Success"

The origin of the District's vision and associative goals is ultimately established by statute as the Board's responsibility, to "adopt a vision statement and comprehensive goals for the district and the superintendent and monitor progress toward those goals" (Texas Education Code, Title 2, Chapter 11, Subchapter A, Section 11.1511, Subsection b2, 2007). How the vision statement and associative goals are actually 'lived out' is relevant to this Research Question.

Central office administrators. The administrators clearly identified the Graduate Profile (containing 20 goals), the Ten Ethical Principles (10 goals), the Leander Way (8 goals), and the Four Challenges, as collectively representing the District's vision, which were often referred to as the "Guiding Documents". The site visits and supplementary material gathered assisted the researcher in

assembling a more complete picture of how the 'Guiding Documents' were distributed.

The Graduate Profile had the greatest presence being displayed on posters that appeared at every campus the researcher visited, in cafeterias, principals' offices, on the District's web site, in Yearly Planning Calendars, and as presented in the four Continuous Improvement Conference (CIC) session booklets the researcher collected for the 2004, 2005, 2006, and 2008 conferences. The Ten Ethical Principles were similarly displayed on the campuses, the District's web site, the Yearly Planning Calendars, but was not presented as a separate 'Guiding Document' in the CIC sessions booklets. The Graduate Profile (Appendix C1) and the Ten Ethical Principles (Appendix C2) were also prominently displayed on large panels behind the front receptionists' desk at the Central Office and it was not uncommon to find them in teachers' classrooms (Appendix C3). The Leander Way appeared on the District's web site, in the 2006 and 2008 CIC sessions booklets, the Planning Calendars, and the Four Challenges appeared on the District's web site and in the two Annual Planning Calendars the researcher procured. The Leander Way and some of the basic philosophy of Continuous Improvement are shared with all new professional educators through a first day orientation session conducted by Bob, Ann, and Cathy and employees have many other training and vision-infusion opportunities to learn more, such as provided at the annual Continuous Improvement Conference which is alternatively referred to as the February

Conference. To some extent, state mandates such as the TEKS guidelines (Texas Essential Knowledge and Skills) influence the “Guiding Documents”, and teachers and administrators alike annually struggle with the associative measurement of TEKS mastery, known as the TAKS tests (Texas Assessment of Knowledge and Skills).

The District had just finished a segment of TAKS testing, and the state accountability pressure was mounting and complaints were being voiced, “Ok, we’re becoming too TAKS driven”. For Cathy, the strategy she uses in managing reactions to the TAKS is to ask herself the question, “Ok, let’s look at the reality of the situation. What do we really want the situation to be? How am I helping to resolve these feelings, rather than getting that feeling myself because a teacher is very frustrated or you’ve heard them talk?” When problems of this nature occur, Cathy engages conversations that explore how the employees ‘feel’ about a problem or situation. This approach invites dialogue, discussion, and provides Cathy with information about localized processes and the extent that emotional issues may influence these processes. The technique allows Cathy to redirect frustrations towards more productive behaviors that directly address the District’s vision and goals.

For Paul, the District’s vision is embedded to a large extent in the Graduate Profile and the Ten Ethical Principles. These documents were derived from inputs from both internal and external stakeholders, including members of the local business establishments, with a focus on giving graduates the skill sets

and personal character traits that are regarded as essential for gainful and meaningful employment and a productive life.

The District's central office administrators are not averse to employees having personal visions and goals, in fact, they are encouraged. But Paul finds that he is continually checking to see if his 'personal' is in alignment with the 'shared'. Conflicts can arise in his department where, "the things we do, do not coincide with what we say our shared vision is", particularly in the "way people are treated' or the "lack of input from all stakeholders". Paul acknowledges that not all employees of the District are unconditionally accepting of the philosophy of Continuous Improvement and some do not accept, much less embrace, opportunities to collaborate and prefer to work in isolation. But refusal to accept the Continuous Improvement philosophy or voicing opinion are not reasons why teachers are not hired or do not keep their jobs. However, according to Paul, "if those opinions are going to be directly opposed to our philosophy of how we treat kids, how we go about building trust instead of fear", and if it does not agree with the publicized vision documents, then "our message is this probably isn't the right district for you, this isn't a fit for you".

Bob used the "bus" metaphor explaining that sometimes a person has to be asked to "leave the bus", an expression borrowed from Jim Collins's book *Good to Great* (2001). According to Ann, the likelihood of this happening is reduced to some extent, through the screening of potential employees. There are efforts by the District to employ teachers who indicate through screening that

they are receptive to teaming, sharing, and relationship-building to solve problems, and who possess the knowledge and skills of sound pedagogical practice. All of the 'screening' instruments obtained by the researcher included probes regarding the teaming, sharing, and relationship-building aspects of the Continuous Improvement philosophy (Appendix B5, B6, and B7).

Cathy indicated that Bob and Ann are more than just titular leaders in the system but inspirational ones as well. They reinforce the vision and help guide the District down the path of continuous improvement. This 'inspiration' to which Cathy refers was observed by the researcher and reflected through the introductory addresses that Bob delivered for the District's Annual February Continuous Improvement Conferences. The CI conferences begin on a Monday morning, usually at 8:15 AM. As attendees enter the gym they are greeted to music and a festive environment. The music entrée for the 2005 Conference was "We Like to Party" by the Latino band the Venga Boys. As the introductory music subsided, Bob approached the podium, set on a portable stage, and the 'party' began with the introductory address.

During the introductory addresses delivered at the 2004, 2005, and 2006 conferences, Bob emphasized the accomplishments of all the employees, conveyed his appreciation for their work, reminded the audience of the importance of the District's vision as manifested in the guiding documents and 'why we are here', emphasized the importance of 'working together', and alerted everyone to the opportunities that lie ahead. He always thanked the local

businesses for supporting the District, e. g. Krispy Kreme for providing donuts for the Conference and Sonic Drive-In Restaurants for over two thousand discount coupons donated to employees.

Bob usually introduces an 'ice breaker' to loosen-up the crowd. During the 13th Annual Conference in 2006, pink, green, yellow, and blue balloons were placed on all the chairs and bleacher seats. The attendants were instructed to blow up the balloons and on cue, 'bat', 'punch', or 'slap' the balloons to designated areas in the gym by color, all accompanied to the tune "Zip-a-Dee-Do-Dah". After the balloons were 'relocated' to the appropriate destinations, the lyrics were projected on the front wall and each 'color group' was assigned a line in the song with everyone singing the last line of each stanza. When the song was finished, the gymnasium erupted into a raucous cacophony of thousands of popping balloons. The general mood for every opening session the researcher attended was one of cheer and at times unbridled enthusiasm, abetted through carefully chosen fun-filled activities followed by an inspirational guest speaker.

After the introductory session of 2006, the researcher had the opportunity to 'walk the halls' with Bob as he mingled with the 'troops' who were going to and from the Conference sessions. The conversation between the researcher and Bob was difficult to sustain as Bob would stop frequently to visit with teachers and employees from across the District. He addressed each by their first name, and engaged in conversations that conveyed warmth and collegiality.

Bob demonstrated an open-communications style of leadership as well as the value he placed on professional, yet personal and respectful relationships.

Campus administrators. Beth says that the vision is reinforced to everyone in the District by the Board, Bob, and the top administrators in the District, as evident through practically every means of communication available in the District: at meetings, conferences, through emails, one-on-one conversations, and through official documents and publications. Beth also focuses on meeting the needs of all children, specifically mentioning the “at-risk kids, our kids from ESL, other languages, and Special Ed children, such that the bar of excellence is set for everybody, and that we step up to the plate and do whatever we need to make it happen, and its truly been that way since I got here”. The researcher was able to confirm through budget reports, that instructional expenditures per pupil are higher for the special populations of the District and for campuses that have higher at-risk populations. The District appears intent on meeting the needs for its at-risk populations, as reflected in higher budget appropriations and redirected expenditures; but arguably, these efforts may be just as much a reaction to the high accountability standards for at-risk student populations promulgated by the state Academic Excellence Indicator System (AEIS, 2008a) (<http://ritter.tea.state.tx.us/perfreport/aeis/index.html>) and the NCLB (No Child Left Behind) Act (<http://ed.gov/nclb/landing.jhtml>), and indistinguishable from the budgetary commitments and redirections made by most other school districts in the state for at-risk student

populations, as indicated through the expenditure per pupil data reported in the Texas Education Agency *Snapshot* publication (2008b) (<http://ritter.tea.state.tx.us/perfreport/snapshot/index.html>).

Because Lana volunteered to be interviewed (before the researcher had purposefully selected the remaining interviewees), hers was the first conducted, on March 21st, of 2005. Lana had worked in the District for only eight months, yet seemed to have already acquired the basic fundamentals of the District's vision and 'how things are done'

You hear that you know, 'Put children first', you know 'we are going to do things the Leander Way', 'Think systems first' and 'Continuous Improvement', and you hear that over, and over, and over again.

And in Leander it seems all the families I've worked with at this elementary school, really do feel like they've got the school district as an equal partner in raising their kids and educating their children.

So, I think that not only the vision there, is pretty clear, its repeated over and over and over again all the time, everywhere by, you know, by all the different owners in the system, the administrators, the professional development leaders, and classes, the teachers, the families, its pretty well out there and consistent.

Lana had apparently received enough training and education in the vision of the District and how it is enabled, that the delivery of her responses to the interview question flowed smoothly and in an unhesitant manner. She keeps her notes and "cheat sheets" in the office from the training and meetings she attends. Furthermore, the training enabled her to direct interventions for the children and parents she works with, in accordance with the 'Guiding Documents' which she uses as a framework for action. According to Lana, the District and the administrators diligently work to create an institutional environment that is

generally parent friendly and reciprocally trusting. Her knowledge about the vision and the way it is lived out, has grown and is continually reinforced through training, the people that conduct the training, administrators, and to some extent through the teachers and families she works with.

All organizations have ways of institutionalizing new employees, either through formal or informal means and though the common understandings about what is appropriate and meaningful (Zucker, 1983). Lana's response to the first question suggests that the District's vision and the way it is lived out, is essentially understood and meaningful, through both the formal training she receives in the District, the proliferation of Guiding Documents that serve as constant reminders, and also through the relationships she is establishing with district staff, teachers, and parents.

Elementary teachers. Gwen views Bob as an inspiration and a central force in promoting the concept of "life-long learners". The February Conference is mandatory for teachers, but so rich and varied in learning content, "Why would you not want to go?" Gwen's campus also developed a "common goal" and mission statement, which "trickles down into our own classrooms", and to a large extent is based on "Why are we here?" While the District vision sets the goals, the campus and the teams develop the strategies to achieve them, and the individuals fine-tune the strategies for application in their own classroom environment. Helen and Gwen usually meet with their respective team members on a weekly basis, most often after the regular school day or during

lunch. Gwen's perspective suggests that the District's vision and that of the individual can exist in a mutually supportive if not symbiotic relationship.

Elle was specific as to the level of cooperation and communications that exists for her educational setting.

I feel like if I had a question about, I don't know, a program decision on just an (instructional needs) question in general, there's definitely someone that I can go to". When I'm talking about the team of educators, I'm really talking about my team, my classroom, our team (of contributing specialists) - those are the people I collaborate the most with.

For Elle, the level of collaboration and communication that one might ordinarily associate with Continuous Improvement is meaningful only within her program, and not between her program and regular programs of instruction.

Rita was the second elementary teacher who focused on the Ten Ethical Principles. In her previous Leander ISD assignment, the principal had assigned an acronym for remembering these principles, C-H-I-P-L-P-L-A-E-R, pronounced "CHIP L PLAYER", which represents "Concern for others, Honesty, Integrity, Promise-keeping, Loyalty, Pursuit of Excellence, Law-abidance, Accountability, treating everyone Equally, Respect for others". The use of this device is perhaps indicative of the complexity of the guiding documents, which collectively may appear overwhelming to a new teacher who has not had the time for familiarization or the opportunities for training, and represents an accommodation on the part of the principal to assist.

Rita is on a relatively large grade level team with eight members, and the team plans together once a week. According to Rita, "As a grade level, we are

doing as much as we can for the benefit of the kids, and we are doing it together". Rita also served on a multiple grade-level vertical team that met several times during the year, focusing on language arts strategies. However, Rita's campus provides the freedom for teachers to implement the strategies in "their own personal way".

Secondary teachers. Marilyn said she focuses more on the Four Challenges, believing that if these are addressed, the principles of the Graduate Profile will be met. Marilyn also has a department vision, developed from within the department, which reflects "where we want to go".

And then teachers individually are encouraged, but not required, to do their vision and I think all of that is encouraged. Our principal is a very systems oriented person and big on being able to express your vision. You are more likely to work towards it, achieve it, and revise it. If you've never had the time to sit down and think about where you want to go, how are you going to know if you ever get there, kind of thing. Now, of course, the idea is that your vision will fit in, you know, kind of like those little Russian stacking dolls, you know, where it kind of builds and builds and builds.

Marilyn has many opportunities to meet with members of her department, because they have to coordinate the use of lab facilities which also enables them to compare and borrow ideas for both the classroom and lab instruction.

The teachers in Mike's department meet three or four times a year, to discuss successful strategies, to share what actually works in the classroom, and to coordinate and make arrangements for the local and statewide program-extension student competitions. Mike's responses regarding the District's vision were somewhat more generalized and focused on the often expressed sentiment and belief in 'success for all students'. Mike noted that to the best of

his recollection the District selected 'collaboration' as an emphasis the previous year.

Ken observes that a majority of teachers in his department, meet and "everybody will bring lesson plans, and exchange units, all in line with meeting the District's Four Challenges" and "closing the gap between high performers and low performers, and maintaining the culture, and increasing the reading levels. A huge majority of us do share and it's very welcomed, very encouraged to share ideas and how we institute things". Ken says he has bought in to the 'Leander Way' of doing things, and from Section 2, question 8 (Appendix, A4) stated that he has opportunities to share information with his team members on a daily basis.

Nan's focus with regard to the Guiding Documents, centered on the Graduate Profile, "We, all the schools, try to feed into that idea of how can we help this one student, you know, every student, how can we help this one student into that Leander ISD Graduate Profile, where they will be a life-long learner". Nan observes that there are inequities in teaching loads between particular content areas, with math and language arts usually faring better than the sciences and social studies. Nan's observation may stem from the historical emphasis placed on Language Arts/reading and math through state accountability testing. While none of the respondents expressed dissatisfaction with the goals of the Guiding Documents and were generally accepting if not enthusiastically supportive of them, there were concerns expressed by two of

the secondary teachers regarding the manner or strategies through which the vision documents were 'lived out', that some stakeholder groups appeared to emphasize or prefer some goals over others, or that the administrators kept changing goal emphasis or strategies from one year to the next.

Support function employees. The CNS program provides training for employees and classes are offered throughout the year, and the cafeteria managers meet once a month with the lead manager, which lasts an hour to an hour and a half, and are conducted in an 'open discussion' format. 'Presentation' of meals is given particular emphasis by the management of the company, training provided to this end, and recipes provided that must be strictly followed. The campus cafeteria managers come from a variety of backgrounds, some from prior school cafeterias, some have run their own eateries or eating establishments, some have worked in corporate cafeterias, and a few have experiences from combinations of these venues. They all bring with them what they learned in their previous jobs, and then receive specific training that is in accordance with the company's expectations. She is confident that what she learned in her other jobs, combined with the knowledge she acquired through her previous Leander ISD cafeteria experience, will meaningfully contribute to her new role. Employees from some of the other cafeterias were helpful answering questions that arose, and some of them even "drop by just to see how things are going". The lead CNS manager for the entire District was

likewise helpful, supportive, and encouraging, as was the principal of the campus.

Teamwork at Fran's site happens as needed and when the situation demands it.

We've had to work to where we were two people short, so we had to really work as a team to get all the food out - that we have to get out and get out on time. If somebody asks, "Can you help me with this? I'm running behind" and then whoever is caught up will help them do what they have to do. Or if they don't understand it, you show them how to do it.

During the school year we have meetings and everybody gets to say what they need to say. And if there's a problem then they can talk the problem out, and everybody talks it out. And it works because we address the problem when we have one.

Fran's story may reflect migration of the Ten Ethical Principles (TEP) to her program, but there was too little information in the responses to this question alone, to determine if these behaviors are attributable to the TEP, similar human relationship principles promulgated by the company, the realities and pressures of getting the job done on time, or a combination of one or more of the three. Regardless of the relationship between the TEP and the employees of the food services department, examples of teamwork are present and manifested when production is jeopardized, and the Program appears to foster problem-solving dialogue at regularly scheduled meetings.

David depends on his 'lead' custodians, who serve a valuable role in familiarizing new employees to the District's Ten Ethical Principles, sometimes through stories, and assisted to some extent through the proliferation of Guiding Document posters at multiple locations at every campus. Ben sees no conflict

between the District's vision and his own. When specifically asked what he thought about the Ten Ethical Principles, he responded that the Ten Ethical Principles are just as relevant in his family life as they are to his work relationships, particularly with respect to honesty and "telling the truth". According to Ben, the Ten Ethical Principles help strengthen the personal relationships within his department, and also in the relationships with other District stakeholders, such as teachers and principals.

One of the researcher's elementary teacher interviews was briefly interrupted by one of the maintenance staff who was repairing an air-conditioner in the teacher's classroom. The repairman was cordial and respectful to the researcher and the teacher, properly introducing himself, and explaining why he was in her classroom. The exchange, while brief, was informative to the teacher and appreciated. The teacher recognized the technician because he had attended a fund raising event to support the campus. This situational vignette suggests that the Ten Ethical Principles may extend beyond the students and to the employees of the District and between and within service groups through demonstration of the 'Loyalty', 'Concern for Others', and 'Respect for Others' principles.

Ben's work in many instances is to manage the unpredictable. Water lines break, electrical storms wreak havoc, toilets and sewer lines clog, air-conditioners stop working, light bulbs go out, pencil sharpeners break, the list is endless. Some of these events are emergencies, some can wait an hour, some

a day, others maybe a week or more. Balancing the severity of the event with available manpower is a continual task for Ben and it makes scheduling meetings difficult at best. He is “lucky” to have a staff meeting once every three months, so he relies to a large extent on “micro-meetings” which are usually on-the-job, or job-site meetings, which are short in duration, usually straight to the point, and with just a few members of the maintenance staff present. Because of the nature of his work, it is difficult to share or team at the level most instructional administrators and teachers take for granted. There is no guarantee that he can attend or stay for the main events of the District, such as the beginning-of-year assembly; he attends if he can. The responses from the support function employees suggest that they may not have the same kinds of opportunities for acculturation and consequently develop a distinct sub-culture that borrows only bits and pieces from the larger culture. Sub-cultures can develop within an organization along both horizontal (functional) and vertical (differentiated by hierarchical level) lines, and are often the result of different work orientations (Kekule, Fecikova, & Kitaigorodskaja, 2004). A department that is based on reaction to crises or emergencies may have difficulty meshing philosophically with a larger parent organization that functions around planning and prediction.

The descriptive statistics indicated that among the SF employees, this Core Value had the lowest mean, or leaned the most towards Continuous Improvement. One of the sentences from the survey descriptor states,

“Individuals should be willing to sacrifice some autonomy for the sake of organization-wide goals”. It is conceivable that having a common goal or mission where employees are held accountable everyday for service deliverables, may explain this group’s relative affinity for this construct. If for instance, one person on the cafeteria ‘assembly line’ fails to do his/her job, the results are immediate and clear for everyone to see. The mission of the cafeteria is highly dependent on each employee carrying his/her own weight, or else daily production and service deliverables are jeopardized. Accountability, as assessed on a daily basis, may be the key driving force in the SF employees’ relatively favorable response to this Core Value.

Summary. Aside from distribution of the vision documents through conference and learning event booklets, planning calendars, posters, and the District web site, the Guiding Documents are also covered in new-teacher orientations conducted separately by the central office staff and by principals at the campus level. The Leander Way is emphasized to all new professional educators through a first day orientation session conducted by Bob and Ann, and employees have many other opportunities to learn more, such as those provided at the annual Continuous Improvement Conference which is alternatively referred to as the February Conference. The Graduate Profile appears most often in publicized material, followed closely by the Ten Ethical Principles. Some of the teacher respondents emphasized the Four Challenges, with the Leander Way appearing when learning environment and organizational

philosophy entered into the interview conversations. Additionally, Gwen and Mike mentioned that the District or campus administrators may emphasize a particular goal from the Guiding Documents during an academic year. Learning all the goals associated with the Guiding Documents can be a daunting task, and according to Rita, acronyms are sometimes used to help new teachers negotiate the task. Cathy, Beth, and Gwen point to Bob's leadership as a contributing factor and catalyst in the continued promotion of and support for the District's vision.

Of the four Guiding Documents, the Ten Ethical Principles appeared to be more easily and frequently recalled by the elementary teachers and SF employees. Cathy stated later in the interview that the Guiding Documents "all fit together" and are 'interrelated', but the supplementary material collected suggest that they did not individually receive 'equal billing' or exposure through the multiple forms of communication used by the District to distribute them, and the teachers and professional administrators clearly had more exposure to the 'Four Challenges' and the 'Leander Way'.

Subsequent to the researcher's field studies, the District combined the Guiding Documents with sound pedagogical research and practice, brain theory, TEKS learning objectives, and elements of continuous improvement to generate the 'Leander ISD Learning Model' which was initially prepared for the 2007/2008 school year (Appendix, B8) and revised for the 2008/2009 school year (Appendix, B9). At the central core of the Leander ISD Learning Model is the

“Focus on Student Learning” which is consistent with the Central Office administrators’ espoused beliefs revealed in Research Question #1. The District’s July, 2009, web-site iteration of the Guiding Documents (<http://www.leanderisd.org/default.aspx?name=disrict.home>), omits the ‘Four Challenges’ listing the Graduate Profile, the Ten Ethical Principles, and the LISD Learning Model as the Guiding Documents, but the ‘Four Challenges’ continues to occupy a position of prominence in the outer concentric ring of the ‘Model’ along with the Graduate Profile, the Ten Ethical Principles, and the Leander Way (Appendix, B9).

The Continuous Improvement concept that materializes most often from the interview responses to Core Value #1 questions is that of collaboration and teaming which is more a reflection of Core Value #6. All of the teachers interviewed were involved, at least to some extent, with one or more of the following: grade level, vertical, content, department, and/or program area team-planning. Sharing or working in teams was viewed as enjoyable and beneficial by every teacher interviewed. In many instances, the teachers associated ‘sharing of vision’ with the ‘sharing of strategies’ used to achieve the vision. The ‘sharing and collaboration’ theme was generally widespread in the comments rendered by both administrators and teachers as a means through which the vision goals are realized.

Adult education, training, and learning, depicted as #7 in Table 6, also emerges as a major focus represented as an underlying concept for Core Value

#5. The responses to this question were difficult to compartmentalize or restrict to a single Core Value, as the 'sharing of vision' is achieved through implementation of other Core Values, e.g., CV #2 (determination of needs by the customer/client stakeholders), CV #5 (employee involvement in improving the system), and CV # 6 (collaboration).

A shared vision is often associated with and promulgated through collaboration and teaming. It is not uncommon for elementary grade level teachers to engage in teaming activities on a weekly basis; the elementary vertical teams and secondary vocational departments meet less often, typically once or twice, or three or more times a year respectively. Frequency of teaming at the secondary level appears higher in TAKS tested content areas and for labs-based coursework where teachers have to plan and coordinate lab use. The Support Function Employees may meet and plan together as often as daily, once a month, or once every three or four months, depending on the department and the nature of the service deliverables. Food service employees are cloistered together as a campus unit, while the plant maintenance and operations employees are more widely dispersed, some assigned by campus, others working in special function teams, and some working across the District darting between emergencies and repair work or temporary assignments. Sharing and collaboration among the Support Function respondents appear to be highly dependent on individual site conditions and the extent personnel is concentrated or diffused in the delivery of services.

Core Value #1 is not easily approachable from a simplistic either/or stance, between 'shared' and 'personal' vision, and several of the interviews suggest that both are realized significations that ideally should be brought into alignment if not harmony with the former guiding the latter. Alignment between the District's shared and personal visions appears to be most pronounced among the CO administrators and the principal, followed in order by the assistant principal, the elementary teachers, the secondary teachers, and the SF employees, results that are consistent with the descriptive statistics in Table 14.

With regard to Core Value # 1, the 'values in action' and practices gleaned from Research Question #2 do not substantially alter the observations drawn from Research Question #1, but the reasons why there are inconsistencies begin to emerge. This Core Value does not appear to be consistently realized across the demographic profiles, possibly because (1). The Guiding Documents were not equally distributed up to and including the time of the researcher's field work, (2). The goals for all the Guiding Documents constitute a complex mélange of ideas that may be difficult to coalesce into an apprehensible whole, particularly for new and Support Function employees, (3). The emphasis among the plethora of vision goals may change from one year to the next at the District and/or campus levels, and (4). The training to reinforce the vision among employees was continually being challenged by the District's growth and the associative infusion of new employees.

Core Value #2. Determination of Educational Needs: "Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders"

Central office administrators. According to the CO administrators, the needs are determined through input from many constituencies including but not limited to School Site Based Committees, performing committees, local civic clubs, Community Committees, social contracts between teachers and students, Improvement Teams, and from student (Appendix, B10 and B11), teacher (Appendix, B12) and parent surveys. Additionally, students speak from the data, such as TAKS test scores, and other measures of learning and skills achievement or school accountability measures. The researcher also uncovered a conspicuous District-sponsored outreach program that operates under the "Partners in Education" moniker that incorporates eight different school-community ventures: Community Partners, Volunteer Program, Student Mentoring Program, Leadership Leander ISD, Principal for a Day, The Leander Educational Excellence Foundation (LEEF), Career Development Programs, and Education Support and In-Kind Services (<http://www.leanderisd.org/default.aspx?name=comm.PIE>). The researcher noted "Volunteer Sign In" sheets in several of the principals' offices and witnessed several volunteers darting in and out of the offices, one apparently doing delivery chores and the other headed to a classroom to help with a reading program.

Ultimately the Board of Trustees is the policy making authority of the District and it is through that authority that the framework for taking action is established to legally meet identified needs (Texas Education Code, Title 2, Subtitle C, Chapter 11, Subchapter 1, and Section 11.151). The state of Texas requires the formation of District Site Based Decision Making committees and Campus Based Decision Making Committees.

Each school district shall have a district improvement plan that is developed, evaluated, and revised annually, in accordance with district policy, by the superintendent with the assistance of the district-level committee established under Section 11.251. The purpose of the district improvement plan is to guide district and campus staff in the improvement of student performance for all student groups in order to attain state standards in respect to the academic excellence indicators adopted under Section 39.051 (Texas Education Code, Title 2, Subtitle C, Chapter 11, Subchapter F, Section 11.252, 2003).

Each school year, the principal of each school campus, with the assistance of the campus-level committee, shall develop, review, and revise the campus improvement plan for the purpose of improving student performance for all student populations, including students in special education programs under Subchapter A, Chapter 29, with respect to the academic excellence indicators adopted under Section 39.051 and any other appropriate performance measures for special needs populations (Texas Education Code, Title 2, Subtitle C, Chapter 11, Subchapter F, Section 11.253(c), 2001).

These statutory provisions present the mechanisms through which both “inside” and “outside” stakeholders have input into school district decision-making processes, and according to Ann influenced the development of the Graduate Profile.

The executive leadership analyzes the input and needs matrices from a variety of sources and to the best of their professional judgment synthesize plans that leverage the greatest impact for the District’s client(s) in a fiscally

responsible manner, which is then submitted to the Board for approval. Bob serves in a pivotal role in making the final recommendations to the Board and is generally regarded as much more than just the titular administrative head of the District. According to Ann and Cathy, he is a prime motivator and an inspiration for many District employees.

Campus administrators. According to Beth, student performance serves as a major input source for determining student needs. The locally developed student academic Profiles serve as a “voice” for the students and reflect the semester-by-semester progress a student is making in meeting the challenges of the TEKS (Texas Essential Knowledge and Skills) learning objectives, which the statewide Texas Assessment of Knowledge and Skills (TAKS) tests are designed to measure. The TEKS guidelines constitute the core knowledge and learning behavior skills that the state of Texas expects students to gain proficiency in, and are available for the central academic content areas of English language arts and reading, math, science, and social studies and will be expanded to include career and technology education, and Spanish language arts and reading for the 2009/2010 School Year (<http://ritter.tea.state.tx.us/teks/>).

Elementary teachers. Gwen states that input comes from many sources, from District professionals and parents. Content facilitators are particularly helpful in providing feedback on classroom strategies, and the teachers, working as teams, have input into defining the needs at each grade level. Gwen sees input from many different departments and programs such as from Child

Nutrition Services promoting a program to teach children what to eat, the PE staff promoting health and fitness, and from the 'special populations' teachers who share high expectation strategies for meeting the needs of all students.

Helen had worked on two different District campuses and observed that campuses vary in the extent parents are involved. One of the campuses has a rather storied past with Continuous Improvement.

At (that school), we had parents all the time that were very involved. They could come into our classroom at any time. We had Student-led Conferences and teacher conferences, where we would show the parents their child's strengths and weaknesses and listen to them and hear what they see. And so at schools where parents are willing to come in, you do hear a lot of, "Well I want this for my" or "I don't want this for our child", and a lot of parents at these schools also like to pick their teachers. And they feel that gives them power of knowing, "Ok, I want this teacher for my child", and hopefully if it's done correctly they are fitting the learning style with the teaching style. Sometimes it doesn't work that way.

And sometimes there was a problem with parents coming in, because sometimes the parents became a distraction of the education. And they weren't looking at it as a profession, professional, but more personal and we were very careful the way we talked to parents. We always wanted them to feel like they could talk to us about their children, but at the same time I think we wanted to be truthful with them and tell them exactly where their child was, when we were looking at Profiles and things.

Helen lived in the community that the school serviced, and developed a reputation as an excellent teacher, reflected through the number of parents requesting her to teach their children. Selection of teachers is yet another way that parents can have an influence in their child's education. Helen's reminiscences illustrate that students and parents have significant and meaningful input through the "Student-led Conferences", and that teachers were careful in their communications with parents, especially with those who were

upset, but nonetheless felt obligated to be truthful in reporting their child's progress. The PTA at one of the schools was energized, supportive, and run mostly by parents. In her current school, teachers are relatively more active in the PTA, which she believes is a healthy trend as this organization provides yet another venue for interaction and cooperation.

Helen observes that student needs are examined at the interface of joint student, parent, and teacher interaction and collaboration, and by the administrators who consider the needs for all student groups at the District level. Three of the elementary teachers say the District emphasizes and encourages parental input and all say they can help the child more when parents are involved. Businesses are becoming more active and making donations, and academic advocate groups formed by parents to support accelerated and enrichment programs also have input. In Elle's classes, student needs are determined primarily through evaluations conducted by a team of professionals.

Secondary teachers. According to Mike, the students' needs and placement in vocational classes is monitored through the use of the CAPS (Career Ability and Placement Survey) and COPES (Career Orientation and Placement and Evaluation Survey). These instruments serve as yet another measurement through which students 'voice' their needs. Additionally, input from a local machine shop owner and further corroborative investigation prompted the District to add machine shop classes and curricula to the vocational program. Also, the District maintains an articulation agreement with the Austin Community

College for students to acquire dual credits which serves as an enticement for students to meet one of the Four Challenges, “Increase the percentage of students enrolling in and successfully completing our most challenging courses”.

Support function employees. One of the female respondents reported that her child needed academic assistance which her previous school district never adequately addressed. The Leander ISD professional staff, conversely, was prompt and efficient in addressing the needs of her child, and was conscientious and diligent in maintaining communications, soliciting feedback, and follow-up. A similar success story was shared by the other female respondent. Her grandchild was having difficulty in a particular content area, and the teachers collaboratively intervened with the parent to develop a corrective strategy. The strategy involved a joint venture between the teachers and the child’s mother, such that targeted instruction was delivered at school and in the home. The child’s academic grade rose from a ‘D’ to a ‘B’. In one instance, the parent became an ‘informed and contributing asset’, and in the other a ‘joint partner’ in educating her child. Soliciting parent feedback and involvement were critical to the success of both interventions. Such successes may be common as both of these respondents knew of other successful cooperative ventures as gleaned from conversations with other employees.

The principals at the campuses for both cafeterias were supportive of the cafeteria’s personnel and mission, and sought input on how and what they could do to help. Both respondents viewed their principals as friendly and

approachable, and noticed that they visited with the children in the cafeteria and seemed to genuinely care about the well-being of all their students. It was not uncommon to see them commiserating with students, whether in the hallways, in the cafeteria, or walking the track with a student who needed “someone to talk to”. Overall, both principals were perceived to be effective and congenial communicators, who organizationally serve as important assets for promoting trust and encouraging and acquiring input from stakeholders, roles ascribed to effective principals as detailed by Deal & Peterson (1990), and both seemed particularly adroit in applying their communications skills in informal situations and settings with both cafeteria workers and students. The culture of an organization is created and promulgated not only in the formal spoken and written communications, but perhaps more meaningfully through the informal conversations and sense-making that are a part of daily operations and processes (McPhee & Poole, 2000).

One of the male respondents answered, “Nobody has sent me a survey at home or nobody has ever asked for my opinion on what would be better for your child to make him/her a better student at Leander. I think it’s left up to the professionals”. However, when his child was in need of educational assistance, the professional educators were quick to respond, and actively sought the parents input in developing a strategy. The teachers at open-house were always encouraging, and provided their e-mail addresses, should the parents

ever need help. “We’ll send an e-mail to the teachers and they will zip on back, and never has one not answered”.

Summary. From the interviews, impromptu conversations, statutory documents, District documents, the Continuous Improvement Conferences, and LISD web material, the researcher uncovered a multitude of ways the District solicits and/or extracts stakeholder input in the interest of determining educational needs: Site Based Planning Committees (SBPC), Site Based Decision Making (SBDM) Committees, various performing committees such as the Re-zoning and Health committees, Parent Teacher Association, Partners in Education (PIE), Student-led Conferences, local civic clubs, social contracts between teachers and students, various process and educational improvement teams, student performance results, and student (Appendix B10 and B11), teacher (Appendix, B12) , and parent surveys.

Stakeholder input appears at many different levels and two of the CNS employees provided details on how they and their children engaged in parent/teacher/student cooperative partnerships that helped in determining the educational needs and the deployment of strategies which resulted in academic progress and success. Another of the Support Function employees was complimentary regarding the manner in which district educators were prompt in consulting with him and his wife in determining the needs and developing learning strategies to help his child and were always encouraging and prompt in returning their emails. Another accommodation the District makes is providing to

elementary parents the option to request the teacher of their choice for the next school year.

Bob is the chief executive administrator of the District and responsible for making decisions that are conveyed in the form of recommendations to the Board for final approval. The board is the final authority. Bob's efforts and those of his staff and the principals are structured to determine the needs of all groups of students. The teachers' efforts are more focused on addressing the needs of individual students. Research Question #2 for Core Value #2, reveals a more complete picture of how extensive the District's efforts are in soliciting input and how parents and teachers can become cooperative partners in the education of children. Four of the respondents indicated that it was at the individual teacher level, that parents and their children were directly involved in the determination of educational needs and strategies, whether through Student-led Conferences or other joint teacher/parent/student partnerships and interventions. Student-led conferences are a wide-spread phenomenon in the District extending through and including the ninth grade, and across all student demographics.

The District administrators indicated that data speaks for stakeholders in determining needs, whether through TAKS tests, student Profiles, student, teacher, and parent surveys, and as one of the teachers added, canned interest and skill-set inventories such as the CAPS and COPES. The prolific use of these instruments and surveys suggests the important role that data plays in determining needs, which also relates to Core Value #7. The results from this

question suggests that parents and their children do have involvement in determining needs and learning strategies at the individual teacher level, and that parents, students, community groups, and other stakeholders have significant input into determining needs at campus wide, program, and District levels but that the Board and administration ultimately make the final decisions.

The descriptor statement used to frame Core Value #2, "*Educational needs should be determined primarily by parents, community groups, students, and other stakeholders*", appears 'on the surface' to be consistent with joint teacher/parent/student interventions, but inconsistent for District-wide decision-making because the Board and administrators are viewed as dutifully tasked with this responsibility. The results from the descriptive and inferential statistical analyses appear to be more a reflection of the latter. However, one of the intentions 'behind' the Core Value description, as conveyed by Detert, et al, must also be taken into consideration.

Being "customer driven" does not mean satisfying every demand from every stakeholder, nor does it mean abdicating professional judgment: the consequences of such behavior would undoubtedly result in biased, inchoate and inequitable educational programs. It means that the needs and desires of stakeholders are to be taken very seriously in designing and carrying out educational programs (2001, p. 194).

Unfortunately, the survey descriptor for this Core Value does not contain this proviso, nor do the corresponding interview questions, which may explain the generally high mean scores posted in the descriptive statistics by all of the profiles, and the mixed interview responses to this Core Value for Research Question #1. However, given the preponderant and specific manifestations of

'practice' provided by the respondents, the proviso underlying the Core Value description, and the supplementary triangulation materials that revealed District's 'outreach' efforts, this Core Value appears to be generally consistent with the District's overt intentions and many of the visible practices.

Core Value #3: Long and Short-term Commitments: Improving education requires a long-term commitment

Central office administration. Much of Bob's time is spent working with Board Members, in educating and informing them of the rationales behind administrative decision-making. Keeping the Board informed and "in the loop" is absolutely essential for staying focused on the District's vision and for continuous improvement to become a reality. Bob also shoulders another important task, "Part of my responsibility, to the people that work with me, is to forecast how much time and effort is this (problem) going to take away from what it is we are really trying to do here?" This usually means trying to "minimize the impact of short-term commitments if they are detrimental to long-term commitments". "Politically I will pick and choose which of those special things that we have to deal with. Some of them I will pay lip service to and then let go, because it's not in the long-term improvement (interests) of the District, the thing we need to be focusing on".

A major problem identified by Paul, is that principals are typically drawn too much away from the leadership and proactive functions of their jobs due to

daily work minutiae and the “in the moment” distractions that accompany their work. Paul stated that because of the Continuous Improvement philosophy, they fared better than principals who work in a ‘traditional’ setting. Paul’s work regimen consists of scouting for “best practices” from the educational and management strategies literature, examining the alignment of systems practices with the District’s vision, making arrangements for and conducting Continuous Improvement training, and planning CI training for the next academic year. Paul’s focus, and for the other central office administrators he works with, revolve about Covey’s Quadrant II functions (Figure 11). Both Paul and Ann make reference to the importance of trying to focus on Covey’s Quadrant II of time management. For Cathy, the Graduate Profile, the Ten Ethical Principles, and the Four Challenges are the long term commitments of the District, and these Guiding Documents exist as an interactive “whole” involving a matrix of complementary if not mutually supporting goals.

Campus administrators. One of Beth’s concerns is that if people do not give a strategy time to work, they will often venture off into “random acts of improvement” that fail to address the “root cause” of a problem. The application of “quick fix” schemes in isolation from long-term and consensually developed strategies may yield sporadic short-term improvement, but generally fail to address the core issue or problem. From Beth’s observations, balancing long and short term commitments is a significant and continual challenge for both teachers and administrators. In many instances, events from the “urgent and

important” Quadrant of Covey’s Time Management Matrix overwhelm the strategies that emanate from the “not urgent and important” Quadrant (Figure 11). At times, the TAKS tests seem to upstage the Guiding Documents because they become Quadrant I ‘priorities’, particularly for third and fifth grade teachers, parents, and students where the state-mandated tests attract more attention.

	Urgent	Not Urgent
Important	<p><i>Quadrant I</i></p> <p><u>Activities:</u> Crises Pressing Problems Deadline-driven projects</p>	<p><i>Quadrant II</i></p> <p><u>Activities:</u> Prevention Relationship building Recognizing new opportunities Planning, recreation</p>
Not Important	<p><i>Quadrant III</i></p> <p><u>Activities:</u> Interruptions, some calls Some mail, some reports Some meetings Proximate, pressing matters Popular activities</p>	<p><i>Quadrant IV</i></p> <p><u>Activities:</u> Trivia, busy work Some mail Some phone calls Time wasters Pleasant activities</p>
FIGURE 11. Time Management Matrix (Covey, 1989)		

Continuous Improvement requires commitment at multiple levels, including the training of employees. Lana volunteered for the Continuous Improvement Institute, a District sponsored series of six workshops of three

hours each, that is designed to convey the concepts of Continuous Improvement and how and why the District uses them. The long term goals drive her campus which looks three, four, and five years ahead in the development of strategies to prepare for anticipated changes in state accountability guidelines and student demographics. Lana stated that the teachers on her campus are usually willing to sacrifice isolated short term strategies and the temporary or sporadic benefits they may generate, in exchange for long term and farther-reaching strategies that may impact more students and that have a greater likelihood of meaningful, sustainable success. This willingness to suspend 'instant' gratification requires a large measure of trust between the administrators and teachers, a phenomenon she has observed on her campus which may be attributable to her campus's storied past of implementing Continuous Improvement and the accompanying traditions that emphasize the Leander Way and building relationships of trust. Lana also highlighted the District's emphasis on training, and the Continuous Improvement Institute is but one of several voluntary workshops the District provides that focus on the philosophy and practices of Continuous Improvement (Appendix, B15).

Elementary teachers. Gwen viewed "immediate needs and pressures" as short term challenges that merge into and compliment long-term goals, and "We're not given more than say two challenges per year so that we don't get lost in a shuffle of all those small things and we can keep the big picture in mind".

Helen stated that the educational and instructional decisions are driven to a large extent by TAKS data and the Student Profiles, and the horizontal and vertical teams make planned adjustments in teaching strategies to address these indicators, while not losing sight of the long term goals. However, she cautioned that some of the longer-term learning strategies are sometimes perceived as requiring too much time to incubate before yielding fruitful results, given the relatively short timeframe teachers have to prepare students for the TAKS tests, and impatience on the part of the principals and teachers and the pressure to get results quickly entice teachers to revisit shorter-term 'quick fix' strategies that may not contribute to long term sustainable academic gains. Helen and Gwen saw a constant tension between maintaining the culture of continuous improvement and the District goals, while grappling with state accountability testing. Both of these teachers indicated that the teaming and collaboration on their campuses helped to mitigate these pressures, but did not eliminate them. One of the teachers saw little attention to long term improvement goals for her campus, and speculated the campus may be focused more on immediate needs and pressures, although "the TAKS scores were high and the kids are happy and learning".

Elle attached professional learning to long term commitment and continuous improvement, and was pleased the District had assumed the costs for rather expensive off-site training. She also observed professional learning taking place on her campus through grade level sharing for TAKS test

preparations. She likewise expressed praise for the February Conferences, particularly the earlier conferences and for the collegiality in general that they provided. But she observed that for the last several conferences many of the presenters were the same as from previous years, and that for the money spent and the effort made to organize the event, they should have provided “more offerings for a more diversified audience”.

From the researcher’s observations who attended the 2004, 2005, 2006, and 2008 conferences, there were some ‘regular’ presenters, but the topics were more often than not different. Because of the influx of new and beginning teachers to accommodate rapid student growth, who know little about the local educational beliefs, customs, and values, the District would be ill served to stage an event called “The Annual Continuous Improvement Conference” without providing sessions and topics related to the name of the event, and that help to explain the culture. There were over a hundred sessions at each Conference across a wide variety of topics and the researcher found it impossible to attend all the sessions that were of interest.

Secondary teachers. Mike viewed long term commitment as the year in, year out, commitment to continuously adjust and improve his lessons to meet the individual learning needs of each student. Ken stated that “everything we do, every decision that’s made, has to fit in with our long-range, like five-year plan...every decision has to somehow fit in with where we want to be five years from now”. There are pressures and needs that surface from time to time, but

they are “dealt with, squashed, or examined, on the way”. However, two of the teachers, each from different campuses, said that at times they felt overwhelmed in having to balance the long and short term pressures.

One of these teachers saw ‘continuous improvement’ as an “umbrella term”, or “buzzword”, one that has “morphed” or “mutated”, with “things” added. Two of the teachers indicated that the “things” are often new strategies or emphases that are stressed one year, only to be replaced by something else the next. These teachers indicated that every year a new approach, or strategy emerges, and it was often difficult to know what to keep and what to throw out. They stated that Continuous improvement, as a long term strategy, is useful and practical, which they believe can positively impact both teaching and learning. However, trying to accommodate some new strategy every year just to see it discarded when the next newest buzzword comes along, and then add the TAKS and NCLB demands on top of the teacher Portfolios, and the task of being an effective educator becomes frustrating and at times overwhelming.

Support function employees. Donna and Fran have both experienced the unexpected in their cafeterias, the most memorable being broken water lines either in or to their schools. When one of their kitchens flooded, the maintenance and custodial departments responded quickly, the former to find and shut off the water valve, the latter to vacuum or mop the standing water off the floors. In response to the broken water line to the school, the maintenance and custodial staffs coordinated efforts to bring in distilled water for cooking.

When employees fail to show up for work, the other workers “pitch in” and do what is necessary to fill in and “get the job done”. The focus of the CNS employees seems to be more on meeting daily demands.

Long term planning for the maintenance staff rests to a large extent with preventative maintenance (PM). Much of the remaining work is consumed with unplanned maintenance and emergencies, which happen moment by moment, day by day. But even in the chaos of equipment breakdowns and emergencies, patterns emerge. Air conditioner repair usually consumes most of September and part of October. From this pattern, Ben knows that the preventative maintenance program can generally begin the mid to latter part of October. Similar patterns exist for other types of mechanical and electrical problems that allow Ben to tentatively schedule times of the year to cover other preventative maintenance tasks.

Ben attended Continuous Improvement workshops and seminars and some failed to meet his expectations. The nature of his work is such that long term planning is difficult and the only thing he can be certain of is to expect the unexpected. However, Preventive Maintenance provides one solution for reducing the frequency and severity of future equipment failure events. David stated that for many of the unexpected and emergency type events, several of the departments know from experience what resources and expertise will be needed, the proper actions to take, and in almost every instance the problem is breached through Interdepartmental teamwork.

This question set was not as easily transferable to the Support Function employees and reveals the difficulties involved with translating the philosophy and practices of Continuous Improvement across widely different work functions within the same organization (Kekäle, et al, 1999). The Graduate Profile and the Four Challenges are important contributions to the Districts vision. However, the goals within these two documents serve as a template for the body of knowledge and skills that the District strives to impart to a target population of K-12 students, and while desirable for people of all ages, are more difficult to apply to a work force of adults that for the most part have completed their formal education and whose primary work responsibilities lie outside of student instruction. The exception would be the Ten Ethical Principles, which as a long-term commitment appears to have some level of traction among the Support Function departments. Additionally, the central office staff person responsible for training in CNS, Plant Maintenance, and Transportation, shared with the researcher that the bulk of the training he provided to these departments did not directly include much in the way of Continuous Improvement philosophy or practices, and one of the training documents obtained by the researcher from CNS, did not focus on any of the central attributes, tools, or techniques of Continuous Improvement. The interview responses from the Support Function employees are consistent with the higher means and 'variance of mean' scores reflected in the descriptive and inferential statistics for this Core Value (Table 16; Figure 5; Table 44).

Summary. For the administrator respondents, short term commitments do influence the operations of the District but efforts are made to achieve a balance with long term commitments or to accommodate them in such a way as to not derail the long term commitments. According to Ann, the Four Challenges were designed with this in mind. Core Value # 3 has traction among the administrators considering the conscious effort they exert in trying to maintain focus on the Guiding documents, and even more so if the TEKS learning objectives are included as long term goals. Ann, Paul, and Beth mentioned the battle that often rages in trying to balance the “prevention” Quadrant II priorities against the “crisis” Quadrant I priorities. The administrators’ use of Covey’s Time Management Matrix, suggest that Book Studies (Appendix, B14) sometimes venture into the realm of personal improvement in such a way as to expand one’s management perspective, and the multi-disciplinary nature of QM invites such accommodation.

However, maintaining focus on the long term goals across all departments and venues is a problematic issue, and conflicts between long and short term commitments and the changing strategies used to achieve the goals associated with the District’s vision, were noted by several of the teachers. Short term commitments have a larger impact on the SF respondents, and the Support Function departments do not receive the same level training to promote the concept of continuous improvement as do the teachers and professional educators of the District.

The Guiding Documents are generally viewed by the administrator respondents as the long term commitments. One of the elementary teachers observed that some of the longer-term instructional strategies are sometimes perceived as requiring too much time to incubate before yielding fruitful results given the short timeframe teachers have to prepare students for the TAKS tests. Impatience and the pressure to get results quickly entice some teachers to revisit easier and shorter term strategies that may not meaningfully contribute to long term sustainable academic gains. Several of the secondary teachers expressed frustration regarding the 'changing emphases' of Guiding Document goals and wholesale substitution of instructional strategies from one year to the next.

The majority of the educator respondents see long-term commitments prevailing over short-term commitments (9 out of 14), at least in terms of the former generally holding the latter in check, and the importance of long-term commitments seem to be conceptualized among the administrators and the majority of the teacher respondents as a core tenet of continuous improvement and how their work should be directed in the District. Support Function respondents are influenced more by daily pressures and short-term commitments.

Core Value # 4. Managing Change: "A School Should Strive to Make Continuous Changes to Improve"

Central office administrators. As shared by Ann, change imposed on schools from the outside (particularly in the form of state mandates or the NCLB guidelines), is sometimes difficult to accommodate, and may not appear to serve the best interests of the students and teachers. But this does not deter the central office administrators, as they believe in studying the mandated change(s), and then modifying the implementation so that it ultimately serves the stakeholders' best interests.

Change from the inside likewise involves research, study, and learning, and the administrators are constantly seeking for ways to improve the system. Each of the administrators has a library of material to draw from and their bookshelves consist of a cornucopia of topics ranging from management philosophy and practice, to organizational management, brain research, human resource development, personal improvement, chaos theory, and instructional strategies and best practices (Appendix, C4 and C5). Some of the book cases are located outside of the office entries and accessible to other educators. According to Cathy, the District makes a conscientious effort to not just stay abreast of change, but to stay ahead of it.

I can't tell you how many times something has hit us, hit the state, and our teachers are going, "What's the big deal, we've been doing that". And this is an over-time kind of thing. There was no crash course in Madelyn Hunter, so to speak in this district, because we had been through that and done that and we're enmeshed in 'what's an anticipatory set' and you 'waste time' and all of the

different components of that which were very, very, good except for the way the state tried to use it as a forty-five minute do-all, which was not intended. But that was one example of how this district has been in front of the change.

Ann added that studying data and setting expectations constitute the beginning of the 'launch' phase for change, and the PDSA cycle.

And that's where really outlining some data and expectations from the very beginning about if we are going to make these changes, what do we predict or hope is going to happen as a result of this and making sure you follow through and then developing the processes and the infrastructure to make sure those changes that do lead to improvement become an ongoing part of the organization...that it wasn't just somebody's pet project - they got tired of it or left and was, in fact, was very good for kids but we didn't continue it. That's always a problem.

The problem that Ann speaks of in this last statement does occur in the District, as previously revealed in the Secondary Teachers responses to Interview Question 3.

Campus administrators. The District has created what many in the District refer to as "non-negotiables", with the Four Challenges often attached to the expression, although the goals within the other Guiding Documents could just as convincingly relate to the expression. Achieving the aims of the "non-negotiables" is achieved through numerous means.

The District periodically uses process improvement teams to revamp and improve operations. Lana observed the impact of the textbook process improvement project. Campuses were previously having difficulty receiving textbooks the same day a student enrolled, many of the campuses were using different textbook forms, and many campuses were accruing mounting textbook losses. By installing a computerized inventory system, the textbooks are now

received usually during the first day of classes for new students, the District has drastically reduced variance associated with textbook paperwork, and campuses can more easily keep track of lost textbooks. Additionally, the people serving on the committee usually take ownership in helping to bring about much needed change and improvement.

Elementary teachers. Three of the four teachers are extremely satisfied with their teams and with the grade levels of students they are working with. Gwen observed that because of the rapid growth in District and surrounding districts, teachers move within and across district boundaries to other campuses which create changes in the teams from one year to the next, a change she has come to expect. She also praised her principal for encouraging change, but not forcing it on the teachers. Helen saw real change among the faculty during her latest assignment and observed that remarkable progress was made in the willingness of the teachers on her team to experiment with new approaches and strategies.

Secondary teachers. For Marilyn, change occurs every year, manifested as new discoveries within her content field, changeover of teachers within her department, and/or new students who may require different teaching strategies to be successful. Within Mike's department, teachers learn and teach new technologies and try new learning strategies practically every year, and keep those that work and that benefit students. Sometimes, "if it looks like it's something a little bit too much of a change, then we will take a little part of it, try

that out, and if that seemed to work, ok, let's try another little piece of it to see if that works".

Nan was enthusiastic regarding the Content Facilitator that worked with her department. Through the Facilitator and the meetings that are scheduled at least twice a year, the teachers are exposed to the latest trends and best practices. The Facilitator emphasizes the need to make changes "in the way we think, the way we teach, and the way we learn", and directs the teachers to selectively "pick and choose" from "an array of what is out there, so we can be better teachers and the students can be better learners". Because of the facilitator's efforts, many of the teachers in her content area were observed talking about "raising the bar for excellence". She was also excited about the District's 'first time' efforts to provide summer schooling in her content area for the campus.

Support function employees. One of Donna's main dilemmas is keeping her kitchen staffed. Invariably, the kitchen loses workers after Christmas, and working short-handed during the months following is a challenge, much less experimenting with new products and presentations, for which manpower has to be redirected. New products such as Pepperoni rolls, while popular with the kids, requires someone to work the preparation of this product into an already busy schedule, as the regular menu items must still be prepared. However, according to Donna, the upper level management for cafeteria services is "in the

background thinking of better ways, more cost-effective ways to serve meals attractively and yet reduce the cost”.

Fran adheres to a clock schedule wherein specific tasks are assigned to be accomplished, but sometimes conditions demand allowances, which is acceptable as long as the meals are attractively served, according to specifications, and on time. There were no large scale changes in the operation of her kitchen from the past year, because “it was working the way it was working”. However, hers is one the larger kitchens in the District, and “we have to try to save steps, or you would be worn out before you even got started”. The management of the food services company is quick to respond to any questions the cafeteria employees might have, and is willing to approve recipe preparation changes if the rationale is sound, clarifies procedure, and does not substantially change the ingredients which are fixed to meet specific nutritional requirements. Maintaining daily production quotas and quality are important to the cafeteria employees that were interviewed, and change often creates problems requiring the redirection of labor which at times is exacerbated because of seasonal manpower shortages.

Ben challenges productivity data for his department because the data doesn't always reflect what is actually happening out in the field. Ben must balance personnel loads and judiciously monitor his operations to stay abreast of the changes occurring in the District. This task requires constant monitoring and adjustment. Because of the growth in the District and the addition of new

campuses every year, Ben has to spend more time in his office and less time in the field, a bothersome trend which removes him from observing the craftsmanship and work regimen of his employees and having the opportunity to build camaraderie. Ben summarizes this predicament poignantly, “We’ve got so many new people in here, and I’ve been in my office so much, I’m not seeing them work, so I’m starting to get away from knowing the people, and that hurts”. Meeting the everyday needs of the District while staying abreast of the changes, requires some trade-offs that Ben is not pleased with. Although the facilities and maintenance operations departments expect the unexpected, usually in the form of equipment failure or breakdown, those times of the year that are relatively less burdened with repair work are treasured as opportunities to do preventative maintenance. However, changes in the District manifested through burgeoning growth and expansion, continue to ‘stretch’ the manpower capabilities of centralized maintenance operations.

David does nothing in changing the custodial operations without consulting with his lead custodians and the principals. David tries to interact with and get feedback through emails or personal conversations from all of his customers, his staff, the principals, to some extent the teachers, and even students. David has to submit data and support information to justify any recommendation for change, and he expects the same from his staff. This is usually accomplished through ‘pilot’ projects.

Summary. There are many ways the District responds to change, through continuous improvement. For the CO respondents, study and research must precede, intercede with, and follow after all improvement efforts. According to Ann, the manner in which change is approached by the CO administrators involves an ordered set of activities that include outlining data and expectations, insuring that the infrastructure is in place to accomplish the plan, following through with the plan, and then making sure that if proven successful the plan becomes an ongoing part of the organization, which are reflections of the PDSA Cycle.

Leveraging improvement with existing resources requires a knowledgeable and trained workforce and an environment that encourages risk-taking and experimentation (Detert, et al, 2001). The CO administrators' bookcases are full of literature that includes a wide variety of disciplines and fields of study ranging from management philosophy to organizational theory, to brain study research, to personal improvement, psychology, chaos theory, educational theory, and instructional management and strategy, to name a few (Appendix, C4 and C5). According to Cathy, the District is often 'ahead of the curve' in studying, testing, piloting, and implementing new strategies and teachers are provided a safe environment to learn and experiment.

One of the major changes the District implemented in response to increasing state accountability pressures, was the creation and implementation of the Student Profile system which represent interim measures of student

achievement, used not only to stay 'ahead of the accountability game' but to improve and accelerate instruction for all students. Process improvement teams and projects are another way the District works to continuously improve. The principals and content facilitators serve as support agents for change.

During the researcher's fieldwork, plans were underway to establish topics for the summer in-services and for the next year's instructional emphasis which for the elementary schools included a Book Study, *Classroom instruction that works: Research-based strategies for increasing student achievement* (Marzano, Pickering, & Pollock, 2001). The efforts the District made in setting up training, making the book available for all elementary instructional personnel, and the planning of implementation strategies, were typical of the manner in which the District's instructional staff approaches change.

The Support Function employees varied in their responses to change. One of the SF employees focused on sustaining predictable and orderly operations and often viewed 'change' as a potential disruptor, another looked for ways to economize effort and "save steps" to meet daily schedules, the third was continually making adjustments in manpower assignments and scheduling in reaction to 'emergencies' or to changes caused by the additional workloads his department inherits because of the creation of new campuses, and the fourth valued frequent communications with stakeholders as a means to anticipate and adjust to changing customer needs. The SF interviews suggest that stability, predictability, and control are valued either because productivity is perceived to

depend on or benefit from these attributes, or because their absence makes planning more difficult. If the existing system and processes are working and meeting the needs of the customer, why change? Instructional services on the other hand, have to continually improve to meet the increasing accountability measures forced on public schools by state and federal agencies along with higher expectations from a more demanding public. These preferences and inclinations appear consistent with the high mean score in the descriptive statistics (Table 17) for the SF demographic profile, and the significant variation of means between the Instructional and Support Function employees reported in the inferential statistics (Table 45).

The success of the process and educational improvement teams at the District-wide, campus, and departmental levels, the ingrained use of the PDSA Cycle for many of the District's programs, the ongoing training and education efforts, and the Student Profiles are but a few of the ways the District embraces efforts to continuously improve. The interviews and supplementary information suggest that the District's practices are consistent with Core Value # 4 for the teachers and administrators, which is augmented by the strong Continuous Improvement vectors for these groups noted in the quantitative portion of the study (Figure 5). The SF respondents work in environments where stability, prediction, control, standardized operating procedures, and/or fine-tuning of existing processes, contribute to consistency in meeting daily production quotas and/or responding to work-related exigencies.

Core Value #5. Decision-making Involvement: "Employees Should Be Active in Improving the Overall School Operation"

Central office administrators. The executive administrators have active roles in influencing District culture and educational strategy, exercised through a variety of venues and activities. This interview question reveals a few of the activities and responsibilities that help to shape and define their roles. Bob leads the weekly Executive Administrator and Principals meetings which serve to build camaraderie, convey a sense of teamwork, inspire and rally the troops, and foster the sharing of information and the gathering of data and feedback. Cathy helps in the sharing of knowledge and best practices, through the District-sponsored summer inservice training that she organizes and evaluates. Ann is a researcher and diplomat, and although she is the titular head over Cathy and Paul, she works more as a partner and confidant, helping to fit pieces of the puzzle together to make sure training, the District's goals, and instructional strategies are in fundamental alignment. Paul is the lead presenter or one of the primary consultants for many of the Continuous Improvement workshops and seminars. The executive administrators also influence the educational culture through Book Studies, share in ideas and planning for the annual February Conferences, Summer Administrator Retreats, and play perennial roles in monitoring and adjusting systems resources and processes for continuous improvement.

Important contributions and valuable roles are not limited to just the professional employees of the District. Several of the secretaries at the central office, having received Continuous Improvement Training and having gained a practical knowledge of Continuous Improvement through work relationships with the administrative staff, share their knowledge with other paraprofessionals and employees at the February Conference. The researcher attended four February Conferences and sat in on sessions led by Bob, Paul, the secretaries, and many teachers from across the District, most of which were well attended. The topics included teaching and learning strategies and best practices for all grade levels, content areas, and special programs, adaptive strategies to accommodate state and federal government accountability guidelines, classroom management, relationship building strategies, Continuous Improvement strategies for classroom instruction, Guiding Documents applications and strategies, and sessions that explore the culture of the District, just to mention a few.

Attached to this Core Value, which is not readily discernable from the survey description nor the abbreviated description provided by Detert, Louis, and Schroeder (but emphasized in their accompanying explanatory material), is the relationship and impact of professional development to Quality Management (2001). The different ways the District promotes professional development (Appendix, B13 and B15), is extensive and strewn across the responses from virtually all of the administrators and teachers.

District sponsored workshops, seminars, and conferences are in keeping with what the administrators repeatedly refer to as “life-long” learning. The administrators realize that new teachers and employees have a steep learning curve not only in learning the Guiding Documents and the tenets of Continuous Improvement, but the strategies to enliven them and the ways to assess their effectiveness. This can create fear and anxiety for the new teacher. To assist in the learning process the District strives to create a supportive environment and uses several expressions to assuage anxieties. Cathy introduced one of the most important ones, which is to “fail forward”. According to Cathy, ‘making mistakes’ teaches us what will not work which can be put to good use in rerouting or configuring future actions, and the data from failure is valuable in verifying that an approach or strategy does not work. It is ok to ask questions, in fact it is expected and as expressed by Cathy, “It’s ‘ok’ not to know, it’s not ok to not ask”.

All four of the executive administrators say their roles include analyzing data and various other indicators to monitor the operational health and efficacy of the Guiding Documents. While there are established “non-negotiable” goals in the District, the processes and exploits used to achieve them, are routinely questioned and subject to modification or adjustment to optimize outcomes, which also serve as opportunities for learning and relationship building.

Organization-wide cultures are unlikely to persevere when faced with high veteran member turnover (Druckman, Singer, Van Cott, 1997), and high leader

turnover is the most debilitating factor impacting improvement and reform (Copland, 2003). “The leaders communicate both the implicit and explicit assumptions they really hold” which often serves as the glue that holds the organization together (Schein, p.252). The four Central Office administrators are seasoned veteran administrators who share a long history of working together and growing together in the philosophy of Continuous Improvement. Having a cohesive team built on relationships of trust, and whose skills are symbiotically joined, offer convincing reasons why the District has been able to maintain a focus on Continuous Improvement for such an extended period of time.

Campus administrators. One of the ways stakeholders have a role in making decisions is by serving on Improvement Teams. According to Beth, decisions that come from these ‘ad hoc’ teams are generally listened to and adopted provided the resources are available. Beth also encourages and includes input from all her teachers in compiling the annual master schedule. The Textbook Improvement Team served as an example for Lana, and she witnessed how the results from this effort beneficially impacted all the campuses, including hers. The reason the assistant principal does not believe she has a significant role in the District, is because she realizes she has not yet acquired enough knowledge about the culture, established the range of relationships that are often important for decision-making roles, or become aware of and familiar enough with the District’s systems to know which processes need improvement.

Elementary teachers. Gwen says her principal is a motivator and regularly seeks his/her teachers' input on how they are improving instruction and student achievement. She also points out that teachers have input into the instructional budget and play key roles in identifying budgetary shortfalls that impact instruction. Helen commiserates not only with the teachers on her teams but also with teachers across the District and is eager to share what she knows.

And also our district is really good too if something new is happening. They'll ask people to come and present. So we presented at the Continuous Improvement Conference and then they also offered it as in-service in the summer where teachers could come and see. And we talked a lot about... strategies and it was neat because they made something and now I do see it all over the district, you know. Like I saw something in our workroom that I know we had come up with, you know. And that's just so exciting cause you know something that kids really love is spreading ...works with a lot of kids and that people are willing to learn and change so, that was neat.

Elle and the other teachers in her department share and 'pilot' new ideas and strategies even though they often have scheduling conflicts that make it difficult to meet. Rita shares ideas from her joint-teacher Portfolio project with other teachers on her campus and borrows other ideas and strategies from presentations at the Continuous Improvement Conference.

Secondary teachers. Marilyn viewed her content area as being particularly predisposed to the sharing of ideas and collaborative decision-making, because the departmental instructional labs require coordination. As the teachers work together in setting up labs, opportunities are presented for teachers to synchronize and cross-reference material and strategies, and in the process, improve instruction. Mike conducted an analysis of the ratio of 'time spent on lecture' to 'time spent on hands-on activities' and found that his

students showed more motivation when the ratio of 'lecture' to 'hands-on' class activity was reduced. This information was shared within the program and comparable results were achieved in some of the other courses where the teachers could make similar adjustments.

Nan and Ken were complimentary of their principal and the manner through which all of the teachers had input into campus decisions. The principal conducted 'leadership meetings' every two weeks and shared with the teachers and employees various decisions that needed to be made at the campus level. After explaining the nature of each decision and the options available, he/she would call for votes. The teachers appreciated this democratic management style because the process was transparent, anyone could express his/her opinion, and the principal always honored the majority vote. While attendance was voluntary, agendas were closely monitored, and people who would be impacted the most by a decision were usually interested in attending. This approach provided all employees at that campus, opportunities to influence educational decisions.

Support function employees. There are responsibility-related decisions that Donna has to make. For instance, when kids go out on field trips decisions have to be made about the types of meals to prepare. Decisions have to be made regarding the quantity of non-seasonal and specialty menu items that need to be prepared, and who is to prepare them. And decisions must be made on how to shift personnel to cover for absences. These decisions impact the

quality of service that the kitchen provides its customers and can leave lasting impressions. For Fran, most of the input that effects cafeteria operations comes from the daily interactions between the employees. For instance, on one occasion Fran suggested to the 'fry cook' that instead of cooking the French fries early and keeping them in a warmer until the kids came through the line, that she try 'batch cooking' them 30 minutes before the first line formed. This suggestion freed the warmer for other purposes, produced better tasting fries that were still crispy and hot, and the kids preferred them over the 'limp' fries from the warmer.

Ben makes the decisions for his department and bases these decisions on instinct, observations, and the years of experience he has accumulated. Much of his management style was formed years earlier while working in private industry, where instinct and experience drive decision-making, based on "Ok, if its not working, let's do it, make the change, and go on". Many of the problems that Ben confronts erupt suddenly, and there is little time to mull over a plan of action or call in a committee to examine options.

David had recommended and received approval for two significant changes in District custodial services, one to downsize work crews, and the other to add floor crews. Ideas for change may come from his staff, such as the 'lead custodians' pivotal role in recommending the downsizing of crews on campuses. David scans the 'stakeholder' horizon when potential change is being contemplated, and coordinates input from a variety of sources, such as

lead custodians, area supervisors, Central Office Business and Operations managers, and the principals. Only after obtaining stakeholder input and suggestions, and conducting a successful pilot experiment, will David approach his supervisor for a final recommendation, and armed with as much data as he can gather.

Summary. The responses to Core Value #5 with regard to ‘values in action’, reveals more involvement by the respondents in improving the overall school operation. Bob ‘pulls in’ input and involvement from his principals at the weekly Principal’s Meeting, Cathy influences the professional educators through planning for the summer in-services and training sessions, Ann serves to fit the pieces of the professional development puzzle together across the District, and Paul guides the Leadership and Continuous Improvement training in the District. The researcher observed the efforts of Ann and Cathy working together, and managed to capture a snapshot of the planning board used for scheduling the summer inservice training, which demonstrates the complexity of the undertaking and why ‘two heads are better than one’ (Appendix, C6). The administrators’ influences may also extend to other central office staff as the researcher observed that several of the Central Office secretaries made presentations to ‘fellow’ paraprofessionals at the Continuous Improvement conferences, which the researcher noted was well attended.

The District approaches the training and education of District staff and professional educators with a vengeance, realizing that with the complex nature

of the Guiding Documents in combination with the tenets of Continuous Improvement, all new employees are likely to experience a steep learning curve and that veteran employees need intellectual refreshment as well. Quality Management aggressively pursues and promotes individual and organizational learning, which is a hallmark principle of the philosophy (Evans, 1995; Hackman & Wageman, 1995). The District promotes learning, experimentation, and the idea of “failing forward”, and as stated by Cathy, “It is ok not to know. It is not ok not to ask”.

One possible reason why Continuous Improvement has endured for over 15 years is that all four of the CO administrators have worked together since the concept’s inception in the District and have grown together as a team in the understanding and practice of the philosophy. Organizational adaptation to the quality management philosophy and the resultant implementation of consistent and successful practice requires deep commitment and high levels of dedication on the part of senior management and administrators (Marchese, 1992; Baer, L., et al, 1993; MacDonald & Piggot, 1993; Evans, 1995; Hackman & Wageman, 1995; Weller, 1995; Ahire, et al, 1996; Soetaert, 1998; Treichler, et al, 2002; Dolan, 2003; Stimson, 2003; Defeo & Barnard, 2005). Quality management ideology is complex, “a big tentful of ideas” (Marchese, 1993, p. 10), and virtually impossible to fully understand and implement as a comprehensive management paradigm over a short period of time, usually requiring years to fully gestate and for accompanying institutional change to become realized (Atkinson, 1997;

Marton, 1999). And the loss of experienced members or an excessive turnover among members can detrimentally impact the culture of an organization (Druckman, et al, 1997). The lengthy within-District work histories and lack of turnover among the executive staff, and the sustained personal efforts and commitments of the CO administrators to quality, suggest that these longevity factors may have contributed to the proliferation and maturity of the Continuous Improvement movement in the District.

Other ways that employees can have an impact on improving their department, campus, or the District is through 'improvement team' participation. The researcher identified three large-scale improvement projects, one involving the teaching of phonics at the elementary schools, the formation of the alternative high school, and the district-wide textbook improvement effort, and a current smaller effort to improve communications between the campuses and the maintenance department. Other smaller scale process or educational improvement efforts were also identified such as improving work order processing in plant services and the development of master schedules at the campus level to name a few.

Some of the principals mimic Bob's Principal's Meeting by having staff meetings of their own wherein teachers and employees have the opportunity to provide input into the improvement of the campus. Other 'principal' strategies include personal encouragement to try new approaches, and listening to feedback from teachers to learn about successful classroom strategies and then

sharing this information with other teachers and principals. Networking between departments and campuses is highly encouraged by the CO executive administrators.

One of the teachers conducted his own study comparing 'time spent on lecture' to 'time spent on hands-on activities' to assess student motivation and passed the results of his investigation up to the program level where other teachers learned of his efforts and were able to mirror similar results. One of the plant maintenance respondents worked collaboratively with people in his department and some of the principals to pilot and eventually institute cost savings measures that were expanded to many of the campuses.

The researcher began the study expecting to see a relationship between the 'espoused values' and 'values in action'. If a Core Value is highly espoused, one might expect to find ample confirmatory evidence of adoption through the practices, and vice versa. Research Question #1, which delved into the espoused values, suggested mixed results for this Core Value and that involvement in improving 'school operations' was hampered by the language used for the descriptor, and how the expressions "active", "overall", and "school operation" are interpreted, and that improvement efforts were consistent only for localized settings. However, the participant responses regarding 'values in action' and practices, indicate that "improving the overall school operation" often extended beyond the individual classroom or localized level when using a

broader interpretation of the descriptor which includes opportunities for and promotion of professional development.

Process and educational improvement teams, experimentation with and piloting of new strategies and sharing the results at the larger unit level, principal/staff decision-making meetings, teacher and employee input in the design of master schedules, the philosophy of “fail forward” to encourage risk taking, the extensive training and learning opportunities the District promotes and provides, and the teacher portfolio system collectively suggest that the District is very active in practicing Core Value #5. The interviews also suggest that it is possible for a Core Value to be practiced to a greater extent than indicated by the espoused values and that the relationship between the two is not always outwardly visible. Beliefs, values, and the means through which they are acted out, may exist at the tacit, subconscious level and may be difficult to verbalize at the conscious level (Robinson, W. L, as referenced in Anonymous”, Personnel Journal, 1974; Argyris & Schön, 1974), and it is possible for unconscious assumptions to distort data (Schein, 1992)

Core Value #6. Collaboration and Autonomy: “Collaboration Is Necessary for an Effective School”

Central office administrators. Collaboration occurs at many levels in the District as revealed throughout the interview questions, but for this question Bob cited the weekly Principal’s meetings and the Business Operations meetings as

providing important opportunities for collaboration, sharing, and opinion vetting. These meetings and others the Superintendent plans and coordinates, provide the Superintendent, executive administrators, and principals with the data and information to analyze the processes of the District and reinforce networking and cross-functional relationships. The frequency of administrative meetings suggests that central office administrators and the principal corps practice and depend on collaboration and are willing to allocate the time for it - in exchange for the information, understanding, and problem-solving acumen gained.

Achieving a balance between individual freedom and “doing what’s best for kids” is not always an easy task. Paraphrasing a comment Bob made outside of the interview session, “People can choose to accept or reject Continuous Improvement. However, choosing to reject the continuous improvement of instruction and learning for kids is not an option”. Bob also tries to discourage “those silos where somebody because of their skills in one area or another politically isn’t dragging resources away from others just so they can shine by themselves”. The overall emphasis is on teamwork and organizational learning because the changing complexities and problems of modern society and education require schools that work smarter and that can readily adapt to change (Tschannen-Moran, Uline, Hoy, & Mackley, 2000). This emphasis on teamwork and collaboration was present, if not highlighted, in every Continuous Improvement Conference the researcher attended, in many of the summer inservice sessions, and as witnessed in a Portfolio Share ceremony.

Cross-functional problem-solving is highly promoted among the executive administrators. While a formal organizational chart does exist, the Central Office administrators functionally operate more in accordance with the Systems Diagram model (Appendix, B16). The researcher interrupted a meeting between Ann and Cathy, who were jointly working on the summer inservice calendar, finalizing the sessions, and checking for alignment with the Districts objectives. Although the formal organization chart specifically assigns Cathy the responsibility for staff development, Ann was offering her time and expertise to help. The CO respondents also work jointly on planning for the Continuous Improvement Conference and the Administrator Retreat, and on other projects that blur the distinctions depicted in the formal organizational chart. According to Ann, collaboration is approached in a “more thought-out” fashion because of District growth.

Now, we in fact, work for ways to determine who needs to collaborate, around what issues and how are we going to support that happening, and not just assume that it's happening, and what is the result we expect out of that collaboration because people have gotten together.

Campus administrators. Beth notes that Tuesdays are important if not seminal opportunities for principals and executive administrators to meet together to provide input, brainstorm, vocalize concerns, strategize, gain affirmations, and form bonds through what is known as the “Principal’s Meeting”. The principals meet and commiserate from 8:00 to 10:00AM according to level (elementary or secondary) and prior to the “Big” or regular Principal’s meeting which runs from 10AM to noon and includes all principals, Bob, and select

executive administrators. Assistant principals meet on alternate Tuesdays. It is not uncommon, depending on the number of new principals, for the District to provide separate meetings for “rookie” principals which are usually held in conjunction with the separate elementary and secondary principals’ meetings.

Lana is often caught between the values she brought with her and those of the District. But as she has worked in the District and “watched and learned”, she finds that “different is not bad” and that attributes of the District’s philosophy when combined with her own, form a compelling, evolving template for practice. Lana’s observations indicate, “If you are willing, honest from the beginning, and take it as a chance to learn, not as ‘I’m going to prove myself right and everyone else wrong’, then it’s going to be well received”.

Beth does not see a major conflict between individual freedom and the philosophy of Continuous Improvement.

Everything that the district sets out to do, especially on the journey with Continuous Improvement, everything ever presented to any of us in almost everything, there's a level that's always attached to, do as much or as little as you're comfortable with and when you're ready.

This observation from Beth, corroborates to some extent with the responses from Bob, Cathy, and Paul, and illustrates the flexibility of the concept, as practiced in the Leander ISD. Collaboration works best when engaged in an environment of trust, and as one of the principals not ‘officially’ interviewed commented, “Among the original people that bought in to Continuous Improvement, there is a sizeable ‘bank account’ or ‘trust account’ to draw from”.

Elementary teachers. Three of the four teachers report good collaboration within their grade level or program teams and that collaboration efforts and effectiveness has improved. Rita was particularly pleased with her team because “members listen”. The fourth teacher has experienced high turnover on her team from the last to current year, and the team ‘chemistry’ is currently not as conducive to collaboration as it was. Consequently this teacher has not met consistently with her team nor collaborated with them to the extent she has in the past. However she and her current team members have dedicated two days during the summer to pull the team back together for refocusing on strategies and goals for the upcoming year. She also observed that collaboration takes time, and with the pressures of family and the temptation to leave after the last bell, can at times be overwhelming. However, she has learned that in the long run, teachers actually save time through collaboration and teamwork.

Elle collaborates with others because it “makes her job easier” and has noticed her department has improved in collaborating since she entered the District. However, she adds that not everyone enjoys teaming, and that in some instances new or struggling teachers have difficulty reconciling their own teaching styles and individual classroom strategies and preferences with those of the team. Also, some teachers are less verbal and outgoing and may have more difficulty expressing their viewpoints in the team environment.

Secondary teachers. Collaboration assumes many forms in the District, but appears to be more readily accepted and practiced among peers within a

department or grade level. As inferred by one of the teachers, collaboration coerced through administrative pressure is usually tolerated but not always appreciated. According to Marilyn and Mike, the District emphasized 'collaboration' the previous year, and conducted numerous workshops regarding the topic. One of the secondary teachers represented a content area and department that was purportedly accustomed to regularly engaging collaboration. Her interpretation of the collaboration training was that it seemed scripted and unnatural, lacking the authenticity that she was accustomed to in her own department. However, she was quick to add, that for someone unfamiliar with teaming and collaboration, this particular lesson approach was probably acceptable if not justified.

Mike corroborated with elementary and middle school teachers to borrow ideas for his high school classes. A greater emphasis on 'hand-on' activities reaped greater motivation for his classes. Mike enjoys the collaboration within his program, and strategy and lesson-plan sharing opportunities are held a minimum of two to three times a year. The teachers have input into what topics are covered for the program-level meetings, as predetermined through an interest survey of the teachers.

Ken was complimentary of the efforts the District made in fostering collaboration, giving credit to the campus principal and the central office administrators, and expressed specific appreciation for the 'content facilitator'. One of the teachers viewed some of the collaboration efforts as beneficial while

some were not. She particularly enjoyed the time management and student behavior management sessions where teachers shared 'best practices'. This teacher was willing to try suggestions from her principal, and some she adopted and some she discarded, after giving them 'trial' runs. She was very enthusiastic about having a common planning period the next year with her fellow content area teachers. Generally, all of the teachers were more prone to adopt strategies that were specific to and proven in the classrooms of their peers.

Support function employees. Donna views her operations as an assembly-line operation and that the kitchen employees have to "be at a certain place at a certain time" and that daily deadlines control the operations. Coordination is extremely important and people do not have the freedom to set their own schedule. For the most part, her focus is concentrated on the efficient and effective daily management of her cafeteria.

Much of Ben's collaboration efforts are directed towards coordination and cooperation with his peers in other departments and with his supervisor. At the present he is working with his peers to pull resources together in the interest of developing a common payroll system. Ben is aware that strategy and personnel job description changes in other departments can have an influence on his own department. Driven by the budget and by the growth in the District, another department engaged a process improvement project to improve efficiency which indirectly created inefficiencies in his own department. In a system as large as

the Leander ISD, change can have a cascading effect and it is difficult to predict all of the consequences.

David makes efforts to collaborate with other departments and is willing to make concessions to assist them, in the interest of staving off any 'turf wars'. For instance, Child Nutrition Services experienced difficulties in staffing because many of the cafeteria workers work as 'part time' employees. The 8-hour jobs in the District are generally in greater demand, so David made an 'unwritten' agreement with CNS to not hire people who want to "jump ship" and come to his department for increased work hours. Within his department, differences periodically arise regarding cleaning or floor finishing techniques, but are usually resolved through trials of the competing methods, with 'data' deciding the victor. The Custodial Department is persistent in working to standardize its operations and in reducing variance, but not without welcoming input from its employees.

Summary. The responses for this question serve as prima facie indicators of the strong correlation between Core Value # 6 and District-wide practice. The District does not "force" the Continuous Improvement philosophy on anyone, yet manifestations of the concept with regards to collaboration, were demonstrated to some extent by all of the administrator and teacher respondents and conditionally for three of the Support Function (SF) employees. One of the SF employees emphasizes coordination, two others collaborate more at the peer level, and the fourth collaborates across multiple levels, both within his department and with others outside his department.

The interviews suggest that collaboration is more likely to transpire between peers who share similar work assignments; and sometimes at the more localized levels, a process improvement effort in one department can have a negative impact on another. However, Core Value # 6 is generally consistent with District practice for most of the respondents within localized settings, and the 'values in action' appear to be consistent with the 'espoused' values.

Core Value #7. Decision-making Environment: "Decision-making Should Rely on Factual Information"

Central office administrators. While decisions are made at all levels of the District, from the individual teacher in the classroom, to within and between stakeholder groups, none have more far-reaching consequences than those that occur between the Board and the Superintendent. The relationship between the superintendent and the board is bound by specific responsibilities established in the Texas Administrative Code and by local board policy (Texas Education Code, Title 2, Chapter 11, Subchapter A, and Section 11.1511). Accordingly, the board adopts a vision statement and comprehensive goals for the District and the superintendent, and makes all decisions regarding policy. The policies direct procedures, employment and personnel decisions, and other operations guidelines, usually with or through recommendations from the superintendent.

Beyond the statutory and policy guidelines are the personal dynamics that frame the relationship between the board and the superintendent. The

interviews and reviewed Board Minutes suggest the Leander ISD Board overwhelmingly supports Bob's recommendations although there were a few occasions when the Board made decisions or initiated action contrary to his advice, and sometimes decisions are made through compromise. Three of the board members, in serendipitous conversations with the researcher, praised Bob for his leadership qualities and expressed pride in the quality of education they believed the District provided. According to Bob, the Board/Superintendent relationship is one of openness and mutual respect. The interviews and extraneous board member conversations lend credence to the notion that Bob's leadership, administrative competence, and longevity in the District have earned for him credibility and respect with the Board and from fellow employees, and no evidence in the study contradict these impressions. One of the executive administrators admiringly acknowledged several of Bob's traits, such as listening to others and having an intuitive sense of timing, particularly in making decisions regarding the budget or sensing the political mood that may impact a decision. Overall, the administrator interviews, District documents, and board member conversations indicate that the Board-Superintendent relationship is healthy and decisions at the top administrative and governance levels are generally consistent with and dependent upon data and information the executive administrators painstakingly collect and analyze, from multiple sources and representative stakeholders.

While there seems to be some agreement that decisions are driven by data and personal experience, all of the executive administrators conspicuously place a high value on data-based decision-making. According to Bob, decisions are often based on looking for “a way to do it better, faster, easier, and less expensively”. Question 7 of Set 2 (Appendix, A4) revealed that at one time Ann had a sign on her door that read “In God we trust; all others bring data”, an expression that purportedly originated from W. Edwards Deming (Davenport, 2006). However, Paul observed that decision-making based on data carries a downside, “They have data that they don’t know how to turn into an action plan that would actually cause them to implement their knowledge”. Sorting through the data and developing action plans that leverage effort and resources remain an ongoing if not sometimes painstaking endeavor. To address this issue the District sponsors workshops and conferences, mentorships, and encourages various other formal and informal teaming and corroborative efforts, all ultimately focusing on “doing what’s best for kids”.

The respondent administrators view feedback from colleagues as an important mechanism for gathering information to make decisions. This kind of feedback is captured and distilled through District established forums such as the Instructional Services Executive Directors (ISED) meetings, the Principals’ Meeting, other scheduled Central Office departmental meetings, through teacher or employee representatives that devote time and expend effort to collect and report constituent findings and recommendations, and through student and

employee surveys. The District has grown to the point where aside from surveys, it is impractical for the central office administrators to get feedback directly from every employee, but instead depends on “representatives” from stakeholder groups to gather information and data for feedback and input.

The interviews and collected documents indicate that decisions are influenced through data, surveys, personal and professional experiences, and input from stakeholder groups, across and within services, departments, campuses, and through multiple venues. According to Paul, learning how to assimilate all these forms of information into manageable and focused action can be challenging if not problematic.

Campus administration. Both Beth and Lana observe that Kindergarten and first grade teachers, where TAKS has less influence, depend more on professional experience, while grades three through five tend to depend more on data. According to Beth, the Kindergarten teachers observed that the Profiles and measurements used for assessing “letters and sounds were not weighted enough to identify kids who really weren’t ready for the pre-reading readiness skills”, which was largely guided by experience in looking for specific demonstrable learning behaviors. In this particular instance professional experience was guiding instruction and served as an influence in the continuing revision of the Kindergarten Profiles.

The teachers on Beth’s campus also noticed that the End-of-Year (EOY) Profile assessment had ceased to be as strong an indicator of student

achievement as the Middle-of-Year (MOY) assessment for the upper elementary grades, which the teachers attributed to ‘test burn-out’ after the spring TAKS tests. According to Beth, the EOY assessments were often not consistent with the TAKS test results, which led to the subsequent cessation of using that particular Profile for TAKS testing grade levels. In this instance, teachers were comparing data to plot a course of action. While Beth and Lana represent different campuses, both observed the phenomenon of primary teachers (K-2) relying more on experience, and grades 3-5 elementary teachers depending more on data. These observations suggest that both data and professional experience influence the manner in which decisions are made, depending to some extent on the grade level, and the influences from state accountability testing.

Lana observes that on her campus there is a “deep respect for the professional educator and we trust their professional judgment”, which is a reflection of the storied history and culture of her campus.

We accept where they are, whether it be novice, struggling, proficient, exceptional, you know stellar, whatever, however you want to describe it, accepting that that's where that individual is, and looking at how do we use their talent to the best of their ability, (by) look(ing) at the weaknesses and strengths in them.

Lana is going through a transition period learning the traditions and culture, while not losing sight of her own experiences and “what I feel professionally would be most effective and be reasonable and least intrusive on my teachers”. The history of the District was reflected in a note she recently received from Bob,

the superintendent, announcing the selection of a new principal, the first in 18 years hired from outside the District. The District prefers to promote from within so that those assuming new leadership roles are spared the transition phase of learning a new culture, as they already know 'how things are done' in the District.

Lana also makes the observation that the use of data "is not crammed down everyone's throats, its not used as a tool for harassment or name-calling or finger-pointing or blaming, it's used as, it is what it is...what are the numbers telling us?" Lana also conveys the notion that for data to have meaning "teachers should not be fearful of it and take ownership in interpreting what it means"; in other words, interpretation of the data should not be done by proxy or the administrators scripting the analysis for them. Lana observed that the District is heavily engaged in future planning, whether in the form of examining housing growth and determining where the next school should be built, or assessing the needs of low-income students and exploring how resources may be redirected to meet their needs, all of which require factual information.

Elementary teachers. Three of the elementary teachers recognized the Student Profiles as a vital if not critical data collection tool for decision making because it was a proven and important indicator for evaluating student achievement and the effectiveness of teaching strategies. Elle uses her data "to change decisions, to change programming, or to continue programming". Gwen added that if the professional experience is in conflict with the data, if what her

experience has taught her should be working but the data doesn't support it as being effective, she always defers to the data and seeks ways to change her instructional strategy or delivery, particularly if the data represents an entire class or group. However, two of the teachers observed that teachers do not always use the Profile data to make decisions that would lead to improved student achievement; they go through the motions of collecting and studying the data, but do nothing with it. Gwen added that impromptu and casual conversations among teachers during lunch and at other venues such as the teacher workroom often influence or contribute to what is actually practiced in the classroom to improve instruction.

Gwen and Elle linked experience to data, seeing them as interrelated and that with increasing experience one learns to interpret and use the data more effectively. Gwen's observations indicate that the data gives new teachers a sense of direction because they do not have the years of successful practice or experience to draw from. Elle commented that data collection and the teaching experiences of her current assignment are such that they merge and it is difficult to separate one from the other. One teacher also stated that the NCLB (No Child Left Behind) requirements along with the IDEA (Individuals with Disabilities Act), has increased the data collection demands for her classes, and she anticipated this trend would only escalate. Gwen specifically mentioned the TEKS and TAKS as primary contributory factors behind the campus's data collection and analysis efforts.

Helen's main point was that new strategies require time to implement, evaluate, revise, and reevaluate, before producing desired results. There could be a considerable amount of time between when a decision is made to implement a strategy and when it actually becomes successful. Helen observed that some of the improvement efforts often required a multiple-year incubation period, which for an impatient person, is difficult to reconcile. The temptation is to abandon an improvement strategy if it does not yield immediate positive results.

Secondary teachers. Marilyn was very complimentary of her principal and said that he/she is driven by data, has data for every decision he/she makes, and that he/she regularly uses the Plus Delta technique in helping his/her teachers to make decisions and plot courses of action. The 'Data Day' which is a teacher workday in October, consists of eight hours of examining student data, from a wide variety of sources including results from the Profile tests.

Three of the teachers mentioned the TAKS at some point in the response, and generally indicated that it was a, if not the, driving force behind the data collection and analysis efforts on their campuses. One of the teachers noted that comparisons are often made of student TAKS results by content area, with other teachers' results within the campus, schools in the District, and other schools across the state, and that he/she and other teachers feel under intense pressure. Adding to the pressures are the NCLB, the mandates of the Four Challenges, the fact that it is difficult to plan for successive years because of

changing school demographics, and that not all teachers have the same student demographics for comparison. Some of the campuses adopt specific strategies to help students on the TAKS, and for one of the teacher's campus, the TAKS Academy was implemented to help kids that are called "bubble kids" because they hover at the boundary between passing and failing the TAKS tests.

Support function employees. One of the CNS employees notes that purchasing decisions are made on the basis of costs through competitive bidding, and that prices for groceries and produce from two different vendors are compared with the most advantageously priced items for the cafeteria always selected. Furthermore, production records are kept and monitored and factored into subsequent meal planning.

Ben states that his supervisor requires data in approving decisions that impact the overall operations of his department. Ben also noted that "Just because you don't have data now, doesn't mean you can't get it". When Ben observed that the 'work order' system in his department was not producing the kinds of relevant data he needed, he procured the services of a consultant to make a 'mirrored' copy of existing data for the purposes of developing a more comprehensive and meaningful program for monitoring his systems work-order processes. Within his department, some craftsmen such as carpenters and plumbers depend more on the knowledge and skills they have acquired through experience, and others such as the air-conditioning technicians depend on prior experience and the data they fetch through the computerized equipment they

use for troubleshooting. Realizing that his employees possess different levels of skills, he sometimes provides his customers with options, “I can send the ‘B’ team today, or you can wait until tomorrow, and I can send an ‘A’ team. It’s not that the ‘B’ team is doing anything wrong, but if you want perfection I’ll send you the ‘A’ team tomorrow when I can round them up”.

David keeps a record of equipment repair, and uses this data for making purchasing decisions. Because of frequent repairs and downtime, David’s department examined and piloted several brands and models of vacuum cleaners and made the decision to convert to a ‘back pack’ model that subsequently cut the repair rate in half. The decision was based on data and the experiences and preferences from his employees ‘out in the field’.

Summary. At the highest levels of the District, at the Board/Superintendent interface, decision-making relies extensively on factual information. Below this level most of the respondents see both data/factual information and personal/professional experience factoring into decision-making although the former appears to take the more dominant role - except in non-TAKS early childhood grade levels where the experience factor is more prevalent. Different forms of ‘factual information’ are gathered through various feedback opportunities and data collection mechanisms, such as the Instructional Services Executive Directors and Principals’ Meetings, through teacher and employee fact-finding endeavors, student, teacher, and parent surveys, Student Profile data, TAKS data, interest and skill-set inventories,

demographic projections, analysis of county and city housing development permit records, and food production, maintenance work order, and equipment repair records. The bulk of the information gleaned from this interview question, suggests that while Core Value #7 is not the exclusive decision-making determinant for all departments, grade levels, and individual employees, it is nonetheless a dominant influence and referent modus operandi behind most instructional strategies for TAKS-accountable grade levels, and for many of the departmental and District-wide management decisions. The emphasis the District places on making decisions based on data and factual information is, in practice, outwardly conspicuous and consistent with Core Value #7 and the tenets of Continuous Improvement.

Core Value #8. The Source of Problems: "Quality Problems Are Caused by Poor Systems and Processes, Not by Employees"

Central office administrators. Bob is involved with a 'Culture Day' orientation session for all new employees, where he shares with the group many of the cultural beliefs of the District. He often uses real-life 'stories' to convey a few of the ways through which these beliefs were validated, and several are illustrative of systems problems. With regard to how consistent the District is in first examining processes, both Bob and Paul indicated that they sometimes "backslide" in following what they espouse, despite training and constant reminders. Regardless, looking at processes first, viewing and treating

processes as a systems phenomenon, and the importance placed on improving processes, represent a set a core ideas that were conveyed by the Central Office administrators and the preferred mindset used for examining and attacking problems.

The administrators know that variation exists in any system, including among the employees, but according to Ann, discovering what is causing the variation usually begins with a look at the system.

There's variation in any group of people or in any process... Can I live with it or not, and if not, is it truly a 'special cause' that I need to work with that person or is the whole system such that I've got to change the training, the interaction, the expectations to reduce the variation or to raise the level for all the group.

Ann, Cathy, and Paul all referred to 'people' problems as "special causes".

'Special causes' are defined as "causes of variation that arise because of special circumstances and are not an inherent part of a process" (Nelson & Daniels, p. 56), whereas 'common causes' are "causes of variation that are inherent in a process over time, and can affect every outcome of the process and everyone working in the process" (Nelson & Daniels, 2007, pp. 42-23). If a teacher is not performing satisfactory, his or her actions affect a relatively small number of students rather than the entire campus or District.

The District may employ many strategies to address the problem. One solution offered by Ann is to "clarify your expectations to a large group and then help the person look at the gap between where they are and where they need to be", followed by the "outlining of a plan that is helpful". Another solution suggested by Cathy is to put the person in contact with or under the tutelage of

someone who can demonstrate the proper procedure, protocol, or successful strategy. If a teacher is having difficulty relating to her students, the teacher could use a student survey to get feedback which does not always work because as Cathy has observed “some of the time, that’s not a teacher who’s going to use that tool because they know what they are going to get”. Aside from seeking dismissal or a myriad of other strategies, Cathy provided what seems to be a reoccurring theme voiced by the Central Office administrators.

But if you find that it really is in the best interest of that person and the district, say, “You know, this isn’t for everyone. This is how we do things here and obviously you are not comfortable with that and you don’t need to stay and be miserable”. Coach them on to something else. But sometimes it’s moving them to another seat on the bus and then they can contribute highly to a district.

The “bus” metaphor comes from one of the District’s Book Studies, *Good to Great* (Collins, 2001) and was used by three of the CO administrators, one in response to Interview Question # 1 and two other CO administrators in responses to this question.

Another way that the values are transmitted is through training, and the Leander ISD aggressively pursues training for its instructional staff and employees. Cathy listed several training opportunities that are designed to promote the process-oriented philosophy of the District; the Leadership Academy Retreat, the Administrator Retreat, and the Learning Academy were specifically mentioned.

Since this question readily connects with processes and process improvement, the researcher dipped into the responses to Set 3, Question 2

regarding Process Improvement Teams to 'fill in the blanks' (Appendix, A4). Familiarity with Process Improvement varies among the respondents. All of the Central Office administrators and the principal were well versed in the concept and all had participated on Process Improvement Teams (PIT) and observed them in action. The elementary assistant principal, because of her brief time in the District knew little about PITs. Three of the elementary teachers were familiar with the expression and had served either on a PIT or an Educational Improvement Team, while the fourth was unfamiliar with the term. Two of the secondary teachers were not familiar with the expression, although one served on a committee to map out a 5-Year Plan for a newly opened school. A third secondary teacher served on several PITs while the fourth served on one. The one teacher who had served on several PITs viewed involvement as time-consuming and the recommendations coming out of the group, to some extent, preordained by the administration. One of the SF employees was not interviewed for the second and third sections of the interview because of a scheduling conflict. Of the three remaining, one had not heard of Process Improvement Teams, and the remaining two were familiar with the expression and had participated in one or more improvement efforts.

Knowledge of PITs seems to correlate strongly with experience in the District and is consistent with the relatively 'strong' responses demonstrated in the quantitative portion of the study by the demographic profile with "8 or more years" of District experience. All of the respondents with eight or more years of

experience were familiar with the expression, four out of five with three to seven years, and only one of four with 'zero to two years of experience' had heard of the expression. All of the respondents familiar with the PIT expression connect the concept to the values and culture of Continuous Improvement. There are indications that District-wide PITs are not used as much as they once were, driven partially by respondent observations that they consume a lot of time and were best suited for larger problems that crossed departmental boundaries, and also because smaller PITs and Educational Improvement Teams at the campus or department level were being used more often as teachers and staff become familiar and confident with the PIT process.

Campus administrators. Beth discovered that focusing on processes is important, but what can be particularly disconcerting while working on a process improvement team, is discovering a situation where there are no processes in place from which to start. Developing a process from the ground up can be a harrowing and extremely time consuming endeavor, because there are usually few if any measurements in place to establish a baseline from which to initiate a process plan.

Beth makes reference to the "bus" as did the Central Office administrators, citing *Good to Great*, and employs the metaphor to convey the strategy of getting the right people on the bus, changing their seats on occasion, and some times asking a few to get off the bus. Beth adds that asking people to leave the bus is "hard, very hard" because this type of action conflicts with the

philosophy of the Leander Way, “which is that they will fail forward, it’s a team effort, and we will grow with you”. Beth adds, “But your bottom line is can you go home every night and say that’s what’s best for kids, and can you put another child in that room? Can you put another assistant in that room? If you keep coming back with ‘no’, then you have to tough it up and go do it, and it’s hard”.

Elementary teachers. Gwen reveals that collaboration and teachers working together are important processes for District and campus problem solving and Helen observes that working with parents is important for improving student learning processes. Gwen says that her grade level team of teachers is involved in processes for improving student achievement, but not with the “tools” of Continuous Improvement. She has however observed her principal using the “tools” in faculty meetings and she uses the Plus Delta tool periodically in her classes.

Helen observes that one of the processes that the District promotes is that of Student-led Conferences which are used throughout the District, up to and including the ninth grade. From Helen’s perspective, the Student-led Conferences are an example of how the District focuses on both processes and people.

Elle noticed that “it’s kind of the same people looking at the process or the same people implementing this new idea”. She further emphasized that the issue is not whether or not a person or organization is process oriented, it matters more that the process is doable and yields the desired results. Rita

added that most of the processes on her campus include “an action plan” to help initiate and prod the improvement effort along.

Secondary teachers. Campus administrative action influences many processes on the campuses. Marilyn observed that a “shotgun” approach is often used if one or two individuals aren’t adhering to procedures or protocols, and the administrators will broadcast the matter to the whole faculty, which is a process she agrees with. The principals also have opportunities to direct training on their campuses. Nan agrees with some of the training for her campus, but views some of the training as promoting unrealistic strategies for classroom use. One of the training programs brought in by the principal suggested using charting, graphing, and run-charts for measuring student behavioral problems. In a real classroom environment however, the techniques took too much time away from instruction and diverted too much of her attention away from actually managing student behavior.

Support function employees. Ben’s department uses many processes to accomplish its mission such as “check sheets” for diagnosing air conditioner and electrical problems, and processes for doing work orders and for materials procurement. His department conducted a process improvement effort to streamline the latter two. The technicians and craftsmen were given credit cards to procure the materials they needed for their jobs. However, at the end of every month the person tasked for routing work orders had to reconcile purchases from the credit cards which backlogged the work orders. The process

improvement effort called for the consolidation of all the credit cards into one card and all materials procurement directed through the department's 'parts clerk'. This change enabled the work orders to flow more smoothly at the end of the month. Finally, the "bus" metaphor crops up again as one of the SF employees commented, "I don't see the District really working on a lot of problem solving on people. It's either you are on the bus or off the bus".

Summary. The CO administrators point to the many training efforts the District uses to focus problem solving on processes rather than people. Cathy listed three training opportunities that are designed to promote the process-oriented philosophy of the District: The Leadership Academy Retreat, the Administrator Retreat, and the Learning Academy.

There is a tendency on the part of the administrators to label 'people' problems as 'special cause' problems and process related problems as 'common cause' problems. The CO administrators first try to determine if an identified problem originates from within the system or subsystem processes since 'common cause' problems can have far reaching consequences, impacting multiple individuals, departments, or campuses. Depending on the nature of the problem, a process modification at a single campus or department level may suffice, or for more widely dispersed or serious problems, a process improvement team may be necessary. If the administration determines that the source of a problem emanates from the actions of a person, then the problem is treated as a 'special cause' situation, and any or several of a number of

intervention strategies to improve the knowledge base or perspective of the person is usually employed.

Four of the respondents, two CO administrators, one of the campus administrators, and a SF employee, referred to the “bus” metaphor originated by Jim Collins in his book, *Good to Great*, and the bus metaphor also appeared in a response to Interview Question #1. The idea is that the District will first try to help a person so that they can “stay in their seat”, but it might also mean “having to change seats” or position, and in the worst case scenario, the person might be asked to “leave the bus”. The CO administrators and the principal appeared firm in their commitment to provide a safe and supportive environment so that employees have the freedom to experiment, ‘fail forward’, and therein learn from their mistakes. This commitment makes “asking a person to leave the bus” more difficult in the sense that the Leander Way and The Ten Ethical Principles strive to build trust, remove fear, and to “grow and learn together”. As expressed by the respondent principal, asking a person to “leave the bus” is difficult because such action seems intuitively opposed to the Leander Way and the Ten Ethical Principles which emphasize building trust, removing fear, and providing people opportunities to learn from their mistakes. Ultimately the solution to this conundrum rests at the core of the Leander ISD Learning Model, which is to “Focus on Student Learning” and make decisions based on “what’s best for kids”.

Process and educational improvement teams represent some of the ways that the District focuses on processes, and grade level or content teaming represent yet other avenues. Many of the teaming efforts focus on improving processes to achieve goals, and the development of an accompanying action plan is a desired product of such efforts. The training and education the District provides to help employees focus on processes, the awareness at the leadership levels to ‘first focus on processes’, and the emphasis on process improvement established through the process and educational improvement teams and other similar efforts across the District, provide evidence that the District leans more heavily on first focusing on processes, and the identified practices are consistent with Core Value #8 and Continuous Improvement.

Core Value #9. Results and Resources: “Quality Can Be Improved within Existing Resources”

Central office administrators. The Central Office administrators demonstrated a propensity to discuss this question from a process improvement perspective and their responses are heavily linked to aspects of the previous question. Bob recalls a previous February Conference where “students’ Process Improvement Story Boards were plastered all over the gym” and adds, “We’re doing some of that now but not nearly to that extent”.

With all the emphasis on state accountability and the ‘full plates’ the principals already have, Bob engaged a process improvement effort to reduce

'duplication of effort' that included many of the elements of the PDSA Cycle. Ann stated that the PDSA Cycle is regularly and routinely used to evaluate programs that "cut across the District", although the PDSA expression is rarely attached to such efforts. According to Ann, one of the improvement efforts related more directly to the kinds of processes used to assess academic performance.

I don't think it is a matter of resources or funding - it's just the way in which the type and the frequency, the way we're delivering the whole idea of feedback to students that has to change...and we're doing a big improvement effort right now.

Bob contributed to this idea in responding to one of the queries from the third set of interview questions.

There are results measures and process measures and we don't have enough process measures in place. We don't have enough evaluative instruments about our processes to make sure that they are doing what they are supposed to be doing.

Bob and Ann demonstrate through these comments that it is important to know not only how students are performing, but how the systems of measurements are performing.

Ann regularly uses the Plus Delta tool for evaluating processes and to establish focus for groups and has observed the use of the technique throughout the District. The Plus Delta tool is used by Cathy from feedback she gets from the Continuous Improvement Conference (CIC), in assessing what went right and what can be improved. The researcher encountered the Plus Delta expression from some of the teachers in the interviews, observed it being used by teacher-presenters at the Continuous Improvement Conference, and saw it demonstrated in district-prepared videos used for training. Ann says that the

Plus Delta is “a way of thinking that changes the existing processes of something that is already running very well, without additional monies”. The idea of constantly improving even when processes are already running very well was highlighted by Ann.

It's a re-examining continually and it's answering Bob's questions about “Where's your dissatisfaction?” Dissatisfaction doesn't have to come just from things that aren't going well. You can have things that are going well that you are dissatisfied (with), because you want it to be more.

The response to this question is complementary to Core Value #4, “*A school should strive to make continuous changes to improve*”, and Deming’s enjoiner to “improve constantly and forever, systems of product to improve quality and productivity...” (2002, p. 23).

The Central Office administrators are also advocates of benchmarking and regularly use data, not only to examine internal test measures, but those outside the District as well. Data is used from the state and from other independent benchmarking entities such as Just4Kids (www.just4kids.org), and the principals received training specific to the Just4Kids website. Results from other schools, combined with an examination of demographics and expenditures per pupil available from the Texas Education Agency (<http://www.tea.state.tx.us/perfreport/snapshot/>), provide insight into whether the inquiring educator should focus more on revising existing instructional processes and redirecting existing resources, or based on the data, consider recommending additional resources.

According to Cathy the Board began requiring performance goals during the TAAS (Texas Assessment of Academic Skills) era and continues to embrace the idea for the purposes of “raising the bar” for student achievement. All programs are evaluated on a three year cycle and annual assessments conducted that outline the extent the goals are being reached. At the third year point, the status of the program is reported along with recommendations for the next ‘PDSA’ cycle. The underlying message reflects an emphasis on improving program and process effectiveness.

Improving student academic performance while keeping costs under control, are two factors that influence Bob’s job performance appraisal.

The most important thing is getting the best student performance I can for the lowest dollar I can. I can show you charts over time where student performance is increasing, and adjusted for inflation, the line of operating expenditures stays relatively flat and that's what we're looking for. You know that's really what my job performance centers around.

Process Improvement efforts in the District usually focus on improving effectiveness as well as efficiency. The central office secretary in charge of keeping track of educator training was deluged by paperwork and teachers were having difficulty keeping track of their training hours. The Central Office, after engaging an improvement effort, implemented a web-based computerized tracking system for educator training to reduce this bottleneck, and made the overall system more efficient. The web-based system was much cheaper than hiring an additional employee and allowed the teachers keep better track of the inservice hours.

Campus administrators. Beth takes a view of process improvement that was uniquely expressed. Beth was trained by Dr. Bryan Cole to examine processes and improvement needs with no preset or confined boundaries.

Imagine the perfect in isolation from any time, money, space, facilities, or manpower constraints. Try to start the improvement process without considering any limitations on money or people, and then see where it takes you. If the needs are documented and the data supports your recommendation, the District will listen and often back the proposal. Or the District may ask the improvement effort to seek another way to accomplish the task if some of what is recommended cannot be provided.

Beth cites as an example, the efforts of a district-wide improvement team's recommendation to adopt a new 'phonics' program, which the District subsequently approved and funded. According to Beth, if there are going to be resource strings attached to an improvement effort, they need to be revealed up front, because "you don't want for kids and teachers to work on something for a long period of time and then say, "That's a bright idea but there's no money"".

Elementary teachers. Ellie adds that "we do go a long way without additional funding, but there just comes, seems to be, sometimes a breaking point, like I just can't do it anymore". And often, at that point, "when the problem is big enough, or when the need is big enough, that money is eventually found, not this year, but maybe next year and positions are created".

Secondary teachers. Mike maintains a relatively stable budget from one year to the next, helped to a large extent by the fact that his classes rely on equipment that can be reused from one year to the next. Sometimes student enrollment increases will cause a program within his department to run short on funds before the school year is out. It is not out of the ordinary for Mike to

request that funds be transferred from his account to help out. One of the teachers observed that some teachers have “wish lists” but that her campus administration focuses on ‘needs’.

Support function employees. Ben contemplates the issue of optimizing his work and his department, specifically, “How much more can we get out of the process than we get now?” He is unsure if additional help is the answer, but current work-load demands are indicating that this may be the approach that the District will eventually have to take.

The research thus far indicates that the District vigorously promotes training and education for its teachers and instructional staff. Through education and training, employees learn about continuous improvement and process improvement. However, most of the training for employees in Ben’s department is specific to the skills used on the job. Meetings for training in his department can last as little as five minutes one month, to a full day on occasion. The employees in his department prefer training in their skills area. Ben is planning a workshop on reading architectural plans, because as Ben states, “All a campus is, is just a set of plans”, and “a lot of our employees don’t know how to read plans”. If his employees can read plans, they can more quickly find the source of a problem, which saves the District money. All new employees are given plant service handbooks that include all the campus maps with instructions on how some of thermostats in the District operate. It is not uncommon for air-conditioners to be left on after-hours and his men need to be armed with the

knowledge of how to shut them off to save the District money. Also his air conditioning technicians often need to shut the A/C systems down in order to conduct repairs.

Generally Ben does not feel the Continuous Improvement Conference is geared for the employees of his department although they are invited to attend. Instead his employees are out on the campuses doing repair work during the Conference to cut down on overtime, which saves the District money. The employees of his department know they are there to serve the best interests of the students, “but they don’t necessarily know we are here for the Ten Ethical Principles, or the Graduate Profile, or the Four Challenges”. Ben likens his department, to a ship on the ocean – “It doesn’t stop”. Continuing from the metaphor, Ben states, “It’s hard for us to stop at all. Our best time to stop is this time of year when most people are gone. But then this is our busiest time of the year. It’s a real challenge, a balancing act”.

Summary. The District just finished one improvement effort to reduce duplication of effort, and was soon to be engaged in another to evaluate how the systems of academic measurements were performing. The PDSA Cycle is used regularly and routinely for all programs that “cut across the District”, and invite scrutiny of budgetary and program effectiveness. One of the more recent Central Office Improvement efforts resulted in a web-based inventory system for keeping track of teacher inservice training that relieved staff manpower requirements,

saved the District money, and allowed teachers to more easily sign up for and keep track of their inservice hours.

The District uses benchmarking to compare their student achievement results with others and prodigiously uses the state supplied TAKS reports and the “just4kids” website for this purpose. Armed with comparison data, the District then seeks to improve instructional delivery processes and strategies so that results are equal to or better than the best scores in the state. The ‘just4kids’ website and state performance reports assist in identifying high performing schools and for cross-referencing expenditure per pupil data tracked by the Texas Education Agency, through detailed reports available on the Agency’s ‘Reports’ web site (<http://www.tea.state.tx.us>).

The Continuous Improvement tools help in the development of strategies for improving District operations and instruction. The deconstructions indicated that the Plus Delta tool was a regularly used tactic by nine of the administrator and teacher respondents and by one of the SF employees. Additionally, the researcher witnessed the tool being used in some of the Continuous Improvement conferences and District training videos. While this tool is most regularly used to assess the ‘pro’s’ and the ‘con’s of a particular product or action and for determining incremental improvement, it could conceivably be used as a budgetary tool to assess cost effectiveness by examining client/customer satisfaction through ‘what went right’ and ‘what could be incrementally changed or improved’.

An elementary teacher praised the District's efforts in frugality and observed that when problems reach a critical level, the District usually finds a way to add additional resources. One of the secondary teachers was willing to transfer funds from his account to another teacher who had exhausted his/her resources before the school year was finished.

According to one of the SF respondents, education and training are centered on job-specific skills but for the plant facilities workers, finding time for training is difficult at best. The employees from Ben's department do not ordinarily attend the Continuous Improvement Conference because they are busy 'catching up' on work orders, during regular hours rather than working overtime which drives District costs up. The researcher attended one session listed in the 2006 CIC session bulletin that did include a presentation by the plant facilities department. The session explored "how working on the system together has resulted in improved response time and repairs done correctly, the first time" (13th Annual Continuous Improvement Conference, session's list booklet, *So You Want it Fixed?*, Verden, Teater, Luke, Goodrum, & Conkle, 2006, p. 9) and reviewed with session attendees the improved work order procedures, which ultimately conserves District resources and reduces duplication of effort. The focus of the session was arguably the result of the process improvement effort Bob initiated a year earlier and as previously mentioned by Bob at the beginning of the CO Administrator group responses to this interview question. In this instance, the prolonged engagement of the

researcher provided evidence of the traction that process improvement efforts have in the District and how they are implemented to yield tangible results.

The focus for the SF employees concentrated on managing the day to day operations of their respective departments, and looking for ways to economize resources needed to complete their respective daily work tasks. The type of training preferred by and provided to the plant maintenance employees was more 'skills-specific' or 'trades-specific' which was similarly expressed in Set 3, Question 3 by one of the CNS employees, and the SF respondents generally viewed manpower allocations as an important if not critical issue.

This Core Value is based on improving internal processes, focusing on customer needs, and "preventing quality problems from occurring in the first place" (Detert et al, 2001). The responses to this question indicate that an array of strategies, tools, and techniques are used to address these CV goals, such as Process Improvement Teams, program evaluation using the PDSA Cycle, comparative analyses using 'benchmarking' data, regular use of the 'Plus Delta' tool to evaluate effort effectiveness, training in Continuous Improvement to optimize internal processes, and the redirection of funding to accommodate unanticipated program changes. The responses to this question indicate that this Core Value is consistent with District-wide program and systems-wide management and evaluation efforts, professional development, and for other smaller group problem-solving endeavors.

Research Question #3: “How Are Personal Experiences in the Leander ISD (TX) Reflective of, or Associated with, Detert’s Nine Core Values and the Philosophy of Continuous Improvement?”

Research Question #3, examines ‘personal experiences’ and was designed to explicate critical incidents or events “that either highlight the normal operation of the school organization or contrast sharply with it” (Erlandson, et al, 1993), and for the purposes of this study are best represented through some of the respondents’ stories. The purpose of this research question was to unearth contextual events that connect the philosophy of QM/CI to District practice. The interviewer did not anticipate that critical incidents would be reducible from every respondent or for every question, and after reconstructing the data discovered that Beth’s lengthy five hour interview provided, by far, the richest source for the ‘personal experiences’ research question. In a casual conversation with one of the central office administrators, Beth was labeled as an “unconscious competent”, defined by W. Lewis Robinson as one “who no longer has to think about what they are doing”. They have arrived at the highest stage of competency “where they can perform a given task unconsciously” (Robinson, in Anonymous, 1974, p. 538). Separating the respondents by group was not followed in the same manner as was used for Research Questions #1 and #2 (Figure 10), and generated less material, because the shorter interviews were not conducive to sharing experiences at the ‘story level’, and/or newer

employees were less likely to have had enough time to gather memorable experiences or to see significant events unfold. The critical incidents emerged from respondent stories, and are segmented by Core Value and event descriptors.

Core value #1. The role of vision: "A Shared Vision and Shared Goals among Faculty, Staff, and Administrators Are Critical for School Success"

Culture day. According to Ann, one of the ways that the District's vision is transmitted is through a District-sponsored 'Culture Day'.

One of them (ways of sharing the District's vision) that made a huge difference was when we realized...bringing in new people...felt a little bit (like) coming into a party or a club that they didn't know the secret hand shake. So we set up the process of having a one-day 'Culture Day' that Bob, Cathy, and I lead...We used to have that day cram-packed with like everything else - you want to put all that information in their head and realize the most important thing is that they understand the values and the philosophy behind the system that we want them to create. So that day is spent on talking about systems thinking, talking about values of the district, what is the Leander Way and what is their role in it...there's a lot of value to having new staff come in, but there's not a lot of value with them coming in with their own philosophies that don't necessarily fit...So that made a huge difference and we get tremendously positive feedback.

With the abundance of Continuous Improvement tools, localized idioms and expressions, and Guiding Documents, the CO administrators realized that new employees may feel overwhelmed by all of the goals, practices, and values the District tries to promulgate. One of the ways an organization can seek to convey its culture is through regularly or annually scheduled events that convey a special history or meaning that over time becomes manifested as a tradition

(Deal & Peterson, 1999, p. 32). This story illustrates how new teachers and professional staff are introduced to the culture of the District, through an 'orientation' session often referred to as the "Culture Day". The primary Guiding Document that new employees are exposed to through this event is the Leander Way, along with the sharing of stories that amplify the history and associative formative rationales that guided the District's CI development. According to Ann, Bob is the chief presenter at the event, and the new teachers and staff are amazed that the Superintendent would actually spend a whole day with them.

We flip to serve you. Beth believes that all employees should be included in District celebrations and events and she practices her belief.

We are all at the grand opening of the district every year and we open together and we shut it down together. And all people are there and all people are a part of it. We are all at the grand opening of the district every year and we open together and we shut it down together.

The district brings in new teachers about two weeks early and they meet on campus first and then they go and do, a lot of times, things with the district, with the curriculum, Bob and Ann do a District Culture Day, several in-services that they go to, and then we bring in...we train teachers and everybody starts first day with returning teachers and they are right there and we bring in everybody, custodians, facilitators, cafeteria workers.

I invited my returning teachers all up the first day of new teachers (training) and we did a "We flip to serve you breakfast" and all of the office staff being new we "flipped to serve breakfast" and we served everybody, all the maintenance people who worked here over the summer cleaning our building, we had everybody there. We had little aprons that said "We flip to serve you". We say that because they came on their own time. It was one of their days off still. And they all came up to meet and greet the new teachers and kind of have a social time prior to returning. So, it's definitely a group effort.

Beth's 'office' team and their "We Flip for You" event for the new teachers, returning teachers, and the maintenance staff, suggests 'modeling' at multiple

levels. Beth and her staff working together for a common purpose, suggests the “work effectively in teams” attribute from the Graduate Profile and the collaboration and teamwork Core Concept from Quality Management (Table 6, #5). Her actions to include all stakeholders imply the “respect for others” and “fairness” attributes from the Graduate Profile, the Ten Ethical Principles, and the Quality Management Core Concept # 9 in Table 6. Lastly, and perhaps a more subtle suggestion arguably related to the “supporting someone or something” attribute from the Ten Ethical Principles (one not meant to imply that the maturational gulf between principal and teacher is comparable to that of teacher and student, or that the complexities of teaching and “flipping pancakes” are similar), is the willingness to serve others. Considering the needs of others before their own, is a primary attribute of transformational leaders (Bass & Avolio, 1994), and reflective of Robert Greenleaf’s summation, “the great leader is seen as a servant first” (1977, p. 7). These actions also link amenably to the District’s vision, i.e., respect and concern for others from the Ten Ethical Principles, and the social responsibility Core Concept of QM (Table 6, #9). And finally, Beth shared with the researcher that when the District was smaller, Bob and the Central Office staff served ice cream to all employees at an end-of-year event. Beth’s “flippin” pancakes at a beginning-of-year event, appears very much akin to Bob’s serving ice cream at the end of the year, and is suggestive of the modeling of behavior that occurs in the District, and how the attributes of culture are transferred. According to Sashkin and Kiser, “constantly and

consistently modeling behavior that exemplifies the values of the culture” are important responsibilities for the organization’s leaders (1993, p. 31).

Closing down the campus. Shared vision is a concept that is transferrable to and generated at both the macro and micro levels of a organization, across an entire system or within a subsystem. The ‘shutting down of school’ at the end of the school year on Beth’s campus is a reflection of how meaningful ‘shared visions’ can be.

Anyway, the prior years, when you go to shut down an elementary school, school is out at eleven, the kids leave, the PTA ends up normally doing a lunch, we had a little ceremony, awards, that kind of stuff - and next day is a work day and it is a scheduled work day and Bob always says, “Now if I drive by at noon and everybody is at the mall? Remember, it is a work day”. But people have graduations to attend and things happening and if they can get their work done, it's fine. Most elementary teachers do not finish on the workday. We all know they work twenty times more than the days that they are contracted for, ‘ahead of the game’ and ‘after the game’. This school was going to be painted which meant we were going to be locked out and the building secured. They were going to board up the main hallway and secure the interior of the building to be safe from anybody walking into it, even myself. So that was going to be really tough which meant we were on a certain time line to be done. Everything had to be packed.

Also with the (prior) building principal having left to go down the street, to open a new facility, every time we open a new facility you are highly impacted if your school is splitting and that school's going to feed the new campus – you don't lose a lot of staff if they are going all the way across the district. But we don't ever open a new facility with all new-to-district employees. They try to balance it with some current employees, from one or two years' experience to more veteran teachers, to rookies that they hire and also new-to-profession and experienced teachers new to the district. Well with (the prior principal) being down the street, you traditionally get a lot of mobility that would go with a new principal. But my school is very stable, and so there wasn't a big fear of the unknown, so a lot chose to stay. I did have to lose some. All of the people had to be boxed up and secured - all that had to be in a place where the District could come to move them. So all their stuff had to be out and in a holding place for all of their stuff to be taken to, and then we were doing an inner building move. So needless to say, by the end of last year it was quite crazy.

When (the prior principal) left, I went to the faculty and said, “It's crazy and it's going to get crazier”. There's lots of balls in the air right now and I didn't have

an AP, I didn't have a secretary, the receptionist and the registrar both were going with the (prior principal) so they were kind of running work at both schools, I was trying to hire a cafeteria manager and an office staff even before I would begin to interview teachers. Plus budget was due and I didn't know what in the world I was doing. It was fun. And then I had maintenance people following me around with two thousand paint samples to choose from. It was crazy. You get the picture? So anyway, I said, "I'm going to drop the ball. You can either pick them up and throw them at me, or you can pick them up and get it done". And every year on that last workday the minute (the prior principal) and I would get here people wanted to check out at eight o'clock. We have a check-out system and you have to go to their rooms and see everything, and at eight o'clock they're just impatient, waiting, they're already done, they're ready to go. You're supposed to work all day but they want to be checked out, signed off and gone.

So anyway, April and May was crazy. Not one teacher came to me with something they needed, something they needed to do, I think maybe two children got sent to the office the last month of school. Talk about stepping up and getting the job done - it was so smooth and so calm it was almost scary. The receptionist, who had been here for twenty years kept saying, "I think they're sick". That's usually the most stressful time, they are all whining, complaining - there was none of it. It was almost scary. I thought they were sick; I was going to have to take their temperature. But they were supportive, they were supporting me, they were just calmly doing the job.

I had a teacher gone because her sister was dying. I had a teacher going through chemotherapy for breast cancer and she was in and out and not very healthy. So the day of check-out, I thought, " (the prior principal) you are going to have to come up and help me check out these teachers, they are going to be waiting at eight o'clock and I don't have anybody here to help me, a secretary or an AP or anybody". And she said, "OK, I'll come over around eleven and see how things are going".

Not one person came and asked me to check out until one o'clock and I couldn't understand. "What's going on?" All the teachers went to the kindergarten teacher's room whose sister had died and had packed up and labeled and moved her room. The PE teacher who normally is the first one to check out because he doesn't have all the things to do that a classroom teacher has to do, was down packing up the teacher who has breast cancer so she wouldn't have to worry about it. They are moving the teachers who are being transferred to the new school down to the cafeteria, so all these dollies are coming and going - nobody was asking to leave. The people that were always the maddest were all out, "I'm over here, I'm taking so-and-so to lunch and we'll be back". One teacher, who really got mad the year before, was down helping the art teacher because one of her friends was sick, "I'm taking Susan to lunch, she needs a break and I'll be back".

And I am truly, to me, that would be a shared vision of shutting down school and they all came together and put their personal issues aside to shut down the

school. And it was just amazing. And I mean I can hardly tell you about it without crying, it was exciting, it was kind, it was very supportive, and that happens in a lot of areas.

That's just an example of it but it happens any time they want to promote something in fine art, or if they want to do field day, or if they want to support, they are all coming to watch a third grade live museum on biographies and, "Can we switch our schedules and do this?"

They just do it for each other.

Those to me are components of shared vision which are making your school safe and kind, and if you want to be here then kids are going to want to be here and it trickles down and that was just a prime example to me.

Beth's second story represents a 'snapshot' of how the Ten Ethical Principles and continuous improvement are lived out for one campus, among the teachers and employees in managing a stressful situation. Indications are that this smooth a campus closing is not necessarily consistent with prior closings, but it does suggest that particular core values such as "Concern for Others", "Respect for Others" (Appendix, B2), and leadership and stakeholder involvement, teamwork, and social responsibility (Table 6, #2, #5, # 6, #9), can be triggered to bring people together when the situation reaches a high anxiety level, or when professional courtesy invites it. This story also illustrates how many of the goals within the vision documents and the philosophy of Continuous Improvement, resonate meaningfully with employees and evolve to become underlying beliefs and permanent imprints for behavior, and that a 'shared vision' often migrates down into smaller units within the organization.

We are family. Beth also added that ‘rallying the troops’, creating a sense of family or ‘togetherness’, and generating excitement for the new school year, are also evident at the ‘beginning-of-year’ ceremony.

We do meet in the competition gym at the high school (Leander High School). And it rotates around and they fill the stands, and they fill the seats, and they will bring in one of the bands, and we do like a big o’ pep rally. Sometimes they will have a motivational speaker or the school board members talk and we kind of kick off. Everybody wears their shirts and it's exciting. If you are not excited about the opening of school, you go to the opening day ceremony, and you are ready.

They run buses to the campuses and pick up the campuses, so your whole school loads the buses together, drives over there and they do the opening and then they do, well they even do more than just bagels and stuff like that at February Conference. They actually do like a buffet with bagels and fruit and all kinds of stuff and you go through and you get the back-to-school district calendar that (a central office staff member) puts out like this, you know put up everything and what the Ethical Principles are, and what the whole year calendar looks like, what the Graduate Profile is, and they give these out. And they may have some other educational promotion people set up. This one has everybody's name on it. It's on the cover (32-page School Planning Calendar).

“Ceremonies are complex, culturally sanctioned ways that a school celebrates successes, communicates its values, and recognizes special contributions of staff and students”, and each season provides opportunities to communicate ceremonially (Deal & Peterson, 1999, p. 15). Beth aptly refers to the beginning-of-year employee assembly as a ceremony, and it appears to serve a multitude of purposes. Equity and fairness principles from the Ten Ethical Principles were visibly present with the suggestion that all employees contribute to the education of children, made even more visible by a yearly school planning calendar booklet with all the employees’ names of the District printed on the cover and which also conspicuously included all of the District’s vision documents for all employees to

see and hopefully embrace. The festive atmosphere conveys a sense of 'having fun together', and the campus T-shirts provide a sense of identify for the wearers. Altogether, the assembly launches the year on a note of collegiality and common purpose, and serves to affirm and legitimize the vision documents and the philosophy and practice of Continuous Improvement.

Open doors. One of the elementary teacher's experiences in the District warrants a closer inspection. The 'critical incident' scripted below is actually reflected through Helen's observations of the Continuous Improvement maturation that occurred at her current campus over a four year period, and showcases Continuous Improvement implementation and the effects it can have on the educational environment.

I went from one school environment to another school environment. And the school I was at, was very much into Continuous Improvement and we were like a family. We were open, sharing, we were learning. I didn't even realize what we were doing with Continuous Improvement. It was just so natural at that school. And when I came to this school, a new school, it wasn't to that point at all. It was at a different place on that spectrum.

There were a few teachers that did the Continuous Improvement, believed in it, the sharing, the open doors, but there were very, very many teachers here that were more of the traditional. I do it this way, don't bother me, 'leave me alone' - very threatened by anything new.

And actually when I came here, I wanted to learn and I wanted to teach others from my experience and learn my new position. But at first I felt a lot of resistance. They looked at it more as 'I don't do this correctly'. You know, there wasn't any kind of discussion or learning from each other. There was a little bit. But over the four years I've been here we've had a change of administration several times.

But those doors have started to come open now. And I have seen this elementary change so much in four years going from very, very little but moving up on that spectrum.

And it's made it so much more comfortable for me, because the first year I didn't think I was going to survive here, you know, and I started closing my door. But now, now I feel so much more comfortable and this, especially my grade level that I work with.

There are several noteworthy points that are suggested by this story. First, the philosophy and practices of Continuous Improvement can have a significant impact on the perceived culture and climate of a campus. Second, the CI philosophy can impact the effectiveness of decision-making, particularly when the mindset of sharing and learning from others becomes institutionalized. Third, the adoption and effective implementation of Continuous Improvement takes time and newly erected schools come with an entire set of hurdles that must be leaped before the organization's overarching philosophy can be absorbed. And lastly, frequent turnover of leadership is not conducive to the maintenance of an organization's culture or the effective implementation of improvement or reform strategies (Druckman, et al, 1997; Copland, 2003).

La verdad. When specifically asked about the Ten Ethical Principles, David said that the Ten Ethical Principles transcend language barriers and are easily understood by his department which is 92% Hispanic. He believes the 'Principles' are universal and just as applicable in the homes, and uses this attribution in his descriptions of the 'Principles' to new employees. Sometimes the Principles do not translate directly, but the underlying meanings associated with them do.

Going from English to Spanish, I have to look at it using different wording at times. For instance, honesty - I would say '*la verdad*', the truth, you know. Tell me '*la verdad*', the '*la verdad*'. Always we practice '*la verdad*' here at LISD. I have to kind of look for a word that matches. And it might not be the right word,

but they link so much, so many times, the words link together, that I do get my point across. And everybody understands when, at the end, when we talk about something like this.

David admits that new employees to the District might not immediately understand the Ten Ethical Principles and may interpret it as “a school thing” or “something maybe from the administration”, and may not initially see any relevance to their jobs or homes. But David observes with time, they do understand, as evident through the many conversations he has had with employees who have worked in the District for several years or more.

Traditions such as “Culture Day”, the modeling of Guiding Document goals and Continuous Improvement values, and seasonal system-wide employee events and ceremonies represent some of the ways the District transmit the vision and values of its culture. New campuses aren’t born with the District’s vision and the Continuous Improvement philosophy – they must be nurtured along and given time to mature through sustained leadership. The vision of the District, as manifested through the Ten Ethical Principles, easily crosses the language barrier for most of the Hispanic employees of the District. These stories suggest that many of the goals within the vision documents resonate meaningfully, even emotionally, for the employees of the District, and how they are lived out.

Core Value #2. Determination of Educational Needs: "Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders"

There were no distinctive critical incidents or stories reported by the respondents that either highlight or contrast how this Core Value impacts the organization.

Core Value #3. Long and Short-term Commitments: "Improving Education Requires a Long-term Commitment"

Go to your room. The manner through which commitments are sometimes honored in the District is characterized by another of Beth's stories.

I'll tell a (fellow principal) story and he probably won't like it but he told it at a meeting the other day and Bob laughed. But the first time he tried to use the (Hot-Dot multiple voting) tool over here with the campus for the first time, he and (a fellow administrator) decided what the needs were that the campus wanted to work on. And when they first presented and they brainstormed, and they "Hot-dotted", it didn't come out with what he thought it should. And he knew it was going to be time or instruction or whatever and it came out administrative support. And he kept saying, "No, no, no, it needs to be (instruction related)", and he kept trying to re-work the data to be something else, and it kept coming out the same way through a variety of tools. And (another administrator) talks about him getting frustrated and sending all the teachers to their rooms because it wasn't coming out the way he wanted it to be.

I think he was going by what he thought was going to be the problem and when the teachers had a different perspective and he asked for their input and they didn't give him what he wanted, he wanted them to change their minds and they wouldn't, and it was great. It was one of their first times here to use that tool and they still tell that story. The teachers tell that story about (the principal) getting mad and just sending them to their rooms.

And it's how we've learned, as we've learned to do it, that you can't do that. The principal learned a lot, the teachers learned a lot...but we had to go back and

honor that and make sure that what they said was important, and that principal will tell you that too.

This story illustrates how one campus used the Continuous Improvement brainstorming/multiple-voting tool called “Hot-Dots” to gather input from a group, in this instance from the campus’s teachers. Teachers multi-voted on educational issues they considered most important on their campus for the purpose of establishing priorities. What is noteworthy about this story is the commitment by the administration to finally follow through and honor the input from the teachers, rather than trying to ‘cook the results’ to derive a contrary conclusion. This story also suggests that the role of the campus administrators’ actions and decisions can build or destroy trust. The critical incident associated with this Core Value, highlights honoring stakeholder input and distributing ownership among the stakeholders, which are hallmark properties of exemplary leadership and essential to building trust and commitment (Bell, 2006), which together bolster long-term commitments, and the building of ‘Relationships’ and ‘Trust’ aspects of the Leander Way. This critical incident highlights the importance and value of honoring stakeholder input, as a means of establishing organizational commitment and building trust.

Core Value # 4. Managing Change: "A School Should Strive to Make Continuous Changes to Improve"

Government edicts. The District believed that the state approved teacher appraisal system and instrumentation (Texas Teacher Appraisal System, TTAS), was not in the best interests of its teachers and vigorously pursued an alternative. Ann's story illuminates the District's strategy.

We applied for a waiver to then commissioner Skip Meno who I have a great deal of respect for, and he, in fact, surprised me back and said, "OK, you don't have to do that, what are you going to do in its place?" And we were able to create our own system that we thought was more compatible (The Leander ISD Teacher Portfolio System).

The District was also in disagreement with one particular aspect of the NCLB (No Child Left Behind Act), and exerted an even greater effort to moderate one of the more onerous regulations.

The other thing recently, the Adequate Yearly Progress that has come along with No Child Left Behind we felt was doing things to children that was not healthy, was not in their best interest. So we talked to board members, they contacted Representatives; they set up meetings with Representatives who set up meetings with (US) Department of Ed people. I'm sure we weren't the only people that did it but we saw that as our responsibility and just saw, in fact, this morning that the Department of Ed is going to announce that they are going to change the one percent cap from Special Ed to three percent".

Ann's two personal experiences highlight some of the measures the District was willing to take in response to governmental directives, and in adapting to mandated changes while creating learning environments that served in the best interests of both teachers and students. The Teacher Portfolio System substituted for both the TTAS and the later developed, Professional Development Appraisal System (PDAS) (Texas Education Code, Section

21.352). The latter story also illuminates the positive relationship the administrators have with the Board, and that it is not out of the ordinary for central office administrators and the Board to work together as a team. Both stories reflect the 'continuous improvement' mindset of the board and administration and how adaptation to change is lived out in the District.

I schedule, you schedule, we all schedule. One school artifact that is usually taken for granted is the campus schedule. Many campus services have to work in harmony, and the activities that crowd a school day can be hectic. Beth's following story highlights how her campus addresses the issue.

I just worked with a group of administrators yesterday on scheduling. A lot of teachers love schedules you know, but to make a schedule very, very effective they all have to have a voice in it, they all have to have ownership in it and they have to be able to look at the whole system.

And when I got here, teachers were only looking at the schedule that meets their own little needs – "I need to know just what that second grade needs to be doing and where they need to be going and really don't care about what else is going on in the whole entire building". And you can't. You can't run a campus that way and not honor what are the needs for the supplemental reading program teachers, or the gifted and talented teachers, and the fine arts teachers, and the Special Ed, and when do we go to the library, and when do we go to the computer lab. All those systems are interrelated and then to have the guidelines of how much classroom time in certain subject areas, and we need some non-interrupted instructional time, and there are so many components to dismissal and making sure that I had people out there before kids went out there, and how to get them all fed, and then the cafeteria and back out, and playground and everything - so all those systems have to go together to make the whole school system work and you had to honor it but you couldn't do that until you could step out and look at the whole process.

And so I started working with teams and they started working on individual things and then sharing with them about how that would impact other systems and then bringing all the different systems together and over the couple of years, we started really perfecting some things on our master schedule but they truly know that it's a living breathing document and that as kids come and go those systems can change very drastically.

And we've learned as a campus to not worry about what was best for us but what was best for the whole system. And it took a little bit of time and the bottom driving factor always had to be 'what was best for kids', and it's wasn't going to be about what was best for you the teacher or the parent or the administrator but what was best for the kid”.

This story reflects the District's 'Continuous Improvement' philosophy at several levels. First, campuses are complex subsystems that must have synchronicity between different programs, departments, and processes and that a 'systems perspective' is useful if not a necessity in reconciling resource and programmatic conflict (Table 6, #8). Secondly, having input from all stakeholders lends credibility and utility to the final product (Table 6, #6). Lastly, expect change - what works this year, may not work the next; change is inevitable and the organization must strive to be agile and flexible, which highlights a core value from the Baldrige Criteria (Baldrige, 2008).

One critical incident describes how the District received a waiver from the state on the teacher appraisal system, which resulted in the creation of the Leander ISD Teacher Portfolio system, and a second demonstrates how the Board and administration worked as a team to seek congressional influence in obtaining a 'relaxation' of the NCLB 'Annual Yearly Progress' guideline for special education students. The third describes the emphasis one campus placed on using a systems approach perspective and soliciting teacher input in designing a master schedule to meet the needs of the students. All three critical incidents illustrate a range of strategies the District pursued to continuously improve the school environment for students and teachers.

I don't think we are going to break it. David worked with one of the elementary principals in experimenting with new 'roll towel' and soap dispensers.

I had gotten permission from an elementary principal to try the rolls towels and hand soap on his campus. The students thought the dispensers 'were cool'. When I asked a student why he thought the dispensers were cool, he replied, "I don't think we're going to break it". And then on the hand soap, a kindergartner said he liked the way it smelled and that's why he was washing his hands. The principal, witnessing the comments, said, "Yeah, I think we've got two products I'd recommend you go with".

Both types of dispensers were more economical than the systems currently in use. The current 'fan fold' towels produced greater wastage and the new soap dispensers could be purchased in larger containers which yielded lower per unit costs and required less frequent replenishing. This story demonstrates the Nine Core Values and Continuous Improvement at several levels. First, meaningful improvement occurs when end-user and stakeholder input is sought and integrated into the decision-making matrix (Core Value #2, Determination of Educational Needs). The story also illustrates how David 'pilots' improvement projects which conceivably incorporate elements from Core Values #4 (Managing Change, i.e. making changes to continuously improve), #5 (Decision-making Involvement, i.e. fact based decision-making), and #9 (Results and Resources, i.e. leveraging systems resources).

Core Value #5. Decision-making Involvement: "Employees Should Be Active in Improving the Overall School Operation"

Don't ask if you don't want to know the answer. Beth has served on a number of improvement teams and has also helped to organize others. For her, the most important revelation came not from the solutions, but how the recommended solutions were 'honored'.

And I think that was the biggest change and the biggest 'Ah Ha' I had, was being asked to be part of an Improvement Team. We came up with some really neat things and the fact that (the principal) took it and promoted it and supported us and it later became a district-wide tool that we had created. It was the first affirmation to the time spent on something like that, that it was honored, and I think when it was modeled top down, if you ask and you give an opinion and it's responded to - then that was very powerful and why couldn't I switch it and turn it around because it made me feel good - do it with my kids - that if I asked, then I had to honor it.

If I asked for their input on how the classroom arrangement needed to be, I needed to try it even if it wasn't going to work. I also had to learn that I could also put in parameters. Bryan Cole helped me do that because through my first training with David Langford, I was like, "You mean they get complete control and complete whatever", and that's kind of how I understood continuous improvement - was the kids take over. And then (I) went to a three-day with Bryan Cole and he said, "Yes, but you still get veto power and he helped me understand that you can still put in the parameters of the non-negotiables even with children and guidelines, and 'have-to's', and things like that".

So yeah, we can re-arrange the classroom but you have, you know, to have an exit plan, this lane has to be clear, and whatever and they can have a voice but don't ask for it if you're not going to listen. And sometimes you aren't going to like what they have to say. You have to be able to defend why that's not an option - you just can't say no. Don't ask if you don't want to know that answer, don't ask. But if you aren't going to listen to what they have to say don't ask. Don't ask for input into a schedule and then don't try it.

This critical incident suggests it is not good enough to provide opportunities for input. When input is sought, it must be honored if offered. The benefits from the process improvement effort communicated an understanding of an aspect of

continuous improvement that extended beyond the stated purpose of the activity. The fact that the improvement team's recommendations were honored and implemented meant more to the respondent than the merits of the recommendations themselves. This critical incident demonstrates a powerful benefit that comes from employee involvement and is consistent with Core Value # 5 and Continuous Improvement. A review of Beth's stories also reveals that her influence and knowledge extends to and is shared with other campuses.

Core Value #6. Collaboration and Autonomy: "Collaboration Is Necessary for an Effective School"

What's best for kids? Beth affirms that the District is accommodating to different personalities, even to those who do not 'fit' well into a team environment, and there is a place for them, "as long as what they are doing is best for kids".

We have a teacher who is the most outstanding (content area) teacher I've ever watched teach. She teaches bell to bell. She does awesome things. If you saw her room you would just know that by being in there you would feel her strength. She's not a real personable person in the work room...but then there's not anybody that would trade her for when you look at what her root purpose for being here is, and watch what she does in the classroom.

The critical incident associated with this Core Value illustrates that while collaboration and teamwork are highly encouraged and widely practiced in the District, there is room for those who choose not to work in a collaborative team environment, as long as they are doing "what's best for kids", which is the

'bottom line' in the Leander ISD. This critical incident appears on the surface to be 'at odds' with Core Value #6, and suggests the District is not entirely rigid in the practice of this Core Value, as long as children learn and benefit from a teacher's instructional efforts.

Core Value #7: Decision-making Environment; Decision-making should rely on factual information

There were no distinctive critical incidents or stories reported by the respondents that either highlight or contrast how this Core Value impacts the organization.

Core Value #8. The Source of Problems: "Quality Problems Are Caused by Poor Systems and Processes, Not by Employees"

It's not your fault. The District administrators emphasize the importance of modeling behavior to others and Beth provides a story to 'drive home' the point, one that focuses on systems processes.

I remember (my principal) being upset with a teacher one time and then later coming back and saying, "You know what, it's not your fault. It's the system, it's a process that some of those things hadn't maybe been communicated, or you didn't have a clear understanding of them, and I look at that as a systems thing and that's something that we need to work on to make sure we get these things apart". So watching her/him even deal with people, that you (first) look at the process.

The cafeteria program is managed by a private company but individual cafeterias are located on District property and to some extent come under the purview of the campus principal. When Donna first began her job, she had to

miss some after-school company meetings because she was still making adjustments to her localized schedule and sometimes having to stay late. She was not sure when deliveries were scheduled, and the computer codes used to access critical records had been changed so that she could not access them. Her principal noticed she was having difficulties, that “The system is failing you”, and intervened by contacting the company’s management and asking for assistance. Although Donna is not technically a District employee, nor is the principal a part of the company’s management, the two systems worked together to solve her problems. Donna’s principal observed there was a breakdown in the processes used to prepare her for a new role and promptly stepped in on her behalf. The company responded by directing knowledgeable and experienced personnel to come by to fill in any knowledge gaps she might have, and a member from the District’s IT staff was fetched to assign her a new computer access code.

One critical incident showcased an administrator who recognized that systems processes were failing in the communication of expectations, which subsequently served as a model of behavior for an aspiring administrator. Another highlighted a District principal’s recognition that an employee for contracted services was floundering in her job due to a systems training failure, and the efforts he/she made in intervening with the contracted employer to provide assistance. The focus in both incidents was on systems process failure, one involving District communications and the other with training, and both

incidents suggest that Core Value #8 resides in the collective consciousness of the organization.

Core Value #9. Results and Resources: “Quality Can Be Improved within Existing Resources”

A pat on the back. Benchmarking is a concept the Leander ISD is familiar with and something the administrators regularly do. The American Productivity and Quality Center (APQC) defines benchmarking as, “The process of identifying, learning, and adapting outstanding practices and processes from any organization, anywhere in the world, to help an organization improve its performance. Benchmarking gathers the tacit knowledge—the know-how, judgments, and enablers—that explicit knowledge often misses” (2008). Benchmarking provides the capacity for a school to identify its strengths and weaknesses and identify best practices (Barber, 2004). Ann’s story extends the concept.

Year before last we had twenty-three instances when they (our campuses) were mentioned and last year based on 2004 TAKS, sixty-seven instances where a Leander campus was identified as the top performing in the state for their area.

When we were doing the (principal) training, it was all hands-on things for them to look up their most recent data in ‘Just4Kids’ and identify campuses either within or outside the districts that they wanted to visit and if so, what questions did they want to ask to see if there’s something we need to do to improve.

I had a very difficult time, I mean literally I had to tease them and say “Wait a minute you guys, do you not get how exciting this is?” And they were so into the data and looking at it and they said, “Yeah, yeah, yeah”. I said, “No, no. Ok, close your computers and stop and at least pat the person next to you on the back. Look at what you have done!

This story is about benchmarking and celebrating student and personal achievements. Celebrating benchmarks of achievement can demonstrate how stakeholders care for each other and reinforce the culture of the school (Saphier & King, 1985). Using benchmarks to improve achievement is consistent with Core Value #9, although in practice the benchmarking tool is more closely associated with process improvement, and thus closer related to CV# 4 (continuous improvement) and CV #8 (focusing on processes rather than people).

Research Question #4: “How Are the Values, Beliefs, and Underlying Assumptions of the Leander ISD (TX) That Sustain and Promote Detert’s Nine Core Values and the Philosophy of Continuous Improvement, Manifested through District Artifacts, Creations, and Processes?”

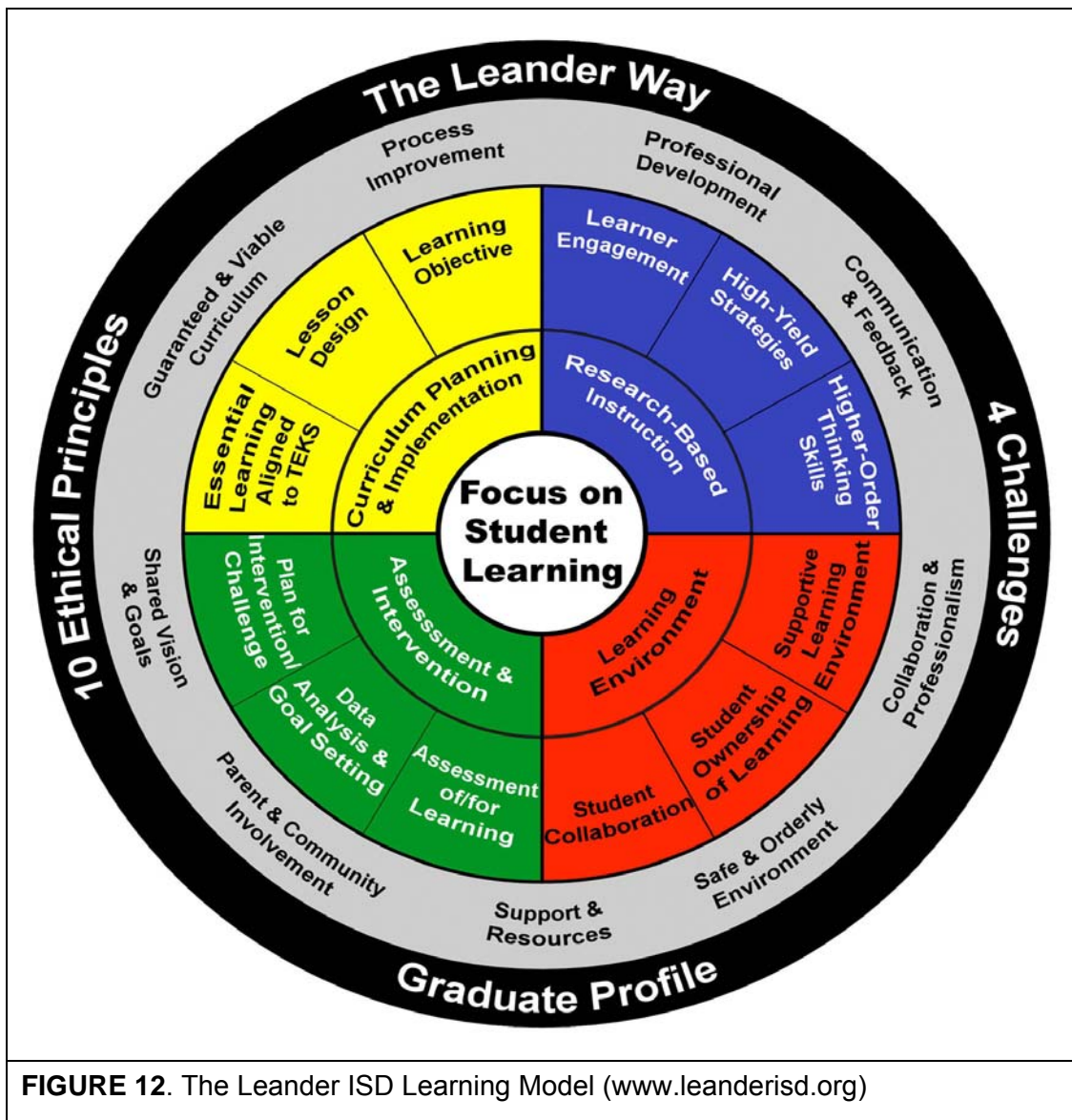
Artifacts include the material objects and patterns that communicate an organization’s beliefs, values, assumptions, and ways of doing things, often represented through various physical structures, organizational processes, language, and symbolism, e.g. physical environment, rituals and ceremonies, mission statements, clichés, history and traditions (Ott, 1989; Schein, 1992; Deal & Peterson, 1999). This definition suggests that cultural artifacts exist in the realm of ‘seen’ or ‘heard’ phenomena and are often the progeny of social and ideological constructs. Although artifacts comprise the “surface” phenomena of

an organization, and thus are more easily observable, they are often the most difficult to interpret (Schein, 2004). Research Question #4 focused on exploring the District's more visible material artifacts and creations, and their connections to the philosophy of Continuous Improvement and Detert's Nine Core Values. The researcher reported artifacts and creations that emerged from the interview responses and from other primary and secondary triangulation materials in the summary table at the end of the chapter.

Core value #1. The Role of Vision: "A Shared Vision and Shared Goals among Faculty, Staff, and Administrators Are Critical for School Success"

Adoption of the District's vision is ultimately the School Board's role, expressed through the statutory charge "to adopt a vision statement and comprehensive goals for the district and the superintendent and monitor progress toward those goals" (Texas Education Code, Title 2, Chapter 11, Subchapter A, and Section 11.1511, Subsection b2, 2007). The primary fieldwork for this study transpired during the spring of 2005, and the District's vision and associative goals at that time were expressed through the Graduate Profile, the Ten Ethical Principles, the Leander Way, and the Four Challenges (Appendix, B1, B2, B3, & B4), which were collectively designated as the "Guiding Documents". However, in the interim between the study's fieldwork and completion of the quantitative and qualitative analyses, the District integrated the Four Guiding Documents into a more comprehensive "Learning

Model”, first published for the 2007/2008 School Year (Appendix, B8) and subsequently revised for the 2008/2009 School Year (Appendix, B9, & Figure 12). The fact that the 2004/2005 Guiding Documents remain as the four main elements in the ‘outer’ ring of the ‘Learning Model’ (Figure 12) indicate the continuing importance of these artifacts to the District. Knowing the origins of the ‘Guiding Documents’ supports an understanding of which stakeholders and processes were involved in generating the District’s vision. The Graduate Profile (Appendix B1) often appears below two mutually related themes, the first expressed by the query “Why Are We Here?” and the second as the “LISD Vision”. Below “Why Are We Here?” is the inscription, “In Leander ISD, everything we do and every learning activity is focused upon meeting our district vision, and upon guiding our students toward acquiring the skill and competencies listed in the Leander ISD’s Graduate Profile. This is the singular purpose of our existence”. Next and presented below the “LISD Vision” heading, is the sentence, “Every student is encouraged, supported, and challenged to achieve the highest levels of knowledge, skill, and character” (Appendix, B1). According to Ann, the origins of the Graduate Profile began with a District-wide Site Based Decision Making (DWSBDM) Committee, which consisted of board members, administrators, parents, students, and members of the local community, who volunteered to accept the task of identifying the knowledge and



skills needed by graduates to be successful in an increasingly complex and changing world. The Board approved the Committee’s final product, titled “The Graduate Profile”, after a long and intensive research and refinement process. Of the four Guiding Documents, the development process for the Graduate Profile involved the broadest range of participants and District stakeholders.

However the DWSBDM Committee is a state mandated contrivance, required by statute for all public school Districts. Nonetheless, while not a direct product of Continuous Improvement, state mandated site-based decision-making committees arguably contribute to and support Core Values #1 (Role of Vision, i.e. shared vision), #2 (Determination of Educational Needs, i.e. involvement of parents and students in determining needs), #3 (Long-term commitments), #5 (Decision-making Involvement, i.e. involvement of teachers and support staff in improving the overall school operation), #6 (Collaboration), and #8 (The Source of Problems, i.e. focusing on the system and system processes).

The Ten Ethical Principles originated through a different process which began as a study initiated by the Board to address a growing concern regarding student behavior. With the District and the surrounding community experiencing phenomenal growth, the Board heard from teachers and administrators alike that student behavioral problems were becoming an increasingly problematic issue. The Board formed an *ad hoc* advisory committee that consisted of representatives from the Board, LISD staff, parents, and other selected volunteers to generate a character-based model for student behavior. The Board approved the final product (Appendix, B2), based to a large extent on the character and personal ethics strategies developed by the Josephson Institute (www.josephsoninstitute.org). The Ten Ethical Principles exists as a separate

guiding document but the goals contained within are also incorporated into the Graduate Profile.

The 'Graduate Profile' describes a wide range of skills, competencies, and character traits the District strives to impart to its graduates while the 'Ten Ethical Principles' promotes desirable character traits and human relationship principles that are repeated as a goal in the Graduate Profile. The 'Four Challenges' is arguably more closely linked to state accountability and the TAKS assessments, but still connects to particular aspects of the Graduate Profile, the Ten Ethical Principles, and the Leander Way (Appendix, B3). Bob, Ann, and Cathy developed the Four Challenges out of concern that the District might be losing focus regarding critical 'vision' issues. Bob initially presented the Four Challenges to fellow educators at one of the Administrator Retreats, which was later approved by the LISD Board. The Administrator Retreat serves as an important venue for the formulation, testing, evaluation, and exchange of ideas, and proved to be an important venue in the launching of two of the Guiding Documents.

According to Ann, the fourth 'Guiding Document', the Leander Way (Appendix, B4), emerged as a framework that originated at one of the Administrator Retreats and evolved from the question, "What are the things that are most important to us, that we hold dear no matter what happens, and that make the Leander ISD, the Leander ISD?" Ann and Cathy worked on organizing the initial concepts during the following school year and presented the 'refined'

framework to the attendees at the next Administrator Retreat. The Board subsequently approved the framework which became officially recognized as one of the Guiding Documents. Of all the Guiding Documents, the Leander Way is the most supportive of and relates most closely to the Deming Philosophy, the Quality Management/Continuous Improvement philosophy, and Detert's Nine Core Values (Table 64). The Deming references in the Table were purposefully included to reflect the influence of his philosophy on key central office administrators during the formative years of Continuous Improvement in the District. There are obvious philosophical connections between the Table 64 Core Concepts, the Nine Core Values and the Leander Way goals which are examined in Figure 13.

Figure 13 represents an analytical extension of Table 64, employing the Microsoft Visio 'brainstorming' template. The ideas of "Customer Focus", "Continuous Improvement, "Collaboration and Teamwork", and having a "Systems Focus" are shared sets of attributes among the QM Core Concepts (Table 6), the Leander Way Goals, and the Nine Core Values. Various other connections among the three sets of principles exist, and more connections appear between the "Core Concepts" and the "Nine Core Values" than between the "Core Concepts" and the "Leander Way" or the "Leander Way" and the "Nine Core Values". This outcome is not unexpected, as the derivation of the nine "Core Concepts" and Detert's 'Nine Core Values' arguably draw more

TABLE 64: Relationships Between the Leander Way and QM/CI Core Concepts

“Leander Way” Core Concepts	Associative QM/CI Core Concepts
Build relationships	<p>Table 6, #5: Emphasis on Teamwork, Collaboration, and Partnerships <u>Deming, Point #9</u>: “Break down barriers between departments; people must work as a team” (2002, p. 24) <u>Detert et al, (2001), Core Value #6</u>: Collaboration is necessary for an effective school (p. 192)</p>
Build trust	<p><u>Deming, Point #8</u>: “Drive out fear” (2002, p. 23)</p>
Build ethical behavior	<p>Table 6, #9: Emphasis on Promoting Social Responsibility <u>Detert et al, Core Value #2</u>: “this value is the education equivalent to being socially responsive and responsible” (p. 194)</p>
Think kids first	<p>Table 6, #1: Customer-driven focus <u>Deming</u>: “Quality should be aimed at the needs of the consumer, present and future” (2002, p. 5) <u>Detert et al, Core Value #2</u>: “needs should be determined primarily by parents, community groups, students, and other stakeholders” (p. 191)</p>
Think Systems	<p>Table 6, #8: Emphasis on Establishing and Maintaining a Systems perspective <u>Deming</u>: “Management of a system requires knowledge of the interrelationships between all the components within the system and the people that work in it” (1994, p. 50). <u>Detert et al, Core Value #8</u>: “Quality problems are caused by poor systems and processes” (p.192)</p>
Think continuous Improvement	<p>Table 6, #3: Emphasis on System-wide Continuous Improvement <u>Deming, Point #5</u>: “Improve constantly and forever the system...” (2002, p. 23) <u>Detert, et al, Core Value #4</u>: “A school should strive to make continuous changes to improve education” (p.191)</p>
Create passion for working/learning	<p><u>Deming, Point #12</u> (2002, p. 77) – “Remove barriers that rob people of pride of workmanship”. <u>Detert, et al, Core Value #5</u>: “Innovative organizations value their employees and encourage them to experiment, reach out to the knowledge bases, and develop professionally” (p.197)</p>
Create excellence	<p><u>Deming, Point #3</u> (2002, p. 23) – Build quality into the product from the beginning <u>Detert, et al, Core Value #9</u>: related to the QM principle that “design quality and prevention leads to better products or services (p. 201)</p>

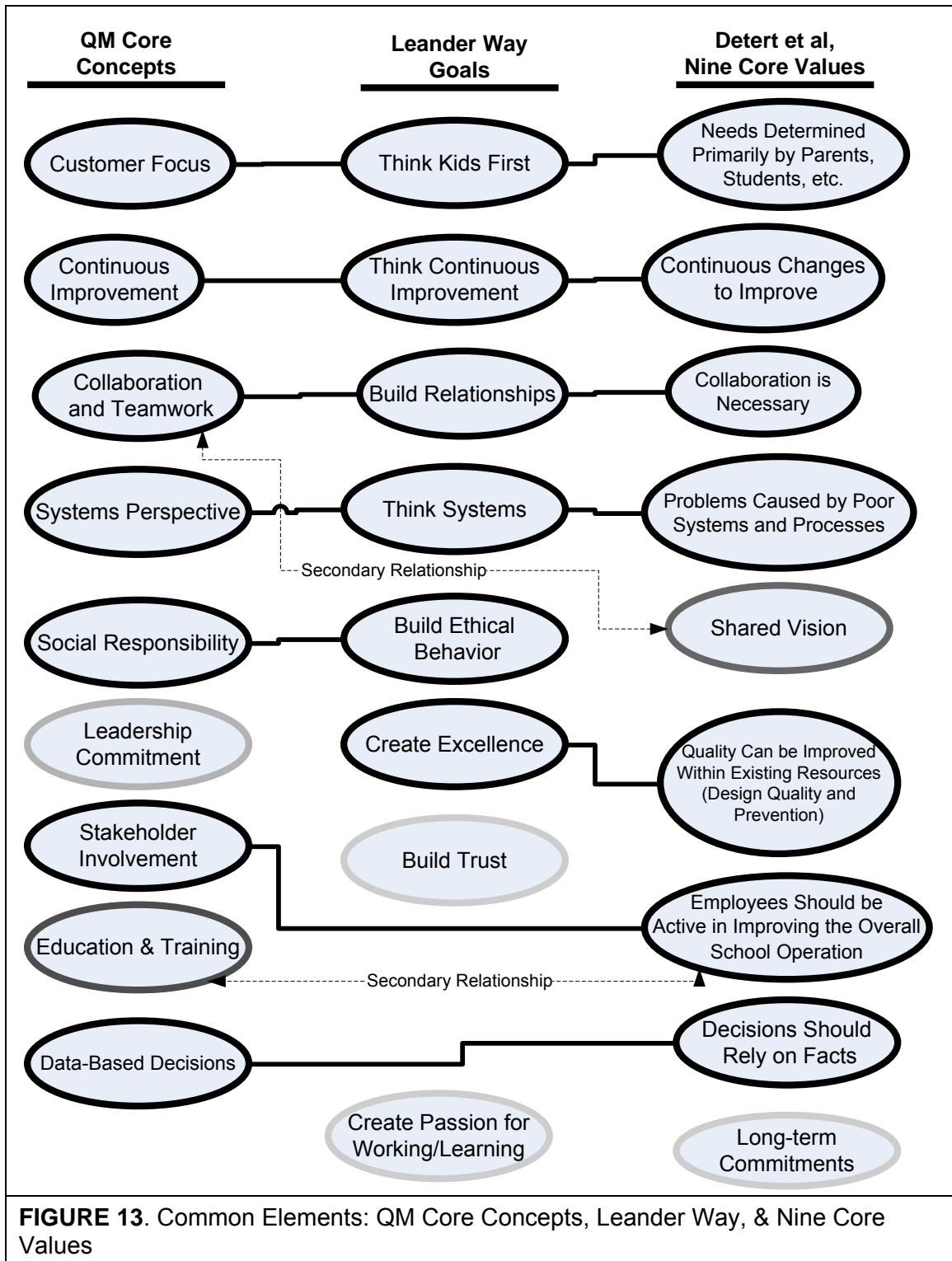


FIGURE 13. Common Elements: QM Core Concepts, Leander Way, & Nine Core Values

narrowly from the quality management literature, while the Leander Way represents a more eclectic approach that extracts principles from quality management, 'personal improvement', and the organizational development literature. The shaded-border ovals represent 'orphaned' principles that show no direct connection to the other sets of principles. However, the researcher does not assume that these isolated principles convey less importance than those that have connections, or that they exist in total isolation from the other principles. For instance, the 'Shared Vision' component of the 'Nine Core Values' would be conceivably unachievable without the 'Leadership Involvement' component of the nine 'Core Concepts'. The dotted connectors represent "Secondary Relationships" that imply a lesser but still discernable level of connectivity. For instance, 'Collaboration and Teamwork' would be difficult to achieve without a 'Shared Vision'. The 'Education & Training' principle from the nine "Core Concepts" is similarly linked to the "Employees Should be Active..." component of the "Nine Core Values", because Detert, Louis, and Schroeder acknowledge this link in the "QM Core Value #5" ruminative material from their 2001 publication (pp. 196, 197) although it is not represented in the associative descriptor. The "Leadership Commitment" component of the nine "Core Concepts" and the "Long-term Commitments" principle from the "Nine Core Values" arguably represent the only major differences between the two frameworks.

Paul, in response to Set 2, Question 5, stated that the training he provides to principals and other instructional leaders is based on a set of values that emanate from the Leander Way, which contributes to the unique culture of the District. According to Ann in response to Set 3, question 6 (Appendix A4), Bob introduces the Leander Way to all new teachers and staff through a first-day orientation session called 'Culture Day', and a District-wide Educational Improvement Committee had recently added a component to the Teacher Portfolio System emphasizing the Leander Way.

Although the Guiding Documents originated through somewhat different processes, they collectively support multiple goals and Core Values. For instance, the Guiding Documents obviously represent the shared vision and goals (CV#1), but also contribute to Core Value # 3 in that they reflect long-term commitments. All of the uncovered artifacts and creations reach across and impact multiple Core Values, and the 'Guiding Documents' are but a few of the many identified artifacts to reflect this phenomenon.

Other artifacts that emerged from this question set are the screening instruments used to select new teachers and professional educators. Both the Central Office and campuses use screening instruments (Appendix, B5, B6, and B7). Not all campuses use the same 'campus' screening questionnaire, but all three questionnaires depicted in the Appendix reflect probes into a person's beliefs and ideas regarding sharing, partnerships, and teamwork, along with other queries that also seek information about an applicants pedagogical

experience, knowledge, and skills. The actual interviews allow the principals to probe even further into an applicant's affinity for collaboration and teamwork.

One of the Continuous Improvement tools introduced by Gwen is the "Five Whys", generally viewed as a self or group reflection tool used to determine purpose or root cause. "The Five Whys" comes from exposure to Continuous Improvement training and typically begins with an initiator question such as "Why are we here?" followed by four more "why" queries, which after succession drill down to the core or root purpose or cause of the mission, goal, issue, or problem. The "Five Whys" originated through Quality Management practice in industrial settings as an exercise to drill down to the root or real cause of a production problem (Ohno, 1988). In the Leander ISD, the tool is used to accomplish either of two tasks, the first to affirm purpose and the second to uncover the source of problems, with the former relating to vision (CV #1) and long term commitment (CV # 3), and the latter approach conceivably applicable to continuous improvement (CV #4) and encouraging fact-based decisions (CV #7). Gwen, an elementary teacher, was the first respondent to mention the 'Five Whys' which suggests this CI tool possesses philosophical 'reach' in the District across the professional educator groups.

At the secondary teacher level, two of the respondents recognized both the Four Challenges and the Graduate Profile as important guideposts for directing the District's vision, with the former receiving the greater emphasis. The vocational teacher's responses regarding the District's vision were

somewhat less specific compared to the other secondary teachers, suggesting perhaps a separate subculture exists for that program, but particular attributes of the general culture were evident, such as the teacher's reference to 'success for all students'.

David is a believer in process improvement. With a tightening budget, David looked for some way that his department "could do more with less" which is a reflection of 'process improvement' and a tenet of Continuous Improvement (Detert, et al, 2001). While Continuous Improvement is not a Guiding Document per se, it is a goal listed under the Four Challenges and well represented in the Leander Way, as well as a cultural influence on the District and a strategy for directing how the goals of the Guiding Documents are achieved.

David piloted a "Team Cleaning Program" in the District where custodians were assigned to a team, and the team assigned a specific task, such as "floor crew" to buff floors and clean carpets, rather than each employee trying to accomplish multiple fragmented and sundry tasks which create unnecessary work-flow and equipment use inefficiencies. The pilot effort proved successful and was subsequently transitioned to multiple campuses. Eventually the concept allowed the District to alleviate custodial staffing demands and brought about significant long-term savings to the maintenance and operating expenses of the District. The resultant savings in labor costs enabled the District to staff custodians for two new elementary schools without having to hire additional

custodians, which as a strategy also aligns with Core Value #9 (leveraging and maximizing available resources).

Conducting small scale simulations or projects to test feasibility and potential effectiveness appears to be a common strategy throughout the District, not only in the Support Function departments but the instructional departments as well, as demonstrated through some of the Teacher Portfolio projects. The 'pilot project' idea borrows from the 'pilot study' or 'pilot experiment' concepts and is used to check the feasibility of a design by providing quantitative evidence that a particular approach is likely to succeed on a larger scale (Haralambos & Holborn, 1995). The 'pilot project' concept is not exclusively owned by any one discipline or management approach, but meshes amenable with Continuous Improvement philosophy, tools, techniques, i.e., the notion of 'process improvement' as manifested through Core Values #1 (shared vision), #3 (long term commitment), #4 (continuous improvement), #5 (employee involvement in making decisions), #7 (fact-based decision-making), #8 (focusing first on processes rather than 'people'), and #9 (leveraging resources), and highlights the interrelated nature of the Core Values (Detert et al, 2001).

Summary. All of the Guiding Documents contribute to the comprehensive vision of the District. Among these 'documents', the Leander Way draws most heavily from the Quality Management and Continuous Improvement philosophy, and the concepts contained within were scattered throughout the administrators' responses. The 'Leander Way' percolates through an assortment of activities

and venues such as the training for principals, the new-employee 'Culture Day' training, the Teacher Portfolio System, and by reinforcement through the myriad of conversations that drive planning and daily practice, and other education, training, and outreach efforts available to District stakeholders.

One of the artifacts used to promote the District's vision is the 'Five Whys' which serves as an introduction to the Graduate Profile through the "Why are we here" query, and for drilling down to uncover root purpose or the source of problems. The 'Five Whys' also illustrates how artifacts serve multiple Core Values, as uncovered throughout the Research Question #4 analyses, i.e. CV #1 (Role of Vision, i.e. shared vision), #6 (Collaboration), and 8 (The Source of Problems, i.e. focusing on processes rather than people). David provided an example of how 'continuous improvement' can be used to reconfigure personnel allocations in the interest of increasing efficiency and reducing costs through the use of 'pilot' projects.

The deconstructions for Research Question #4 for Core Value #1 (Role of Vision) revealed some of the District's efforts to procreate and sustain its vision as manifested through widely distributed 'vision' documents and supported through the application of Continuous Improvement philosophy, tools, and processes. The 'Guiding Documents', Culture Day, the Teacher Portfolio System which includes a Leader Way component, the 'Five Whys', interview screening, pilot projects, and process improvement efforts, all suggest identifiable linkages to and/or support for the District's vision and Core Value #1. All of the identified

artifacts contribute to how Continuous Improvement is lived out and conceivably serve multiple Core Values. The artifacts alone do not indicate the extent these efforts are effective, just that they exist, possess identifiable linkages to and/or support for one or more constructs of Continuous Improvement, and have the potential to have an impact on the operations of the District. However, when artifacts are juxtaposed with the “espoused values”, the “values in action”, and the ‘critical incidents’, some sense of their intended purpose, use, and effectiveness begin to emerge.

Core Value #2. Determination of Educational Needs: “Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders”

While several of the respondents referred to community outreach programs, none specifically mentioned the Partners in Education program, although the Program was noticeably active on some of the campuses the researcher visited, and highlighted on the District’s website. The prior year, the District was one of only ten across the state that submitted participation numbers to the Texas Association of Partners in Education (TAPE), formerly known as the Texas School Volunteer Program (TSVP) (James, 2004). The Leander ISD volunteer program encourages individuals from many different organizations and vocations to participate: Businesses, Governmental Agencies, PTA, Parents/Family Members, Higher Ed Institutions, Hospitals/Health Care

Facilities, Senior citizen Groups, Community-Based Organizations, Civic Organizations, and Faith-Based Organizations (www.leanderisd.org/default.aspx?name=comm.PIE). The program provides avenues of involvement that include community partnerships between businesses and schools, volunteer activities, student mentoring, the “Leadership Leander ISD” program where participants take part in an in-depth 10-month District ‘learning experience’, a “Principal for the Day” experience to get an inside look at how schools work, the Leander Educational Excellence Foundation (LEEF) which includes an Early Literacy Outreach, Classroom Enrichment Grants and Teacher Training, and need-based textbook scholarships, Career Development Programs and other educational support options that include monetary or material goods support. The Partners in Education Program has an assigned director who coordinates the various outreach efforts and serves as a liaison to interested individuals and groups.

Examples of the various performing committees are the Re-Zoning committee that makes recommendations on boundary changes resulting from newly created campuses, and the Health Committee that tackles emotionally charged issues such as sex education. Executive administrators and board members often attend committee meetings to provide data and pertinent state and governmental guidelines, along with existing policy information to facilitate the generation of recommendations. The Re-zoning and Health Committees represent two of the committees that the District uses for parent and community

input. Most of these types of committees are ad hoc, serving a specific purpose for a specific school year. These types of committees are often formed to address issues that have the potential to evoke apprehension and/or contention and allow stakeholders to vet their opinions, network, and gain mutual understandings.

The administrators view surveys as an important avenue through which stakeholders can express opinion and provide input. The Secondary Student surveys (Appendix, B11) distributed to approximately 60% of the secondary students and the Smiley Face or Elementary Student surveys (Appendix, B10) involving all students in the fourth and fifth grades, probe for opinions about the quality of education the students believe they are receiving, including opinions about their classes, instructional environment, and teachers. Student surveys alert principals of problems and help to guide future improvement efforts. According to Paul, student surveys provided some of the information that influenced the creation of New Hope High School to meet the needs of the ‘non-traditional’ student, i.e., students who have families of their own, work to support themselves, may be estranged from their parents, have drug dependencies, at risk of dropping out of school, etc..

The District gathers input from students through a variety of surveys, and the use of reputable “canned” interest inventories such as the ‘CAPS’ and ‘COPES’ represent yet other ways that the District captures data and information for the purpose of “hearing the voice of the customer” and for making

educational and instructional decisions. The vocational programs at the high schools also conduct 8th grade orientation sessions at the middle schools to acquaint parents and students with program offerings for the freshman year, and to gather program needs information.

However the largest survey efforts were contracted out to Harris Interactive and comprehensive reports provided to the District in 2001 and 2007 (<http://www.leanderisd.org/docs/4-07%20Harris%20Report.pdf>). The respondent groups consisted of the parents in the District, students from grades 4-12, and faculty and staff. The 2007 overall results indicated substantial improvement in satisfaction from all groups over those obtained in 2001.

There were three artifact-related items mentioned by the elementary teachers: The Student Profiles, Student-led Conferences, and Content Facilitators. Two of the secondary teachers mentioned the articulation agreement the District has with Austin Community College (ACC) through which course content is synchronized so that students can acquire dual credit for both high school and college coursework, and one of the teachers also singled out a similar agreement with Texas State Technical College (TSTC) in Waco, Texas. The articulation agreements reflect outreach efforts to external stakeholders, a means of meeting one of the Four Challenges to “Increase the percentage of students enrolling in and successfully completing our most challenging courses”, the collaboration aspect of CV #6, and ways the District extends existing resources (CV #9).

Summary. The Partners in Education Program and ad hoc or performance committees such as the Rezoning and Health Committees are examples of District efforts to garner stakeholder involvement, and both internally developed and outside consultant-based surveys represent other ways the District gathers input from students, parents, and teachers. The ‘voice of the student’ is also heard through the Student Profiles, Student-led Conferences, and ‘canned’ instruments for ascertaining student skills and interests. Vocational and Technical Education teachers and program specialists meet with 8th grade parents and students through ‘orientation’ sessions to share information about student and job market needs, program offerings, and to determine student interests. The District also maintains articulation agreements with community and technical colleges which serves as an interface between internal and external clients, a means to coordinate and accelerate instruction, and a mechanism to leverage available assets. All of the material artifacts and creations referenced to this interview question reflect District efforts to gather stakeholder input for the purposes of making informed decisions, and link meaningfully to Core Value #2 and continuous improvement.

Core Value #3. Long and Short-term Commitments: “Improving Education Requires a Long-term Commitment”

The Graduate Profile, the Ten Ethical Principles, and the Four Challenges again appear as dominant system artifacts, referenced by Cathy in pointing to

how these documents define the long-term commitments. Lana identifies the Leander Way in much the same manner, and Paul introduces Book Studies, and the Tuesday morning Principal's Meetings in response to this interview question.

'Book Studies' constitute one of the 'research' activities that the administrators, board members, educators, and system stakeholders partake in, and can focus on a variety of topics from educational 'best practices' and learning strategies, to management philosophy and practice, brain theory, to personal improvement strategies (Appendix, B14). Book Studies are sometimes assigned for the annual Administrator Retreats, as well as the topic of professional discussion for smaller groups such as Board Members and the executive administrators, the Central Office Staff and principal corps, or for larger groups such as an entire campus, groups of campuses, or the entire District.

The advent of a 'Book Study' usually begins when one of the executive administrators reads a book that he or she believes might have a direct and relevant application for some aspect of District operations or instructional strategy or practice. The administrator then recommends the book to other administrators who may or may not see the same relevance. If they reach a consensus on using the book for a study, the books are procured, and a time and venue selected for one or more, larger group studies. The Book Studies provide an opportunity for professional enlightenment and personal reflection and are usually conducted in an informal environment where everyone is

encouraged to participate and where comments, discussion, and brainstorming are welcomed. Cathy provided a 'short list' of the Book Studies which included 27 titles (Appendix, B14).

Not listed in the Book Studies list, are the workshop and seminar materials used from the David Langford seminars and workshops, including the *Quality Learning Training Manual*. Langford, a Quality Management educational consultant from Billings Montana, introduced the concept of Quality Learning and Continuous Improvement to Ann and Cathy through a 4-day session in Bozeman, Montana during July of 1991 and subsequently served as a regular resource to the District from 1992 through 1995.

According to Bob an opposition group rebelled against "Langford" and "TQM schooling" which eventually led to the District's cessation of regularly using Langford as a consultant. But remnants of the training persist in the form of charts and other workshop materials that adorn the walls of some of the administrators offices, and Langford's association with the District served as a major informatory source and initial thrust for the earlier phases of Continuous Improvement development and practice in the District, and continues to influence those administrators and teachers who were a part of that training.

Langford generously provided the researcher a copy of the primary training manual used in his 4-day introductory course, the *Quality Learning Training Manual (2005)*, which also included the *Tool Time for Education: Choosing and Implementing Quality Improvement Tools (2004)*. The concepts

and strategies presented in the training manuals convey the philosophy and practices of Continuous Improvement, drawing from the Quality Management Core Concepts listed in Table 6, the teachings and philosophies of the more prominent QM scholars and experts, aspects of 'Systems Thinking', data-based decision-making, CI concepts and tools, and the transformational leadership ideas that Hoy and Miskel refer to as "idealized influence, inspirational motivation, and intellectual stimulation" (2001, p. 415). Professional training and education in Continuous Improvement would not end with Langford, as the District established other avenues and resources for supporting 'continuous improvement' application, ideology, and practice, from the boardroom to the classroom, but much of the QM/CI terminology that flowed from the administrator interviews are arguably attributable to what was learned through the 'Langford training' opportunities. W. Edwards Deming was another early influence on the executive administrators, and as shared by Ann, she and Bob attended two of Deming's last conferences, the first on December 1st and 2nd of 1992 in Costa Mesa, California, and the last on January 21st and 22nd of 1993 in Dallas, Texas. An organization's use of outside consultants, particularly with regard to engaging and implementing a systems-wide transformation, reflects Deming's admonition that a system cannot understand itself, and requires a view and guidance from the outside (Deming, 1994).

Successful high performing organizations depend to a large extent on collaboration, shared teamwork, and building relationships (Lezotte, 1992;

Seymour, 1992; Langford & Cleary, 1995; Milakovich, 1995; Lindsay & Petrick, 1997; Huysse, & Kennedy, 1999; Alukal, 2003; Manos, 2007). The Principals Meeting, scheduled for every Tuesday morning, serves as a means of exchanging information and keeping both the Central Office and the campuses informed about important or emerging issues, for sharing strategies and research, and for creating a sense of camaraderie, collegiality, and teamwork. Throughout the interview responses, the administrators conveyed the notion that these meetings had a profound and sustaining effect on the District's culture of trust, relationship building, and Continuous Improvement.

Beth introduces commonly associated QM/CI terminology in response to this question, blithely ruminating about "random acts of improvement", "root cause", and "Hot Dots", and Lana reveals that she was receiving training through the "Continuous Improvement Institute" to learn more about the CI philosophy and the associative terminology. "Random acts of improvement" are characteristic of organizations that have a 'reaction' mentality and which tend to rely on 'quick fixes' rather than having a comprehensive 'proactive' and aligned systems improvement orientation that focuses on long term solutions (Marton, 1997; Werner, 2007). 'Root' causes are faults in the system that are specific, can be reasonably identified, management has the control to fix, and can be reasonably prevented from reoccurring (Rooney & Heuvel, 2004). "Hot-Dotting" is a 'brainstorming' variation of the Multi-Voting Technique (Langford, 2004), where participants individually cast multiple votes by importance on issues that

the group deems important. The multiple votes are cast on individual ballots and then transferred to a chart for prioritizing issues, or by affixing colored sticky dots to items on the chart, each color representing a ranking by importance. The researcher witnessed teachers using this tool to help students identify long term commitments and priorities at the Teacher Portfolio Party and in District training videos, and topics involving the tool often appear in summer inservice and Continuous Improvement Conference sessions.

Three out of four of the elementary teachers listed Grade level and vertical teaming as common practice. The grade level teams either reinforce content skills across disciplines within a grade level, or synchronize the teaching of learning skills among members of the same academic discipline and grade level. The vertical teams usually coordinate and sequence learning activities across grade levels for the same academic discipline. Grade-level and vertical teaming keep the teachers focused on the long-term commitments and student achievement goals defined by the TEKS learning objectives.

In the context of responding to this question, two of the teachers, one from the elementary group and one from the secondary, spoke of the Continuous Improvement Conference (CIC) as one way the District makes a long term commitment towards ongoing and recurrent training. The elementary teacher also mentioned that the CIC was an important venue for fostering collegiality and the secondary teacher identified the Continuous Improvement Conference as a principal means for learning new instructional strategies, thus

highlighting again the interrelationships between the Core Values. And the Preventative Maintenance Program developed by the plant facilities department, highlights a long-term commitment to reduce equipment failure and 'downtime' and control process variation through scheduled service work.

Summary. Cathy referred to the Graduate Profile, the Ten Ethical Principles and the Four Challenges in responding to this question, and Lana again referenced the Leander Way. Book Studies, the Principals Meeting, and the Continuous Improvement Institute appeared for the first time in the interview responses. QM and CI terminology and tools also emerged from Beth's interview in the forms of 'random acts of improvement', 'root cause', and 'Hot Dot tool'. The Continuous Improvement Institute appeared for the first time. The elementary teachers referred to grade level and vertical teaming in their efforts to continuously improve, and two of the teachers mentioned the Continuous Improvement Conference as a vehicle for promoting collegiality and strategies for continuous improvement. Ben elaborated on the Preventative Maintenance Program which is used by the plant facilities department to reduce equipment failure and 'downtime' and control process variation.

The Guiding Documents serve as the long term commitments for the District. Various other artifacts and processes such as training efforts and opportunities as exemplified through the Continuous Improvement Conference, Book Studies, and the Continuous Improvement Institute, the appropriation of CI knowledge, tools and concepts such as 'random acts of improvement', root

cause, 'Hot Dot tool', other CI manifestations such as grade level teaming efforts, and the use of Preventative maintenance, collectively lend credence to the notion that a framework for this Core Value exists and supportive practices in place.

The Graduate Profile relates to the long-term Core Mission of the District (CV #2), and the Ten Ethical Principles to the 'social responsibility' Core Concept of QM as represented in Table 6, #9. The Leander Way also reflects Core Value #1 (i.e. shared vision), Core Values #2 (i.e. customer-driven focus), #4 (i.e. Continuous Improvement), #5 (i.e. teacher and support staff involvement in improving system processes), #6 (i.e. teamwork, collaboration, and partnerships), #8 (i.e. focusing on system processes), #9 (i.e. leveraging available resources), and pervades the philosophical outlook of the interviewed administrators; Book Studies, the Continuous Improvement Institute, and the Continuous Improvement Conference are likewise reflected in Table 6, #7 and illustrate the long term commitments (Core Value #3) the District makes to training (as implied by Core Value #5, i.e. employee involvement in improving the overall school operation). The Principals Meeting and grade level and vertical teaming also relate to Table 6, #4; 'random acts of improvement', 'root cause', 'Hot Dot', and Preventative Maintenance conceivably reflect QM/CI problem-solving concepts or strategies that support long-term commitments to continuous improvement. The artifacts and processes associated with this Core Value strongly relate to the Continuous Improvement philosophy in the manner

they are lived out, and expand the analysis provided for Research Question #2. The artifacts identified in this question again illustrate the utility that the artifacts demonstrate in supporting multiple Core Values.

Core Value # 4. Managing Change: "A school should strive to make continuous changes to improve"

Ann introduced the Teacher Portfolio System in response to this question. The District's Teacher Portfolio system consists of the teachers preparing a 'portfolio project' that focuses on teacher-developed strategies to improve instruction, learning, and student achievement in their classes and serves in lieu of the state promulgated teacher appraisal system known as the PDAS (Professional Development and Appraisal System). The researcher attended a "Portfolio Party" at one of the elementary schools where the teachers had prepared their portfolios for presentation and sharing with other teachers. Projects were set on tables in the library, and other teachers could come by, examine the material, and ask questions. The event took place after the regular school day in an informal and collegial environment at the school library, and most of the teachers appeared eager to share what they had done and learned from their project. The end-of-year teacher evaluations include the teacher presenting their Portfolio to the campus principal and explaining why they had chosen the project, and what they had learned from it. The portfolios represent yet another way that professional development is promoted.

Across the District, the Portfolios draw from a myriad of strategies such as teaching students to track and accelerate their own academic progress, designing interdisciplinary study units based on multiple intelligence theory, developing higher levels of questioning strategies, using music activities to supplement math instruction, developing student writing journals for language arts, using demographic and geographic software to organize data in new ways for science projects, teaching students how to corroborate internet research and evaluate electronic resources, and developing activities and strategies to help students work in teams or work groups to solve complex problems, to name just a few. In virtually every example the researcher examined, the portfolios concentrated on strategies or activities to improve student learning and achievement and often involved exploring new tools and/or methodologies to accomplish this purpose. Teachers have wide flexibility in selecting each year's portfolio project, as long as improving some aspect of student learning or achievement is the ultimate goal, and teachers may choose to partner with other teachers for more complex projects, or projects that have the potential to impact multiple classrooms or cross academic disciplines. The teachers that referenced the portfolio system in their responses, either directly indicated or inferred a strong preference for this system of educator appraisal over that of the state-promulgated PDAS system.

As a campus uncovers the needs of students through the TAKS (Texas Assessment of Knowledge and Skills) performances, a new set of needs arise

among the professional educators to determine which improvement strategies to employ for raising achievement. In effect, one need leads to another, the students' needs 'trigger' the need to apprehend and implement effective instructional improvement strategies. The resultant 'needs assessment' processes involve multiple inputs from multiple stakeholders, from students and parents, to teachers, campus specialists, campus administrators, and Central Office staff and specialists. Student assessment involves some form of academic performance measurement and the District developed the Student Profiles to monitor student progress in accordance with the state developed learning objectives called the TEKS (Texas Essential Knowledge and Skills). The TEKS guidelines constitute the core knowledge and learning behavior skills that the state of Texas expects for students in the academic content areas of English language arts and reading, math, science, and social studies and will expand to include career and technology education, and Spanish language arts and reading for the 2009/2010 School Year (<http://ritter.tea.state.tx.us/curriculum.html>). The TEKS guidelines and the state promulgated Academic Excellence Indicator System (AEIS) through which school district academic performance is publically reported (<http://ritter.tea.state.tx.us/perfreport/aeis/>) constitute the primary academic benchmarks for the District, and trigger responses and strategies that borrow from the Continuous Improvement Philosophy.

In response to this question, Beth used the Student Profile System as an illustration of one of the ways the District monitors and adjusts instruction to promote continuous academic improvement. Within the Four Challenges is the goal to “eliminate the link between economic disadvantage and low achievement while improving the overall student performance”. For Beth, this particular goal of the Four Challenges drives much of what she did as a teacher and what she does now as a principal. The pursuance of this goal required changes in the curriculum and the implementation of ‘accelerated’ instruction for all students. To achieve ‘accelerated learning’, the District originated processes to monitor student achievement between shorter intervals, from semester to semester instead of year to year, and subsequently developed the Student Profiles which are interim assessment instruments designed to accomplish this purpose. The Student Profiles, which are synchronized with the Texas Essential Knowledge and Skills (TEKS) objectives (<http://www.tea.state.tx.us/index2.aspx?id=6148>), originally focused on English language arts/reading and math, and were given to students three times a year which became known as the Beginning of Year (BOY), Middle of Year (MOY) and End of Year (EOY) Profiles. Because Beth helped to write the Profiles, she believes she has the knowledge in assessment to review the Profiles annually to make sure they remain aligned with any changes in the TEKS.

According to Lana, her campus has held many ‘Plus Delta meetings’ to continuously refine the profiles, because “while they give us good information,

they are difficult to communicate to parents, they are very invasive, and they take up a lot of teaching time”. The Profile instruments evolved to not only include all of the TEKS learning objectives, but to also use the question format found in the TAKS tests so that students become familiar with the presentation style of that instrument. The EOY Profile is generally not administered for content areas covered by the spring, grade level TAKS tests, because doing so risks unnecessary duplication of effort and incurring possible student test fatigue. The Profiles exemplify one strategy the District developed in responding to mandated change from the state education agency, which Beth considers to be one of the District’s most valuable tools in meeting two of the “non-negotiable” goals stated in the Four Challenges, i.e. to “Eliminate the link between economic disadvantage and low achievement, while improving overall student performance”, and to “Ensure that all students read at or above grade level”.

Many of the teachers complain that the Profiles consume an inordinate amount of time and energy to develop, analyze, and revise, which contribute to varying levels of resistance. However, according to Lana, general feedback from teachers indicate that while these processes consume much time and effort, they are considered valuable and the teachers would not want to eliminate them, just design them to take away less instructional time, and make them easier to analyze. Grade level teams analyze the Profiles, and campus principals, content specialists, and Central Office administrators work to

coordinate the content within and across grade levels and campuses. The combined efforts involve multiple levels of teamwork. The current Profiles were being revised to lessen the consumption of student and teacher classroom time and to make them easier to evaluate.

The Content Facilitators of the District received praise in the answers Nan provided to this question. The Content Facilitators are subject matter specialists that meet with teachers throughout the District, several times a year, to share and promote learning strategies and best practices. There are facilitators for English language arts and reading, math, science, and social studies, both at the elementary and secondary levels, and their functions conceivably support the attainment of the Graduate Profile goals (CV #1, shared vision; and #3, long term commitment), promote continuous improvement (CV #4), and represent a group of internal stakeholders who are tasked with the responsibility of collaborating with and helping teachers (CV #6, collaboration).

Summary. The Teacher Portfolio System represents an alternative to traditional teacher appraisal, one that encourages teachers to experiment with and implement new and innovative tools, techniques, and strategies, or to improve existing strategies, primarily directed at fostering continuous improvement of student learning and achievement. The portfolios serve to promote professional development, accountability, and instructional improvement or change, but in a manner that teachers in the LISD perceive as less threatening than traditional professional growth and evaluation systems.

Teachers use the Student Profile system to continuously monitor and adjust instructional strategy (CV #4), which also contributes to Core Values #1 (sharing a common vision), #2 (broad stakeholder involvement), #3 (making long-term commitments), #5 (employee involvement in making improvements), #7 (making fact or data-based decisions), and #8 (focusing on processes). The Content Facilitators support the attainment of the Graduate Profile goals (CV #1, #3, i.e. shared vision), promote continuous improvement (CV #4), and represent a group of internal stakeholders who are tasked with the responsibility of collaborating with and helping teachers (CV #6). The artifacts and processes identified in the responses to this question all directly or indirectly support the philosophy of Continuous Improvement and Core Value #4 (Managing Change).

And lastly, the Content Facilitators serve an important support role in augmenting continuous improvement. The Content Facilitators are subject matter specialists that meet with teachers throughout the District, several times a year, to share and promote learning strategies and best practices. There are facilitators for English language arts and reading, math, science, and social studies, both at the elementary and secondary levels, and their functions conceivably support the attainment of the Graduate Profile goals (CV #1, shared vision; and #3, long term commitment), promote continuous improvement (CV #4), and represent a group of internal stakeholders who are tasked with the responsibility of collaborating with and helping teachers (CV #6, collaboration) to continuously improve.

Core Value #5. Decision-making Involvement: "Employees should be active in improving the overall school operation"

According to Detert, et al, "The QM literature stresses the importance of employees, but in somewhat different ways" (2001, p. 196). Collectively, QM scholars identify teamwork, collaboration, employee fulfillment, learning opportunities, and professional development as components in valuing employees (Detert, et al, 2001), and learning opportunities abound in the Leander ISD. Accordingly, Cathy and Lana mention the Continuous Improvement Institute which consists of six, three hour sessions that examine the philosophy of Continuous Improvement and how it might be practiced. The "Institute" training covers virtually every aspect of the Continuous Improvement philosophy, tools, and techniques and relates to all of the Core Values; a session syllabus for the training appears in Appendix B13. Participation is voluntary, but new principals and assistant principals are strongly encouraged to attend, and enrollment is open to everyone.

Another learning opportunity is the Administrator Retreat which is held every summer, off site and usually out of the District, but within a relatively short driving distance and generally consists of about fifty of the District's administrators and supervisors. The four Central Office administrators plan the event, Bob spearheads many of the sessions, and the three other CO administrators make significant contributions or present at some of the sessions.

The event provides an important opportunity for research, reflection, group problem-solving, and professional bonding,

The Continuous Improvement Conference is again mentioned as a primary learning event, which is open to all employees. In actuality, attendance is mandatory for all professionally certified employees and instructional aides, and attended by most of the secretaries. Although Service Function employees are invited, most do not attend, and the researcher did not identify any in attendance, except for the CNS employees who were preparing and serving the Conference lunches, and the custodians and maintenance workers designated to oversee the conference site. However, representatives from Child Nutritional Services, Maintenance, and Transportation do periodically make presentations at the Conference, usually in the interest of informing the instructional employees of how their respective departments engaged improvement efforts to better meet customer needs; out of the four CI Conferences the researcher attended in 2004, 2005, 2006, and 2008, CNS provided two sessions at the 2008 Conference, Maintenance, one session at the 2006 Conference, and Transportation, a session each at the 2004 and 2008 Conferences.

The four learning events/activities mentioned in response to this interview question, the Continuous Improvement Institute, the Continuous Improvement Conference, the Administrator Retreat, and the Book Studies, all serve interrelated and complementary purposes. The Institute focuses on the philosophy and practice of Continuous Improvement while the 'February' or

Continuous Improvement Conference (CIC) is a venue for sharing and building camaraderie, in a setting that promotes fun-filled yet relevant learning across a wide variety of topics pertaining to instructional and continuous improvement. One of the CIC sessions that the researcher attended showcased the Leander ISD's Continuous Improvement "Jeopardy" game which is a hybrid between the television game shows, "Who Wants to be a Millionaire" and "Jeopardy". Attendants participate in groups and a 'Jeopardy' board faces the audience covering topics such as the Leander Way, Systems/Process Design, Improvement tools, and Stephen Covey's *7 Habits of Highly Effective People* (1989). Response buttons are attached to an electronic device that registers the first response, and team members are allowed to help the contestant. Another CIC session, one that resembles a "Monopoly" type board game, is the "Leander Way" game where pairs of contestants have the opportunity to test their knowledge about the "Leander Way". The use of these two 'games' familiarize employees with the culture of the District, and highlight the collaborative nature of some of the activities purposefully included in the CIC sessions, which also support CV #6 (collaboration) and the philosophy of Continuous Improvement (CV #4).

The 'retreats' are memorable events that shape and strengthen relationships, provide opportunities for modeling insightful professional behaviors, establish the importance of teamwork, and draw attention to important issues that will require a common focus. The "Continuous

Improvement” moniker appears as a prominent descriptor for many of the training workshops and sessions, and reflects the District’s choice of language which avoids the use of ‘TQM’ or ‘QM’ in the event descriptors to convey a more ‘user friendly’ impression to educators. These training and education opportunities are but three of eleven identified in Appendix B15. Additionally, the District has a cadre of “ROPES (Repetitive Obstacle Performance Evaluation System) facilitators” who are trained teachers and staff that instruct ‘Ropes’ courses in the interest of exploring and developing trust-building and group decision-making attitudes and skills (Attarian, 2005). The District also provides training that is specifically tailored for Process Improvement Facilitators. Continuous Improvement draws from its TQM lineage in that it “is pro-learning with a vengeance” (Hackman & Wageman, 1995, p. 330), and exemplified through all of the education and training opportunities the District provides.

This interview question also elicited some of the cultural language and jargon that appear in District conversations. “Fail forward” represents a means of reducing tension, pressure, and anxiety in an institutional environment that stresses continuous improvement and that has high expectations for its work force. Paraphrasing Cathy’s comments, to “fail forward” means “its ok to take risks”, and “if you fail, you learn from the experience” and can put the knowledge gained to better use the next time.

As revealed in the third question set, improvement teams assume the forms of either Educational Improvement Teams or Process Improvement

Teams and operate at the department, campus, or District level. A Process Improvement Team is a project team that focuses on developing or improving a specific systems process. According to Westcott, “The team comes together to achieve a specific goal, is guided by a well-defined project plan, and has a negotiated beginning and end” (2006, p. 61). Most of the PI teams are typically cross-functional in that the participants represent different functions and skill sets. Chartering a process improvement team typically consists of identifying a problem and the principal stakeholders, creating a macro flowchart of the process, selecting the team members and making sure they are trained, and selecting the team leadership (Cupello, 1995). The Leander ISD developed a comprehensive Process Improvement Team approach that began with the Langford training, evolved through trial and error, and was eventually refined into an effective strategy under the tutelage of Dr. Bryan Cole of Texas A&M University. The District-developed flowchart for process improvement depicted in Appendix B17 represents the end result of this development, as it existed at the time of the researcher’s field work. For Educational Improvement Teams, the organizers prefer volunteers who work outside of or distanced from the content area or problem being explored, a strategy meant to foster cross-functional awareness. And according to Beth, it helps if the team members are experienced in Continuous Improvement concepts and skills, and if the team members already know each other.

The Continuous Improvement Conference is one of the most referenced District artifacts, particularly among the elementary teachers, and appears to be a powerful influence in transmitting the culture of the District and in the diffusion of instructional strategies. Another artifact which reappears is the Teacher Portfolio. In Rita's case, the most recent Portfolio project was a joint endeavor with half of her grade-level team members, who as a group presented their project at a "Portfolio Share" event. The Portfolio was a welcome relief for Rita, who had moved in from another District that used the state approved PDAS (Professional Development and Appraisal System, Texas Administrative Code, Title 19, Part 2, Chapter 150, Subchapter AA, Rule 150.1001). Some of the more relevant benefits of using the Portfolio approach are as follows: serves as a substitute for the 'PDAS', encourages the teacher to research pedagogical literature and 'best practices' for innovative teaching strategies, lessons learned contribute to the teacher's knowledge base, and the results can be shared with others which opens avenues for the extension of practice.

Summary. The qualitative portion of the study does not suffer from the same restraints as the quantitative portion, and some of the respondents were quick to associate this interview question with education and training. Artifacts such as the Book Studies and the different training opportunities available to employees focus on 'how to improve' services and deliverables, while the process and educational improvement teams, and teacher portfolios demonstrate ways that District employees actually apply the knowledge gained

from the education and training. The artifacts and processes unearthed in the question are consistent with both Continuous Improvement and Core Value #5.

Core Value #6. Collaboration and Autonomy: "Collaboration is necessary for an effective school"

The Central office administrators prefer to use a 'systems approach' in the delegation of duties and responsibilities (Appendix, B16). Although specific tasks and responsibilities are assigned in the formal organizational chart, it is not uncommon to find all four of administrators sharing and helping each other in the accomplishment of tasks. Bob summarized the task as follows:

So you have a lot of people crossing a lot of lines. One of the things you won't find in this district very prominent is an organizational chart. I like it that way, I don't want those lines of responsibility to be crystal clear, I want them to be a little fuzzy. I want there to be some overlap. That's why we use the System Diagram instead of the organizational chart.

These collaborative efforts act as 'force multipliers' that collectively accomplish more than if the administrators were working in isolation. When a team responds to the call for joint action, learning opportunities are presented that are often referred to as "double-loop" learning (Argyris & Schön, 1974) where basic assumptions are questioned and new ideas explored that may inform core decisions (Kruse, 2001). Such an approach fits well with the philosophy of change and continuous improvement that the administrators espouse.

The CO administrators believe in, encourage, and promote cross-functional collaboration and problem solving, and the Principals Meeting is a

manifestation of this belief as the central office administrators and campus administrators 'join heads' once a week to collaborate. Cathy also mentioned that Process Improvement Teams are another way the District engages in cross-functional collaboration and problem solving, and Paul added that the "degrees of freedom" should be first analyzed and the process topology determined before process improvement efforts begin (Table 65). Some processes and artifacts are very mission dependent and tightly bound to the District's vision which constitute the 'non-negotiables' – these artifacts and processes are the 4's and 5's on the 'rating' scale.. Other elements such as 'teaching style' and teaching methodologies are more governed by personal volition and fall into the '0' and '1' categories on the rating scale. Sandwiched between the '0's' and '1's' and the '4's' and '5's' are the artifacts and processes that reconcile the extremes of the scale, such as the Student Profiles, Process Improvement Teams, and student storyboards. Paul attributes the development of the process rating tools and analyses to the Bryan Cole training and considers the associative concepts valuable to the District's process improvement efforts, for 'aligning all the arrows', and for leveraging District resources.

Table 65. Process "Level of Freedom" Rating	
Rating	What is the current / desired level of order for the identified process?
	Operational Definition
0	Total independence of structure (order) from the system. No parameters are identified. No accountability.
1	Very little structure (order) in place from the system. Few parameters are identified, and they are very flexible (more like guidelines).
2	Some structure (order) from the system is present. Parameters are identified but very little feedback and accountability is given. There are many "exceptions" to the rule. Less than 50% of the entire system is consistently within the parameters.
3	Structure (order) from the system is present. Parameters are identified and communicated. Exceptions to the rule may be allowed if certain qualifications are met. More than 50% of the entire system is consistently within the parameters.
4	High degree of structure (order) from the system. Resistance to variation from identified parameters. Permission to deviate from established structure may be granted with certain stipulations. Accountability is stressed with more than 80% of the system consistently within the parameters.
5	Complete dependence on control by the system. Parameters are identified and fully communicated. Parameters are non-negotiable and the degree of accountability is high.

Beth mentioned the Book Studies as an opportunity for collaboration and professional growth, and Ann encourages the use of the 'Five Whys' in collaborative settings as a brainstorming tool for drilling down to root cause or

refreshing purpose. Most of the teachers mentioned 'teaming' at the grade or content level as a major contributor to collaboration, and one mentioned the Student Profiles and benchmarking as two artifacts/processes that 'bring teachers together'.

Summary. Although there is a formal organization chart, the executive administrators often follow a 'systems approach' in carrying out tasks and solving problems. This approach encourages collaboration and cross-functional problem solving. The weekly held 'Principals' meeting, Book Studies, grade-level and content level teaming, Student Profiles and other benchmarking activities, Process Improvement Teams, Process Rating Tools, brainstorming, and data analyses meetings were other artifacts and processes mentioned in response to this question. The artifacts and processes mentioned along with the associative contexts within which they are used, suggest that Core Value #6 is well established.

Core Value #7. Decision-making Environment: "Decision-making should rely on factual information"

The Instructional Services Executive Directors (ISED) which consists of Ann and the executive directors that report to her, meet to share ideas, give and receive feedback, cultivate discussions about the District's vision and goals, ruminate over priorities, and analyze data. Information gleaned from these meetings provides focus for the Directors as they meet with the constituencies

and stakeholders across the District. This group is important in helping to reduce or prevent vision drift and for “aligning all the arrows so they point in the same direction”. Cathy oversees a Mentorship Program, which is an informal training program where senior teachers serve as mentors to help acclimatize new teachers to the District and how the culture of the District encourages and supports fact-based decision-making. Paul was remindful of how important surveys and questionnaires are in directing data-based decisions, and Beth revisits the Student Profiles as a mechanism for influencing decisions.

The Student Profiles are again mentioned by three of the four elementary teachers as a prevalent decision-making tool in the District. Profiles are long-standing data gathering instruments designed to be aligned with the TEKS (Texas Essential Knowledge and Skills) learning objectives, and according to Rita existed before the TAKS tests were required by the state. When Rita first came to the District the TAAS (Texas Assessment of Academic Skills) was the state’s primary accountability instrument, and a fellow teacher commented, “You're not going to hear about that anymore. All you're ever going to hear about are the Profiles”. While the TAAS tests were finally phased out in 2002, the Profiles were already in existence, and continue as an important student achievement metric.

The TAKS Learning Academy is a program used by a campus to lift student achievement for those students who are at the cusp between passing and failing the TAKS test. Students are purposefully selected based on previous

TAKS and current Profile data, and for students who are willing to substitute an elective for the opportunity to improve their TAKS scores and who the teachers feel would benefit from participation. Generally the instruction focuses on language arts/reading, and math, and in its current iteration, teacher participation is voluntary for which they receive additional compensation.

Marilyn mentioned that her principal regularly uses the Plus Delta tool with the faculty to identify and target academic skills areas that need improvement and also drew attention to the Data Day that is held across the District during the month of October. During most of the day, the focus is on examining and analyzing data, usually from Student Profiles, or TAKS results. “Data rooms” were subsequently set aside on most campuses, to disaggregate student data down to the smallest component to track individual student academic performance. The data used for analysis usually come from the Profile tests and the TAKS test data (Champion, 2007).

The CNS department uses competitive bidding to lower costs which correlates closely with Core Value # 9 and production records help cafeterias keep track of the food items consumed and in the planning for future meals.

Summary. Beth and Lana addressed Student Profiles extensively in their responses to Core Value #4. According to Detert et al, “an artifact of this criterion would be a comprehensive, integrated information system”, which the Student Profile System fulfills while also potentially contributing to CVs #1 (shared vision), #2 (stakeholder involvement), #3 (long-term commitment), #5

(employee involvement in improving the school), and #8 (focusing on processes). CNS competitive bidding and production records are manifestations of Core Value #7 which also support CV #9 (leveraging system resources). The ISED (Instructional Services Executive Directors) meetings not only support CV #7 (making fact-based decisions), but the 'continuous improvement' aspect of CV #4, and collaboration property of CV #6, as well. The Mentorship Program provides a (CV #6) collaboration mechanism where decision-making strategies (CV #5) are communicated and explored, along with opportunities to learn more about the District's vision (CV #1), and the District's emphasis on continuous improvement (CV #4). The TAKS Learning Academy represents a product of decision-making based on factual information and also supports Core Values #1, #4, #5, and #6, as logically extended through practice. The artifacts mentioned in the responses to this question, similarly reach across and demonstrate applicability to multiple Core Values, a claim that Detert et al make in describing the Core Values as "mutually reinforcing" (2001, p. 203). All of the artifacts or processes identified in this study impact or contribute to multiple Core Values. The artifacts/processes delivered in response to this question are supportive of Core Value #7 and Continuous Improvement.

Core Value #8. The Source of Problems: "Quality problems are caused by poor systems and processes, not by employees"

Cathy listed two of the training opportunities developed by the District to impart knowledge about systems thinking, process improvement, and process orientation, the Leadership Academy Retreat and the Learning Academy, and also mentioned the ROPES training as a means of building trust among staff and employees to augment group decision-making and process improvement opportunities (Appendix, B15). A Process Improvement Team (PIT) is as the name suggests, a project team that focuses on developing or improving a specific process, usually in the interest of achieving "breakthrough-level improvement", and is typically cross-functional in composition "bringing together people from different functions with different skills related to the process to be improved" who are given a "specific goal and guided by a well-defined project plan" that operates within a negotiated timeline (Westcott, p. 61). Although improvement efforts in the District are more likely to be found at the campus or department level, the most acclaimed and referenced examples occurred at the District level where well-developed procedures and organized planning guide process improvement efforts. According to Ann, District PIT efforts involve a planned set of actions.

People apply, "I would like a process improvement effort, I would like to request a facilitator, this is the purpose of it, this is my problem, these are the parameters, and this is what I expect out of it". We assign a sponsor. And that didn't happen overnight. We've seen what happens if you don't have some consistency there".

Responses to Question 3.2 (Appendix A4) and a review of the District's flowchart for Process Improvement (Appendix B17) provided more details. All District-wide Process Improvement Teams are assigned a "Sponsor" who serves as a liaison to all relevant Central Office departments to establish and inform the Team of any time and resource limitations that may be associated with the project. Also, the LISD created "Facilitator" roles to assist Process Improvement Teams (PIT), the primary function of which is to provide tools and strategies for group problem-solving. The third titular position is that of the Team Leader whose main responsibilities include enlisting team members that represent all the stakeholder groups, defining the parameters of the process selected for improvement, and keeping the meetings focused and organized. Successfully engaging a large, cross-functional, process improvement effort is not easy and sometimes figuratively compared to 'trying to herd cats' (Jacobs, 2006). Without the delineated PIT leadership roles, well-organized planning, and accompanying training, process improvement efforts can easily drift astray and consume an inordinate amount of resources without producing meaningful results. According to Ann, District-wide process improvement efforts are usually extremely time consuming and if not done well, with well-defined goals, focused teamwork, and measurable results, can actually do more harm than good. The more noteworthy District-wide PIT efforts generated sustained, successful outcomes such as the formation of an alternative high school for 'non-traditional' students, the

implementation of a school phonics program for the elementary schools, and the deployment of a more efficient textbook accountability system, and according to Bob and Ann, Process Improvement Teams are valuable in transmitting the core values of Continuous Improvement, especially for those who volunteer to serve on them.

Bob and Ann stated that there were no current District-wide process improvement efforts being implemented, and all four of the CO administrators say they are not used to the extent they once were. However, smaller improvement efforts were underway during the researcher's field work, one using focus groups to brainstorm how to reduce duplication of effort and to streamline communications between the maintenance department and the campuses, and another in the planning stages to examine the effectiveness of the processes used to assess and communicate student academic achievement. Focus groups are used to gather opinion and also for identifying different scenarios that could impact policies, programs, and future events (Krueger & Casey, 2000).

Ann mentioned that the central office was examining the Ford *RAPID* (Rapid Actions for Process Improvement Deployment) approach used by the University of Texas in conjunction with Ford Motor Company, which is a strategy that focuses on eradicating small inefficiencies. This approach uses a one day event to bring all relevant stakeholders together using a specific structured process to generate suggestions for small improvements (Dalkir, 2005). Both

the “focus group” and RAPID strategies use stakeholder input gathered over a relatively short period of time to guide decision-making, and are generally much less resource intensive than Process Improvement Teams. Bob and Ann indicated that the use of focus groups and other ‘abbreviated’ approaches should not be interpreted as a reduction of interest in using District-wide Process Improvement Teams, but rather that the District is more judicious in how and under what conditions they are used.

All of the Central Office administrators and the elementary principal observed that the process improvement concept had migrated down into the campuses and was being used more informally but much more frequently for a wide variety of purposes. According to Beth, the concept expanded to include ‘educational improvement’ efforts as well. Process and educational improvement teams at this level are generally used for smaller problems that do not require the assignment of a District Facilitator or central office approval, and Ann and Cathy view this as a healthy trend. Regardless of the type or size of the improvement team effort, carefully monitored action plans delineating goals, responsibilities, resources, and timelines, are an expected outcome. According to Ann and Cathy, Dr. Bryan Cole of Texas A&M University provided training to the District on how to design and implement Process Improvement Teams in a more deliberative and organized fashion. Beth added from Set 3 question 7 (Appendix, A4), that the Cole training also included lessons and coaching on how to conduct a SIPOC analysis (identifying suppliers, intputs, processes,

outputs, and customer categories), which is a QM/CI tool (Scholtes, 1998, pp. 59-60). As Paul contributed from Question #6, Cole also provided training in determining current process conditions and the 'degrees of freedom' associated with a process under study, which when combined with a SIPOC analysis, are valuable precursors to successful PIT efforts. Few of the identified artifacts and processes support all of the Nine Core Values to the extent demonstrated by successful Process Improvement Team efforts.

There are other means through which the values of the District are transmitted. According to Deal and Peterson, the history of an organization consists of stories about events and people, some more epic in proportion as well as 'little' stories which just as effectively transmit beliefs and values (1999). A well chosen story has the potential to address an issue through powerful imagery "without compromising its complexity" (Deal & Peterson, 1999, p. 96). Bob mentioned his TTAS (Texas Teacher Appraisal System) story, and the "Failure Rate" story that he sometimes shares in his 'Culture Day' sessions.

The TTAS story focuses on the state career ladder debacle and how the teachers in the system responded to 'drop in' visits by administrators who entered their rooms equipped with an in-triplicate observation form. The teachers referred to the "drop-in" visits as "drive-bys" and the administrators perceived that long-standing personal relationships were threatened by the classroom visits. The point of the story is that a system based on rating and

ranking was destroying the culture of trust the District was trying to build, which eventually prompted the development of the Teacher Portfolio System.

The “Failure Rate” story describes the results of an effort where the Central Office administrators established a goal for the campuses to improve their state accountability achievement scores by ten percent. Miraculously, the scores improved 10% the next assessment cycle, but the increase in achievement was driven more from fear of failure than the desire to improve instruction. According to Ann, “they were giving us the product we wanted but not the results”. The institutional stories highlight the importance the District places on process improvement and the systems perspective depicted in Table 6, core concept #3.

Stories are also passed along through District created videos. The researcher viewed two videos, both of which focused on students taking charge of their learning and/or their learning environment. In one video, entitled “Little Life Lessons”, a kindergarten teacher shares how her students learned self-evaluation skills using the PDSA concept, storyboards and Continuous Improvement tools such as the ‘Five Whys’, run charts, the “probletnuity” concept, multi-voting, and ‘force field’ analysis. The teacher attached a “Little Life Lesson” to each of the storyboards and associative CI tool used, i.e., “probletnuties” are opportunities to find solutions to problems, multi-voting emphasizes the importance of prioritizing tasks, and the force field analysis highlights the importance of stopping periodically to assess one’s actions.

The video includes vignettes of the teacher explaining the rationale behind her approach, along with actual classroom footage of the teacher and her students explaining the work they did in class.

The second video, entitled “Be Dissatisfied”, opens with a short instrumental refrain from the Rolling Stones’ song (I can’t get no) *Satisfaction*, and follows a similar presentation format, with two teachers, one from the third grade, the other from the fourth, providing anecdotal vignettes along with actual classroom videos of the teachers and their students showcasing continuous improvement work. “Failing forward”, “Hot Dots”, force field analysis, kids taking ownership of their learning, and supporting and being part of a loving, caring, learning community were highlighted in the third grade presentation, and Pareto charts, Interrelationship Digraph, ‘Imagineering the Perfect’, were some of the concepts seen in the 4th Grade presentation. The warmth of the relationships between teachers and students was palpable, as was the pride in what was accomplished; the student dialogue appeared to be unscripted, and the students’ awareness and working knowledge of the processes and CI tools involved in the storyboards seemed genuine. The researcher also observed the inclusion of students in some of the Continuous Improvement Conference presentations, each with a story to tell of successful instructional interventions, strategies, or accomplishments.

The use of Continuous Improvement Tools to help stakeholders focus on processes was evident in the Portfolio ceremony the researcher attended. One

of the portfolios highlighted the CI tools used in one of the teacher's classroom and included examples of student generated work applying the Five Whys, a Plus Delta chart, run chart, Force Field Analysis, a Pareto Chart, and an Interrelationship Digraph (Appendix, C7). This teacher's portfolio presentation suggests that the classroom stories portrayed in the District-produced videos are not isolated instances of teachers and students using the CI tools. The stories shared by the administrators during Culture Day and those portrayed in the District-produced videos, CIC conference sessions, and Teacher Portfolios represent some of the ways the culture of the District is transmitted and the philosophy of continuous improvement promoted.

The topic of Student-led Conferences arose during interview questions #2, and #8. The researcher also noted that Student-led Conference topics were represented in some of the sessions at the Continuous Improvement Conferences and summer workshop catalogs. Helen stated that the District encourages and promotes Student-led Conferences, which are used throughout the District up to and including the ninth grade. The student presents his/her work, usually in a portfolio format, and elaborates on what was learned and which assignments and projects were of particular interest. Student-led-conferences provide the opportunity for the child, parent, and teacher to commiserate about the child's achievements, areas of strength, those in need of improvement, and the kind of assignments that might be helpful for future work. The conferences convey to students and parents some sense of control and

involvement in mapping out strategies for learning. From Helen's perspective, the Student-led Conferences are an example of how the District focuses on both processes and people. With regard to Detert's Core Values, this artifact reaches across Core Value # 1 (supporting a shared vision, i.e., the goals of the Guiding Documents), Core Value #2 (stakeholder involvement in the determination of needs), # 3 (having a long term commitment to the District's vision), #4 (continuous improvement), #5 (employee involvement in improving instruction), #6 (collaboration), #7 (making decisions based on factual information), #8 (focusing on processes), and #9 (an emphasis on using existing resources to improve the quality of education).

In response to Question #8, Nan emphasized that the District and her campus administrators rely heavily on data to scrutinize processes, and that the "How do you know" enjoiner often accompanies the evaluation of conditions and results associated with student achievement improvement efforts. According to Ann, the "How do you know" query is commonplace as the District strives to base decisions on data to measure system and process effectiveness. The current 'push' on Nan's campus was to use "scatter plots" to keep track of student behavioral problems. Similarly, and as gleaned from Ken's response to question Set 3.3 (Appendix A4), he and his students were collecting data on a daily basis to monitor academic achievement and enthusiasm, accomplished through run charts for classroom activities and assignments (Appendix, C7). Ken indicated that 'focusing on processes' applies logically to classroom and

instructional settings and the Continuous Improvement Tools assist in providing methodology and measurements for assessing process direction and improvement.

People who function as a group establish a system of communication and language that “permits interpretation of what is going on” and help to convey the values of the organization (Schein, p. 71). Schools often appropriate metaphors or ‘picture words’ and expressions “that consolidate complex ideas into a single, understandable whole” (Deal & Peterson, 1999, p. 96). The “How do you Know” expression, along with “Fail Forward”, and “Spotters Ready” are three of the more commonly recognized idioms that dot the cultural landscape of the District and all of the administrators and elementary teachers were familiar with these expressions. According to Ann the “How do you know” expression originated from the David Langford training.

You know it seems a little confrontive to look at a colleague and say, “How do you know?” You know it seems just, not very kind, kind of rude, and we gave ourselves permission to ask each other those questions and to help ourselves learn, to not flip back into our prior way of doing things.

Questioning a person’s reasoning is not a sign of mistrust but an opportunity to learn (Argyris, 1991). The “fail forward” expression conveys the notion that, in paraphrasing Cathy’s remarks, “it’s ok to fail as long as you are failing forward, that is, you are learning from your mistakes and you’re doing it in a way that enlightens future decision-making”. And the “Spotters Ready” phrase is a by-product from the ROPES training, and suggests that those around you are ready

to catch you if you fall. Both of these coping mechanisms serve to remove the fear of failing and relate directly to Deming's 8th Principle, "to drive out fear" (2002, p. 23). As time permitted, the researcher attempted to ask most of the respondents about these expressions as a closing interview exercise or through an email query. Aside from the CO administrators, the elementary teachers demonstrated the greatest familiarity with these expressions. These common expressions of support, together with the CI tools, symbols, and jargon, help to convey the values, models of behavior, and technologies that characterize the culture of the organization (Kekäle & Kekäle, 1995).

Summary. District-sponsored education and training opportunities are mechanisms through which employees learn about the philosophy and practices of Continuous Improvement, and Process Improvement Teams (PIT) and Educational Improvement Teams reflect a means through which these education and training efforts translate into group action and problem solving. District-wide Process Improvement Teams evolved over time to include positions with differentiated responsibilities, such as Sponsors, Team Leaders, and Facilitators who serve in roles to guide process improvement efforts in accordance with a District-developed process improvement flow chart. The CO administrators and the elementary principal inferred that improvement efforts occur more frequently at the campus or 'micro' levels and that smaller process improvement efforts gravitated towards more time efficient and less resource demanding strategies such as 'focus group' discussions and brief, concentrated, brainstorming

sessions. In military parlance, for large process improvement efforts that impact the entire system and traverse functional, campus, and departmental boundaries, the District prefers to employ the 'big gun' of Process Improvement Teams; for smaller campus and departmental efforts, focus groups and other short-term intensive brainstorming approaches are the implements of choice.

Stories of events and people have the potential to transmit an organization's beliefs and values, and activities such as 'Culture Day', District-produced videos, the Continuous Improvement Conference, and Teacher Portfolios, serve to distribute these stories and therein promote and sustain the District's culture. Cultural idioms of support combined with the expressions associated with the Continuous Improvement Philosophy and Tools, contribute to the values, models of behavior, and technologies that characterize the culture of the District. Student-led Conferences again appears and highlights the potential for this artifact to reflect multiple Core Values, and arguably ranks with other highly referenced artifacts in supporting all of the Core Values. All of the identified artifacts/processes are consistent with Continuous Improvement and Core Value #8.

Core Value #9. Results and Resources: "Quality can be improved within existing resources"

This Core Value is based on the premise that quality can be improved without adding additional resources by improving internal processes, focusing on

customer needs, and/or by preventing quality problems from occurring in the first place. An Important tool for achieving these aims is the PDSA Cycle. The PDSA Cycle, as adapted by Deming from Shewhart, is “a flow diagram for learning, and for improvement of a product or of a process” (Deming, 1994, p. 131). According to Ann the PDSA cycle is an important aspect of program evaluation, although the ‘PDSA’ acronym is ordinarily not used in the description of the process. The process begins by asking the program leaders, “What is the purpose of the program?” whether it be bilingual education, pre-K, gifted, or any of the other programs. The next question to ask is, “What are the goals that you hope to achieve?” followed by “What are the measures that will determine whether you are reaching those goals or making progress towards those goals?” The final evaluation questions are “Are you making progress toward what you want to accomplish?” followed by “What do you recommend for improvement in the future?” In essence the evaluation phase may be summarized by asking, “Based on your purpose, your goals, and your most recent measure, what processes have to be improved if you are going to make improvement?” Program evaluations usually occur in three year cycles, as has already been discussed under Research Question #2.

Bob, Ann, and Cathy all refer to the Continuous Improvement Conference as an education and training vehicle through which employees of the District learn how to improve internal processes and focus on the needs of students. Bob remembers how student ‘story boards’ were a dominant theme for one of

the earlier Conferences. Storyboards are manifestations of the PDSA Cycle where students apply many of the Continuous Improvement tools to analyze their own goals for learning, using different tools for each of the stages of the Cycle (Appendix, C8). The concept of the Storyboards was to a large extent initialized through the Langford Training Seminars and workshops which encouraged the use of the “Probletnuity” concept derived from the idea that every problem brings opportunities for improvement (Langford, 2004, 2005). The use of storyboards is often highlighted in summer in-service training, Continuous Improvement Conference sessions, and through other training opportunities in the District including District-prepared videos, and the researcher observed the use of story boards at a Teacher Portfolio celebration, in one of the elementary classrooms, and in District-prepared videos. Some of the elementary schools emphasized the use of story boards and Continuous Improvement tools more than others, and storyboards appeared more often at the elementary school level than the secondary, which was an observation not anticipated going into the study.

Ann also mentioned the Student Profiles and Student-led Conferences as ways the District strives to meet the needs of the client/customer. Ann mentioned the ‘Plus Delta’ tool as a primary and regularly used means for embodying the Continuous Improvement concept, because it serves as an ideal mechanism for fine-tuning processes. The technique is an evaluation device that generally consists of a large “T” with a ‘plus sign’ placed above the left branch of

the “T” and a “Delta sign, Δ ” placed above the right branch. Lists are then derived below each, depicting the “things that went right” under the “+” sign, and the “things that need improvement” under the “ Δ ” sign. “The Plus Delta chart is a simple tool used to solicit feedback from individuals or groups on the strengths and weaknesses of a given situation” (Langford, 2004, p. 102). Ann also recalled the ‘Just4Kids’ website which is used for benchmarking and for improving instructional strategies, and constitutes an approach that does not necessarily obligate additional resources, and Process Improvement Teams was again noted as a primary strategy for improving processes.

Summary. Program evaluations using a 3 year PDSA cycle are commonplace in the District. The Continuous Improvement Conference is again referenced as a resource that promotes process improvement, focuses attention on customer needs, and emphasizes establishing and sustaining the quality of service deliverables. Bob nostalgically recalled the prevalence of Storyboards that were prominently showcased at earlier CI Conferences. Responses to Question #9 included references to Storyboards, Student-led Conferences, Process Improvement Teams, the Plus Delta tool, and benchmarking. All of the Artifacts/processes indicated are supportive of Continuous Improvement and Core Value #9.

Referenced Artifacts: Linkages and Patterns

While Research Questions #1 and #2 unearthed the interactive nature of the Core Values, they remain somewhat confined by the interview question. Such is not the case with artifacts. Due to the interactive nature of the artifacts across multiple Core Values, the researcher's last task was to examine the topology between the two to gain a better understanding of linkages and patterns. Table 66, represents the collection of artifacts triangulated from the respondent interviews, context inference, supplementary District materials, site observations, and/or District training events, as juxtaposed with Detert's Nine Core Values and the quality literature. The 'shaded' checkmarks represent the artifacts specifically associated by the respondents to a Core Value, while the 'plain' check marks represent artifact associations extruded from supplementary District material, site observations, training events, context inference, and/or the literature. The 'plain' checkmarks also represent a deductive exercise, appropriated by researcher to reveal the multi-dimensional aspects of the artifacts which as cultural influences are often difficult to understand and fit into a plausible context (Schein, 1992).

Artifacts/processes	CV #1	CV# 2	CV# 3	CV# 4	CV# 5	CV# 6	CV# 7	CV# 8	CV# 9
DWSBDMC	√	√	√		√	√		√	
Graduate Profile	√		√	√		√	√		√
10 Ethical Principles	√	√	√	√	√				√
Four Challenges	√		√	√					
Leander Way	√	√	√	√	√	√		√	√
LISD Learning Model	√	√	√	√	√	√	√	√	√
Employee Education	√	√	√	√	√	√	√	√	√
Culture Day	√		√	√	√	√	√	√	
Interview screening	√		√			√			
Collaboration/Teaming	√					√			√
Teacher Portfolio System	√		√	√	√		√		√
Five Whys	√					√		√	
Pilot Projects	√		√	√	√		√	√	√
Partners in Education		√		√					
Ad hoc Committees		√		√		√		√	
Surveys & Interest Inventories		√		√		√	√		
Student Profiles	√	√	√	√	√		√	√	√
Content Facilitators	√	√	√	√		√			
8 th Grade Vocational Education Orientation		√	√	√		√	√		
Articulation Agreements	√	√				√			√
Book Studies	√		√	√	√	√			
Principals Meeting	√		√			√	√		
'Random Acts of Improvement' Concept			√		√				
'Root cause' Concept			√	√	√			√	
Hot Dots			√		√	√			
Grade Level Teams			√	√	√	√			
Vertical Teaming			√	√	√	√			
CI Conference	√	√	√	√	√	√	√	√	√
Preventative Maintenance			√				√		√
Continuous Improvement Institute	√	√	√	√	√	√	√	√	√
Administrator Retreat	√			√	√	√	√		
CIC "Jeopardy" Game				√	√	√			
"Leander Way" Game				√	√	√			

Table 66 (Continued)

Artifacts/processes	CV #1	CV# 2	CV# 3	CV# 4	CV# 5	CV# 6	CV# 7	CV# 8	CV# 9
ROPES Course				√	√	√		√	
Covey's Time Management Matrix			√	√					
"Fail Forward"				√	√	√	√	√	
Systems Approach				√	√	√	√	√	
"Cross-functional" Teams					√	√	√	√	
ISED Meetings	√			√		√	√		
Mentorship Program	√			√	√	√	√		
Data Day				√	√		√		
Data Rooms				√	√		√		
Benchmarking				√			√		√
Competitive Bidding				√			√		√
Production Records				√			√		√
TAKS Learning Academy		√		√	√		√		√
Leadership Academy Retreat				√	√	√		√	
Learning Academy				√	√			√	
Process Improvement Teams (PIT)	√	√	√	√	√	√	√	√	√
Educational Improvement Teams	√	√	√	√	√	√	√	√	√
PIT Sponsor				√	√	√		√	
PIT Facilitator				√	√	√		√	
PIT Team Leader				√	√	√		√	
Determining Process Rating						√		√	
RAPID				√				√	
Institutional Stories	√		√					√	
Student-led Conferences	√	√	√	√	√	√	√	√	√
Focus Groups				√		√		√	
CI Tools				√	√		√	√	
Cultural Idioms	√		√					√	
Story Boards	√	√	√	√	√	√	√	√	√
Plus Delta				√			√		√
Just4Kids				√			√		√
PDSA Cycle			√	√	√		√	√	√
Note: √ - Respondent Referenced Artifacts	12	6	16	4	10	8	11	18	8
Note: √ - Researcher Referenced Artifacts	17	13	16	47	29	32	22	14	16
Total	29	19	32	51	39	40	33	32	24

Many of the artifacts, such as the 'District-wide Side-based Decision Making Committee' (DWSBDMC), 'Education & Training', 'Ad hoc Committees', 'Articulation Agreements', etc., are not unique to Continuous Improvement or the Leander ISD, but arguably support the goals and practices of both. Three caveats accompany the construction of the table. The researcher makes no claims that the regular, un-shaded checkmarks universally represent all possible artifact/Core Value combinations, or that the list of artifacts in the table is a complete representation of all the artifacts in the District, and acknowledges that the allocation of these checkmarks are, in practice, subject to deletion or extension depending on observer immersion in the culture, situational context, the purpose(s) served, and the knowledge-base, experiences, and perspectives of the involved practitioners. A second caveat, sometimes associated with reports of quality management practice, also suggests caution; the rhetoric from practitioners does not always correspond to actual practice (Zbaracki, 1998). A third caveat to consider is that individual artifacts do not equally impact District operations, as some are more closely attached to the underlying beliefs and taken-for-granted assumptions (Ott, 1989; Schein, 1992). Given these precautions, several plausible generalizations emerge from the table.

Eight of the artifacts, as triangulated from the aforementioned resources, link to and/or have the potential to support all Nine Core Values: The LISD Learning Model (as an ideological template for driving practice), the Continuous

Improvement Conference, Continuous Improvement Institute, Process Improvement Teams, Educational Improvement Teams, Student-led Conferences, Story Boards, and 'Employee Education'. On the surface, it appears that Core Value #4 (A school should strive to make continuous changes to improve education), was the least referenced by the respondents. However, underlying the survey descriptor for this Core Value, is the 'continuous improvement' intent (Detert et al, 2001), and under this 'expanded' scope are linkages to many incremental and breakthrough improvement strategies and efforts, and therefore achieves the highest 'Researcher Referenced' tally.

The Leander ISD Learning Model did not exist at the time of the researcher's field studies, but emerged in the interim between the field studies and the completion of Chapter IV, and is purposefully included to illustrate the efforts made by the administration to continuously refine and improve the framework guiding the District's vision and practices. In similar fashion, 'Employee Education' and training is not a conspicuous element in the survey descriptors nor was it expressly framed in any of the 24 interview questions, although the topic appears in the Core Value #5 ruminative material from the Detert et al 2001 article and serves as a contributory factor in 'determining teacher capacity' from the Detert & Pollock 2008 publication. The quality literature is very emphatic about the importance of employee education and training (Table 6, Core Concept #7) and the topic appears as a recurrent theme throughout many of the interviews, expressed as individual beliefs, as well as

through actual District training events, activities, conferences, workshops, seminars, retreats, and Book Studies, etc.

The District's emphasis on 'Employee Education' and training , appears somewhere in the collective responses and triangulation materials gathered for every Core Value, from Research Questions #1, #2, and # 4. Furthermore, 'Employee Education', as a generalized expression that encompasses all of the District's formal professional development and training efforts (Appendix, B15), was among the top respondent-referenced artifacts depicted in Table 66, as was the Continuous Improvement Conference (which is encompassed within these efforts), and the Student Profiles – each accruing four 'shaded' checkmarks across the horizontal grid.

In viewing the vertical columns of the grid, Core Value #8 (focusing on processes), garnered the highest respondent count at 18, with Core Value #3, long-term commitment, representing the second highest at 16. The surprising and relatively high count for CV #3 may be linked to the prolific number of 'Guiding Documents' that serve as frequent reminders of the long-term goals of the District, and the different mechanisms, tools, and techniques, and training efforts through which the vision goals are frequently brought into focus. Core Value #2 accumulated the fewest artifact references from the respondents, but as suggested in the analysis for Research Question #2, should not be interpreted as a lack of interest on the part of the District, as the Partners in Education Program alone, constitutes a significant outreach effort to garner

input, information, and support from 'outside' stakeholders. To repeat an earlier admonition, the artifacts alone do not indicate the extent these efforts are effective, just that they exist, possess identifiable linkages to and/or support for one or more constructs of Continuous Improvement, and have the potential to have an impact on the operations of the District. However, when artifacts are juxtaposed with the "espoused values", the "values in action", and the 'critical incidents', some sense of their intended purpose, use, and effectiveness begin to emerge.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

“It can scarcely be denied that the supreme goal of all theory is to make the irreducible basic elements as simple and as few as possible without having to surrender the adequate representation of a single datum of experience” (Einstein, 1934, p. 165).

“In the end, it is important to remember that we cannot become what we need to be by remaining what we are” (Max DePree, 1989, p. 100).

Summative Discussion of Research Design

For an organization to implement long term and effective practice, it must first have a foundation of theory from which to build knowledge (Deming, 1994). Theory is of little use if it cannot be translated into meaningful action; theory and action are mutually interdependent (Argyris & Schön, 1974; Deming, 1994; Detert, et al, 2001). Theory, evolved from the reinforcing relationships between espoused values, and confirmatory action through successful practice, establishes meaningful values and allows organizations and individuals to move from “talking the talk” to “walking the talk”. Unfortunately, scholarly research into Quality Management theory is relatively scarce and the call for QM theory development has been a recurrent theme in the management literature (Saraph, Benson, & Schroeder 1989; Anderson, Rungtusanatham, & Schroeder, 1994;

Flynn, Schroeder, and Sakakibara, 1994; Dean & Bowen, 1995; Ahire, Golhar, & Waller 1996, Black, & Porter, 1996; Leonard & McAdam, 2000). Theory development is particularly crucial to the study of Quality Management because the interdisciplinary nature of the philosophy “transcends the boundaries of existing theories” (Dean & Bowen, 1994, p. 393). And from what little research is available, there appears to be a ‘disconnect’ between Quality Management practice and theory (Sitkin, 1994; Giroux, 2006), and in many organizational settings, rhetoric about QM practice (what we say) rules over substance (what we do) (Hackman & Wageman, 1994).

The interdisciplinary nature of Quality Management invites study of the paradigm through various orientations or theoretical models, i.e., mechanistic, organismic, cultural (Spencer, 1994). For the purposes of this study, the organizational culture framework was selected as the orientation of choice because culture may be defined through the values that guide practice, and practice is manifested as phenomena that can be observed and to some extent measured.

This study examines distinctive cultural phenomena of the Quality Management philosophy, manifested as nine “Core Values” proposed by Detert, Louis, and Schroeder (2001), that are purportedly essential for successful implementation of the philosophy in a public school setting.

1. A shared vision and shared goals among faculty, staff and administrators are critical for school success.
2. Educational needs should be determined primarily by parents, community groups, students, and other stakeholders.

3. Improving education requires a long-term commitment.
4. A school should strive to make continuous changes to improve education.
5. Teachers should be active in improving the overall school operation.
6. Collaboration is necessary for an effective school.
7. Decision-making should rely on factual information.
8. Quality problems are usually caused by poor systems and processes, not by teachers (or employees).
9. Quality can be improved with the existing resources. (Detert, et al, 2001, pp. 193-201)

These value constructs represent attenuations of general Quality Management philosophy, and for the purposes of this study, are examined through the organizational levels of culture proposed by Schein (1992). According to Schein, cultural values are manifested at the multiple levels of artifacts, espoused values, and the underlying assumptions and tacit beliefs that direct the observable norms of behavior (1992). Schein's 'espoused values' and 'norms of behavior' levels are kindred offspring, respectively, to Argyris and Schön's 'espoused theories' and 'theories in use' (1974), distinguished respectively as 'what we say' versus 'what we actually do'.

As observed by Schein, the scholarly pursuit of understanding culture is neither simple nor easy.

There is no reliable, quick way to identify cultural assumptions. Sometimes such assumptions are obvious at the outset. And sometimes one must conclude that there are no shared assumptions working across the organization because of a lack of shared history. What may be very clear to insiders and satisfy their need to understand their own culture may be quite unsatisfactory from the point of view of trying to describe that culture to someone outside the organization...The only safe approach to such external deciphering is cross checking each bit of information obtained against other bits of information until a pattern finally begins to reveal itself (1992, p. 194).

The deepest levels of culture (the underlying cultural assumptions) reside as tacit or implicit guidelines that tell group members how to perceive reality and

direct their behaviors, and as such exist at the subconscious levels and are difficult, if not impossible, to access through surveys alone (Schein, 1992). The researcher considered the site conditions and accommodations provided by the District 'gatekeepers' and worked within these parameters. Given the site limitations, the researcher employed a mixed methods design and depended on triangulation between survey results, interviews, field notes, site observations, and collected artifacts to piece together the fragments or 'bits' of culture that coalesce into recognizable patterns.

The quantitative portion of the study was based on a researcher-crafted survey (Appendix A3) which borrowed value constructs from Detert et al (2001), while the qualitative portion scrutinized the same constructs through the 'Naturalistic Inquiry' paradigm. The quantitative or survey portion of the study examined two groups, a smaller sample representing the administrators of the District and a second larger randomized sample representing all other employees, for the purpose of uncovering employee perceptions of Quality Management adoption in their respective work environments based on Detert, Louis, and Schroeder's Nine Core Values (2001). The research design attached the data analysis from the quantitative portion of the study to Research Question #2. The qualitative analyses focused on purposefully selected employee interviews, and triangulated this data with relevant school documents, observations of selected school events, impromptu conversations with District officials and employees, and District-produced video and web-based material for

the purpose of uncovering consistencies, inconsistencies, and emergent patterns across all four research questions.

The principal research questions of the study serve as probes to examine the cultural absorption and utility of Detert's Nine Core Values and the Continuous Improvement variant of Quality Management, through Schein's multiple levels of culture.

Research Question #1. What are the espoused values and beliefs in the Leander ISD (TX) and to what extent are they consistent with Detert's Quality Management Core Values?

Research Question #2. How and to what extent are practices in the Leander ISD (TX), aligned with Detert's Quality Management Core values and the philosophy of Continuous Improvement?

Research Question #3. How are personal experiences in the Leander ISD (TX) reflective of or associated with, Detert's Nine Core Values and the philosophy of Continuous Improvement?

Research Question #4. How are the values, beliefs, and underlying assumptions of the Leander ISD (TX) that sustain and promote Detert's Nine Core Values and the philosophy of Continuous Improvement, manifested through material artifacts, creations, and processes?

Research Question #1 sought to reveal the 'espoused', or outwardly 'proclaimed' cultural values, while Research Question #2 focused on uncovering the norms of behavior reflected through practice. Research Question #3 attempts to illuminate how meaningfully the norms of behavior are lived out, while Research Question 4 examines the material artifacts, creations, and processes, largely from a historical context, to understand how they reflect the values, beliefs, and underlying assumptions of the culture. A philosophy with deep organizational immersion should demonstrate a cohesive and consistent set of values that are

discernable across the multiple levels of culture. If Detert's 'Nine Core Values' ostensibly reflect the value constructs of Quality Management/Continuous Improvement through the organizational culture framework, then it is reasonable to assume that their presence and utility should be confirmable across Schein's multiple levels of culture, which may lead to a better understanding of Quality Management theory.

The discussion of the findings and conclusions are examined through three subsequent chapter sections; the first examines the findings developed in Chapter IV based on the summaries by Research Question and Core Value, and the second evaluates the Core Values as constructs for the Continuous Improvement variant of Quality Management, based on holistic analyses of the first section. The third section opens queries for further research that emanate from the first two.

Section 1: Discussion of Findings, and Derivation of Conclusions by Research Question and Core Value

***Research Question 1: "What Are the Espoused Values and Beliefs in the
Leander ISD (TX) and to What Extent Are They Consistent with Detert's
Quality Management Core Values?"***

Schein, in borrowing from Deal and Kennedy's definition (2000), states that espoused values are "the articulated, publicly announced principles and

values that the group claims to be trying to achieve” (1992, p. 9). A group’s espoused values reflect the generally accepted values of the individuals within the group, however, “until the group has taken some joint actions and its members have together observed the outcome of that action, there is not as yet a shared basis for determining what is factual and real” (Schein, 1992, p. 12). This Core Value is viewed within the QM literature as important because a common culture serves as the glue that promotes integration across the organization and encourages identification and sharing of information and resources, “something that never occurs without shared values” (Tushman, & O’Reilly, 1997, p. 288). The purpose of Research Question #1 is to uncover the espoused or ‘claimed’ values, and how closely they relate to the Nine Core Values. The conclusions drawn for Research Question #1, focus particular attention on the philosophical foundations that underpin the Core Values and the manner in which they are interrelated. The findings suggest that Core Values rarely operate in isolation and are more often interrelated and mutually supportive. The research design attempts to partition culture into “levels” and “core values”. However, in the Chapter V Conclusions, it becomes necessary in many instances to assimilate information gleaned from across the findings to help explain the interactive nature and complexities involved between and within the “levels of culture” and the “Core Values”.

Core Value #1 Discussion: "A Shared Vision and Shared Goals among Faculty, Staff and Administrators are Critical for School Success."

According to Detert, Louis, and Schroeder, a shared vision and goals "requires that all staff members know and understand the organization's vision and are willing to align their behavior accordingly" (2001, p. 193). However, education is an exceedingly complex endeavor (Eisner, 1979), as educators must consider and continually balance the needs of and pressures from diverse constituencies, competing resources, governmental edicts, and global pressures while trying to learn new skills, improve practice, and create healthy learning environments. These factors generally influence a school's vision, which is subsequently energized through a corresponding collectivity of goals, usually articulated through guiding principles or 'Guiding Documents' that become the overtly expressed or espoused goals and values of the organization for directing action. When an organization's espoused values are 'put to the test', lived out, refined, and reinforced through successful practice, they become part of the collective consciousness wherein the values of the individual become aligned with those of the organization (Schein, 1992).

The summary interview findings from Chapter IV indicated that there were no significant conflicts individually expressed between the 'District', 'company' (CNS employees), and 'personal' visions. The administrators' espoused beliefs were the most consistent and coherent, while the teachers and support function

employees' responses were less specific and often fragmented, emphasizing or referencing isolated parts from the collectivity of 'Guiding Documents' that comprise the District's vision. The two most often repeated slogans among the respondents were "doing what's best for kids", and "life-long learning", but knowledge of the support goals through which the comprehensive vision is lived out, seemed more limited in both breadth and depth among the teachers and Support Function employees. Both campus administrators, and one each from the elementary teachers, secondary teachers, and SF groups, indicated that 'personal vision' was an important signification, which suggests that the concepts of 'shared vision' and 'personal vision' should not be viewed as bipolar opposites or as either/or propositions, but as distinct entities that mutually coexist. A final review of the deconstructions also suggests that the alignment of vision between the 'personal' with that of the 'organization' seems manifested more as a journey than a destination with the most experienced respondents, the veteran administrators, demonstrating the most comprehensive and consistent grasp of the District's vision.

The 'shared vision' appears more akin to quilt work with the most consistent pattern being collaboration, teamwork, or working together as a group, which is more reflective of Core Value #6. Portions of the District's vision were widespread, but the variability in the responses suggests that this Core Value, as manifested through an interrelated matrix of goals, may be difficult to achieve in a relatively large, high growth-rate district. Ann's opinion, that aside

from the vision cohesiveness among the executive administrators, the District's vision is probably unevenly realized in the organization and that not everyone could articulate the full vision with clarity, proved to be an accurate reflection, considering the deconstructions and associative analysis.

These differences of emphases regarding the District's vision, as gleaned from the interviews and supplementary material, suggest the influence of several factors: (1). the span of the District's vision and the multiple documents that strive to define it, presents a challenge to system-wide absorption and adoption, (2). the size and complexity of the District may complicate distribution efforts, and (3). the growth of the District with almost 300 new teachers every year creates a perennial dilution of the District's vision.

Core Value #1 Conclusions

Achieving espoused goal/value consistency and synchronicity among rank and file employees of a large school district can be a problematic issue. While the quality literature emphasizes the importance of an organization's members having a shared vision, the findings suggest that the extent Core Value #1 is espoused depends on several factors, i.e., the size, growth, and organizational complexity of the school system, and the complexity and scope of the goals/values that drive the organization's vision. The findings also suggest that it takes time for employees to learn the complexities of an organization's vision and associative culture, measured in years – the more complex the vision,

the more time will be required for the espoused goals and values that represent that vision to become acculturated. Furthermore, the interviews and supplementary material suggest that employee turnover and/or rapid growth can dilute the widespread dispersion and deep immersion of the organization's vision and goals across the workforce.

A school district has little or no control over size, growth, or the general services it is expected to provide. The only manageable factors are the district's goals and how the goals are directed. For this reason, schools should endeavor to continually assess the processes that support and promote the system's goals/values, directing these efforts towards improving the connectivity and relevancy between the vision goals and meaningful practice. The Leander ISD Learning Model clearly represents such an effort. However, the findings suggest the more complex the collectivity of goals that support the organization's vision, the more difficult is the task of transforming them into readily and easily apprehensible values that relate to each employee's responsibilities, strengths, and personal vision, while simultaneously serving as genuine initiators for action to meet the needs of the clients/stakeholders.

Core Value #2 Discussion: "Educational Needs Should Be Determined by Parents, Community Groups, Students, and Other Stakeholders."

This Core Value borrows ideology from the Baldrige Criteria where the QM language of 'customer driven quality' is replaced by 'learning-centered

education' (Detert et al, 2001), and focuses on the 'who' aspect in the determination of educational needs.

The deconstructions revealed a broad mixture of responses. Three of the CO administrators believed the implementation of this Core Value was a complex process, consisting of the gathering of input from all relevant stakeholders and instrumentalities, followed by the administrators integrating the input into an apprehensible whole and then making the final decisions. An underlying perception among the veteran administrators was best expressed by Ann.

I think that when people discount the information you get from parents or communities, et cetera, it's because you're asking them the wrong questions. You're asking them process questions, questions about methodology et cetera, that they really don't have the background (to answer).

So making sure that when you're trying to get feedback from all those different groups about what their needs are, you need to make sure that you're asking them the right questions to get the right information.

Asking the right questions is a strategy that undergirds the establishment of a quality focus (Scherkenbach, 1986; Hodgetts, 1996).

The general feeling from two of the elementary teachers was that decision-making is predominantly professional educator driven, but with considerable influence from state accountability expectations, student academic 'Profile' performance, and the parents, while the third teacher believed that 'needs' are determined by everybody, professional educators and parents, which she considered "a good thing". The 4th elementary teacher believed that many of the decisions, such as textbook adoptions and curricula decisions are made by

just a few people, but that “they probably take many things in consideration”. All four of the secondary teachers believed that the Superintendent, the central office administration and staff, and the campus principals consider input from teachers, parents, and other stakeholders, but ultimately make the final educational decisions. Two of the SF employees believed that teachers, parents, and administrators worked together to determine the educational needs, while the other two believed the administrators and professional educators should make such decisions.

Core Value #2 Conclusions

The espoused beliefs rendered by the respondents do not consistently align with the Core Value #2 descriptor. The majority of the respondents believed that the professional educators should make the final decisions in addressing educational needs, after integrating and considering the input and information gathered from all relevant stakeholders. Nothing in the interviews suggested the espoused values rendered by the respondents are in opposition to ‘learning-centered education’. In fact, all of the respondents voiced a sincere commitment to serving the needs of children at some point in their respective interviews. Some of the underlying concerns may revolve about issues of freedom and accountability.

If individual educators and staff are held responsible and accountable for one or more of the many charges for which schools exist, should they not have

the freedom to determine how their skills are deployed, based on data, experience, and training? For instance, all of the secondary teachers believed that parental input was welcomed – but stated or inferred such accommodation should not divert attention away from the ‘big picture’ and the District’s broad vision, nor dictate how teachers should teach. This perspective is not isolated to just the Leander ISD as Detert and Pollock reported in their 2008 study that “external customer focus received the most negative values-related comments, many of which involved intrusions by outsiders into classroom-based decision-making about content and purpose” (p. 201).

Separating the “who” from the “what” and “how” factors in the determination of educational needs may not be easily reconciled. This ‘Core Value’ failed to resonate consistently as an espoused value, possibly because the descriptor statement focuses solely on the “who” factor. Outside stakeholder involvement might be more easily reconciled and accepted among ‘internal’ stakeholders, if framed through collaboratively derived ‘partnership’ agreements or covenants that delineate the ‘rights and responsibilities’ of all stakeholder groups, taking the ‘who’, ‘what’, and ‘how’ factors of determining educational needs into consideration.

Core Value #3 Discussion: “Improving Education Requires a Long-term Commitment.”

The “long-term” commitment value is not universally endorsed by the QM literature, but does convey an emphasis on a longer time horizon which is contrary to the struggles many teachers face in keeping students engaged on a daily basis and the emphasis on short-term improvements driven by state accountability testing (Detert, et al, 2001).

The feeling from the majority of the respondents is that continuous improvement implies by its very nature a long-term commitment. Continuous improvement requires belief in and commitment to both the Guiding Documents that articulate the District’s vision and the Continuous Improvement philosophy that serves as a means to fulfill it. “Continuous Improvement”, “continually improve”, and “continuous improvement” are multiple reflections of the same general idea, with the first representing the philosophy, the second an action, and the last a product.

There were differences expressed regarding the role of short-term commitments, some believing that short-term commitments help in the reaching of long-term goals and commitments, but that it was sometimes difficult to reconcile the two working in harmony. The central office administrators were unwavering in their belief that the District’s Guiding Documents constituted the long-term commitments, and both groups of administrators emphasized the ‘commitment’ object noun of the descriptor as much as the ‘long-term’ adjective.

Long-term goals and strategies arguably have little chance of success without a deep and abiding commitment to the purpose and end-product(s) envisioned.

Several teachers believed that the spectre of state accountability testing and the pressures to 'get results quickly' overshadowed long term goals. Three of the respondents associated training and/or professional development with CV #3, as both a manifestation of long-term continuous learning commitments, and a means through which long term commitments become memorialized. This Core Value was espoused by eight of the respondents, eight believed both short and long term commitments influence improvement, and two of the SF employees believed that weekly operations planning and targeted daily strategies should be the primary mechanisms for driving improvement. However, the bulk of opinions acknowledged that long term commitments should have a role in driving educational improvement, either in the form of a contributory or controlling influence.

Core Value #3 Conclusions

This Core Value prioritizes long term commitment over high stakes accountability testing, highlighting the alleged role such testing may play in distracting schools from their core vision and associated goals. More specifically, Core Value # 3 supports the notion that schools should work to minimize or prevent situations where near-sighted strategies are frantically dispatched in the hopes of quickly breaching large performance gaps, and instead focus on the

development of carefully planned, research-based strategies that are more likely to achieve long-term, sustainable improvement gains across the entire system. One of the problems that may impact this Core Value is that it is often difficult to discern if an improvement decision is having an impact on an organization or people until years later and it not uncommon for a strategy to yield little or even a negative effect in the short term (Deming, 1994). Deming's admonition might also influence how CV #4 (a school should strive to make continuous changes to improve), CV #5 (employees should be active in improving the overall school operation), CV #7 (decisions should rely on factual information), and CV #8 (problems are caused by poor systems and processes, not by employees) are actually lived out. Organizations should give long-term goals and strategies time to work (Shin et al, 1998).

The espoused values serve as a platform from which to direct improvement action. The interviews suggest that short-term commitments share space with long-term commitments and are not likely to 'go away'. Notwithstanding the annual distractions from high stakes testing, unforeseen events and unanticipated outcomes can sometimes deflect or suspend long-term commitments, as they may temporarily require redirection of system assets for resolution. Any school choosing to embrace this Core Value should conceptualize, *a priori*, how they plan to accommodate such intrusions and interruptions without significantly compromising long-term goals and commitments. Detert, Louis, and Schroeder partially address this issue by

stating that “schools/districts should invest in learning programs and assessment systems that support and document progress on long-range goals, rather than focusing primarily on year-to-year fluctuations in standardized test scores...” (2001, p. 195).

The CO administrators referred to the ‘Guiding Documents’ and ‘continuous improvement’ in responding to this question set, which suggests that Core Value #3 (Improving education requires a long-term commitment) is closely linked to CV #1 (a shared vision is critical for school success), CV #4 (A school should strive to continually improve education), and CV #5 (employees should be active in improving the overall school operation). Detert, Louis, and Schroeder state that the Core Values are interrelated, and the findings for this Core Value seem to affirm this claim as the CVs appear to demonstrate a propensity to cluster into mutually interactive relationships.

Core Value #4 Discussion: “A School Should Strive to Continually Improve Education.”

This Core Value is a reflection of Deming’s enjoinder “to improve constantly and forever the system of production and service” (2002, p. 23). No other group in the District embraces change to the extent as that expressed by the Central Office administrators. This ebullient attitude about change does not consistently extend to the other respondents and variation exists among them,

from analytically and purposefully predisposed in the planning for it, to laissez faire acceptance, to accepting it if in manageable 'bites', to reserved caution, to preferring a predictable and consistently stable production environment. Most of the respondents expect change, but had different beliefs as to how they frame and accommodate it. Variation in the responses to change among employees of an organization is not unexpected according to organizational change and innovation diffusion scholars (Rogers, 1995) and the CO administrators' responses were philosophically coherent with Deming's view of management's role and responsibilities (2002). Differences in perspective seemed to revolve about either the pace of, or the rationale for change, with most of the respondents expressing or inferring a generally favorable opinion regarding the need to continually improve (taking all of the responses into account across all 24 interview questions). The most notable exceptions came from the CNS respondents, whose espoused values leaned more towards achieving consistency in quality and meeting daily production quotas. This finding suggests that departments which must meet daily, high-quality, production quotas such as food services, may place a higher value on maintaining a consistently high standard of deliverables rather than risk changes that promise speculative improvement, or that potentially deliver improvements in one area but at the expense of another.

Core Value #4 Conclusions

This Core Value lies at the heart of the Continuous Improvement philosophy. For an organization to continuously improve, its members must be willing to embrace and engage change and innovation. The organizational change and innovation diffusion scholars contend that variation in employee acceptance of and adaptability to change and innovation should be anticipated as organizations strive to improve product and/or service quality (Rogers, 1995). Such variation was evident in the interview participants' responses.

Organizations that aspire to achieve world-class quality need to be capable of embracing and engaging both incremental and 'breakthrough' improvement to remain competitive (Juran, 1989; Juran, 1995b; O'Reilly & Tushman, 2004). With the growth of the internet, global competition, knowledge economies, unpredictability in the marketplace, and rising customer expectations, some QM scholars and advocates argue that traditional incremental improvement strategies are not sufficient alone in addressing the pressures from rapidly changing environmental factors (Cole, 2001). Rather than pit the merits of incremental change against breakthrough change (discontinuous innovation), Cole contends the two can work in harmony (2001), which is a perspective shared by Sutcliffe, Sitkin, and Browning who contend that the two are "mutually reinforcing" and from a systems perspective are synergistic (2000, p. 326). According to Cole,

The initial challenge is to see innovation as part of the continuous improvement process and then to see whether discontinuous innovation can be infused with a continuous improvement approach...for large-scale discontinuous innovation to be successful, there has to be a great deal of continuous improvement surrounding it – before, during and after (p. 10).

Cole further elaborates on the processes required for change and innovation, incorporating the concept of “probing and learning”.

On closer examination, however, it can be seen that the probe-and-learn process does lie at the heart of continuous innovation. In fact, it captures the essence of continuous improvement. Probe and learn is based on a series of continuous small gradual steps. If well done, it is experimental in the best sense of embodying fact-based management. Probe and learn is focused on process not results, like all continuous improvement activities...Probe and learn—more accurately put probe, test, evaluate, and learn (and refine)—is essentially an accelerated plan-do-check-act (PDCA) cycle, just as is Ford’s Rapids Program. Probe and learn can be seen as a new form of PDCA suitable for dynamic environments. Unlike conventional PDCA, the probe-and-learn process underweights (sic) ‘Plan’, and overweights (sic) ‘Do’...probe and learn is about organizational renewal and thus totally consistent with the ultimate objective of continuous improvement (2001, pp. 15, 16).

The “probe and learn” approach is in effect intentional and controlled exploration through ‘trial and error’, wherein employees learn from their failures through their own action research with client stakeholders. According to Cole, “This implies a distinction between desirable error from which lessons can be learned (which should be encouraged) and unnecessary error which does not lead to learning and should be prevented” (2001, p. 13). This approach is strongly reminiscent of and relates closely to the “fail forward” expression revealed in the Research Questions # 2 and #4 findings for Core Value #5 (Employees should be active in improving the overall school operation).

The notions of ‘continuous improvement’ and ‘continuous innovation’ fit appropriately with Juran’s ‘incremental improvement idea, while ‘discontinuous

innovation' is more descriptive of his 'breakthrough improvement' concept. The Quality Management Philosophy supports both forms of change. Organizations that embrace change and innovation, that relentlessly pursue continuous improvement of system processes and are flexible and adaptable to changing environmental factors, and that promote and sustain an involved and participatory workforce, have the best chance of success (MacDonald & Piggot, 1993; Dean & Bowen, 1994; Sitkin, et al, 1994; Baldrige Foundation, 2008).

The attitudes and personal experiences of the employees and stakeholders within an organization contribute significantly to how change and innovation are received and adopted. Rogers suggests that employees may be divided into 'adopter' categories and attached research-based distribution percentages to each, which include the venturesome "Innovators" (2.5%), the respected by peers "Early Adopters" (13.5%), the deliberative "Early Majority" (34%), the skeptical "Late Majority" (34%), and the more isolated traditionalists or "Laggards" (16%) (1995, p. 262). Rogers clarifies the coinage of the "Laggards" expression by stating, "But it is a mistake to imply that laggards are somehow at fault for being late to adopt. System-blame may more accurately describe the reality of the 'laggards' situation" (1995, p. 266). If, as Rogers suggests, Laggards "must be certain that a new idea will not fail before they can adopt" (1995, p. 262), then alleviating fear of failure would arguably constitute a high-priority strategy for improving employee attitudes about change and

innovation, particularly when considering that the skeptical 'late majority' and 'isolated traditionalists' potentially constitute half of the work force.

In comparing the QM Core Concepts, the Leander Way, and Detert's Nine Core Values (as depicted from the Chapter IV findings in Figure 13), none outwardly express Deming's enjoinder calling for organizations to "Drive out fear" (2002, p. 23). However, the Leander ISD focuses indirectly on this idea through the "Build Trust" and "Build Relationships" goals of the Leander Way (Guiding Document), which are based on the assumption that building relationships of trust helps to moderate fear of failing. Core Value # 4 (A school should strive to make continuous changes to improve education) arguably rests to a large extent, on the elimination of fear, which can be achieved through the building of relationships of trust.

Metaphorically speaking, the researcher's task was much akin to that of a detective tracking a fugitive through a forest. Following clues left from a broken twig, an abandoned but still smoldering camp fire, a meandering trail of footprints, led the researcher down a somewhat unanticipated path. Emergent clues from the literature and the interviews led the researcher from the topic of 'change' to 'continuous improvement' and 'breakthrough improvement', then to 'continuous innovation and innovation diffusion' on to Deming's admonition calling for organizations to drive out fear, and finally to the 'Leander Way' goals of 'Build Relationships' and 'Build Trust'. How these two goals relate to practice

is further explicated in the Research Question #2 and #4 discussions and conclusions.

Core Value #5 Discussion: “Teachers (Employees) Should Be Active in Improving the Overall School Operation.”

This Core Value seems hampered to some extent by the imprecise nature of how “active”, “overall” and “school operation” are interpreted. There is considerable variation in the quality literature as to how ‘being active’ or ‘involvement’ is defined. It can be as little as ‘having input’ to as much as feeling the ‘freedom to take risks’ to make changes (Detert, et al, 2001). According to Detert et al, training and education can also empower people, giving them the knowledge to experiment, engage action, and take risks (2001). However, it should be noted that the descriptor verbiage chosen by Detert, Louis, and Schroeder for CV #5 (2001, p. 196), does not match the full range of meanings they purport to be associated with this Core Value.

The first question segment for Core Value # 5 was phrased to focus on the respondents’ perceptions regarding their impact at the District level, the second at the more localized level which for teachers was further refined to address educational decision-making. The CO administrators all believed they had decision-making roles in improving education at the District-wide level, and the veteran principal believed her influence extended to other campuses, which were anticipated responses considering their respective roles and

responsibilities. With the exception of one of the elementary teachers who believed her Continuous Improvement Conference presentation had a pedagogical impact in a specific content area for teachers across the District, most of the other respondents thought that they had little impact in influencing the overall operations at the District level. However, all but one of the 18 respondents believed that they had significant roles in influencing the operations in their classes, grade level teams, or department, the one exception believing that she had a role but that it was limited by operational guidelines and manpower.

Core Value #5 Conclusions

As previously discussed in the conclusion segment for Core Value #3 regarding long-term commitments, it is sometimes difficult to discern if an improvement decision or strategy is having an impact on an organization or its people until years later, and it not uncommon for a strategy to yield little or even a negative effect in the short term (Deming, 1994). This may conceivably create a situation where employees are left wondering how effective their input and contributions are between evaluation intervals and mistakenly dismiss their input in the decision-making process as ineffectual and consequently of little value. Schools should therefore, develop strategies to recognize and value employee input, and to encourage risk taking, even when the results generated from such input may not always generate immediate and measureable positive outcomes.

As indicated by Beth, these tasks fall largely on the shoulders of campus administration.

Another problem emerges with regard to how “overall school operation” is defined, and the descriptor verbiage does not conspicuously reflect a possible underlying connection to employee training and professional development. Employee development and training appears throughout many of the educator responses across virtually all the Core Values, which suggests that the training and professional development component serves a paramount role in the support of Continuous Improvement and organizational learning, and should be considered as a separate “Core Value”.

This Core Value appears consistent for more localized decision-making, with the opinion among non-administrative respondents that employee influence and impact on decision-making generally diminishes the further removed from localized settings. This finding bolsters the notion that employee decision-making involvement is more likely to become realized and functionally effective at the smaller divisional levels within the organization, i.e. campus, department, grade-level teams.

Core Value #6 Discussion:” Collaboration Is Necessary for an Effective School.”

According to Detert et al, Core Value #6 “explicitly focuses on the importance of interdependency for achieving maximum effectiveness” and centers “on the belief that collaboration leads to better decisions, higher quality,

and higher morale” (2001, p. 197). The executive administrators indicated that they wanted to see collaboration employed in the proper context, not as a buzzword, flavor of the month, or to the exclusion of hearing diverse opinions, and that achieving the level of collaboration, co-operation, and teamwork indicative of true learning communities requires an intentional effort to build an environment of trust. Collaboration and/or ‘teamwork’ appears consistently espoused among all of the interviewed respondents, although there was a general trend to associate collaboration more with peers among the teachers and the SF employees.

Core Value #6 Conclusions

The findings for Research Question #1, Core Value #1 (shared vision), revealed a strong connection to Core Value #6 (Collaboration is necessary for an effective school), which highlights yet another example of how the Core Values are often interrelated and mutually reinforcing. The interviews suggest that ‘collaboration and teamwork’ serves as a strongly espoused value for transmitting the shared goals and values of the organization and that a symbiotic relationship exists between these two Core Values. Furthermore, the central office administrators believe this Core Value to be the most critical component of the Continuous Improvement philosophy, best realized in environments and work relationships of trust. While the ‘building relationships of trust’ component of the Leander Way and the kindred ‘drive out fear’ principle from Deming are

not represented in the Core Value descriptors, they do arguably reside as catalysts for the successful acculturation of this Core Value.

Core Value #7 Discussion: "Decision-making Should Rely on Factual Information."

This Core Value originates from the 'management by fact' concept emphasized in the Quality Management literature (Detert et al, 2001). The initial interview deconstructions, indicated nine respondents believe data should drive decision-making, eight believe decision-making should be based on both data and personal/professional experience, and one believed personal experience should be the dominant driving force. This Core Value appears to cluster more strongly with those teachers who are in close proximity with and who must prepare for grade level or content area TAKS testing. Given the nature of the interview questions emphasizing the comparison of "fact-based" decision making with making decisions based on experience, the espoused values were not aligned consistently with Core Value #7 either across or within all groups. This variance in response represents yet another of the Core Values that is difficult to express as an either/or proposition as almost half of the respondents believe personal/professional experience should also guide decision-making.

Core Value #7 Conclusions

The across and within group variations of opinions regarding the basis for decision-making do not negate the finding that nine of the respondents believed that facts and data should drive decision-making, and another eight believed that while facts and data should be taken into consideration, experience should also guide and meaningfully contribute to decision-making processes. The central issue surrounding this Core Value is not so much about the conflict between 'fact-based' versus 'experience-driven' decision-making, but the extent the former becomes acculturated into and commiserate with the latter. This Core Value was most strongly espoused among the teacher groups, particularly those teachers who reside within or in close proximity to high stakes accountability testing.

Core Value #8 Discussion: "Quality Problems Are Caused by Poor Systems and Processes, Not By Employees."

This quality value "represents the belief that people want to do a good job, but are often thwarted by the system in which they work...poor systems can lead to erroneous or incomplete information upon which to act" (Detert et al, 2001, p. 200). Fifteen of the respondents believe that the District leans more heavily towards focusing on processes. However one each from the secondary teacher and Support Function groups believe the focus is or should be on people, while another of the SF employees believed the emphasis between the

two is about equal. Most of the respondents were in agreement with this Core Value (15 of 18).

Core Value #8 Conclusions

The researcher identified from the quality literature, the preeminent quality gurus, and quality management award-certification organizations, “Nine Core Concepts” which include “an emphasis on establishing and maintaining a systems perspective” (Table 6, Core Concept #8). Detert, Louis, and Schroeder take this idea in a somewhat different direction, purposefully shifting the ‘cause(s) of failure’ away from the employees and towards ‘the system’ and systems’ processes. This Core Value ostensibly borrows the “Drive out fear” principle from Deming (2002, p. 23, Detert et al, 2001) and spotlights whether or not an educational system preemptively blames employees when things go wrong, or looks first at trying to identify and correct underlying system or process failures. Fear of failure and incrimination can paralyze employee action, rendering change and improvement difficult or impossible. Core Value #8 is yet another of the CVs that demonstrates a strong association with Deming’s “Drive out fear” principle.

Core Value #9 Discussion: “Quality can be improved within existing resources”

According to Detert, Louis, and Schroeder, this Core Value is based on the following, general QM value:

...improving internal process, focusing on customer's needs, and preventing quality problems in the first place, can achieve improvements...design quality and prevention leads to better products or services...preventing student failure is less costly (in terms of time, money, and negative effects for student development) than detecting and "fixing" failure late in the educational process...This quality value is related to the idea of the fundamental importance of organizational attitudes about stability versus changing/learning/innovating (Detert et al, 2001, p. 201).

This Core Value is fundamentally linked to CV#4 (A school should strive to make continuous changes to improve education).

None of the CO administrators believed system processes were fully optimized and if they ever were, it was for only a fleeting moment. However, all of the administrators and teachers believed that many different kinds of efforts are made to get the most value from dollars spent. One of the Support Function employees leaned towards first optimizing processes, another believed future improvements might possibly require more resources, while the other two believed that all that could be done to improve processes had already been tried, and that it was time to allocate more funding and resources to their department. The administrators and teachers believe in optimizing processes before 'throwing money at a problem', and believe the District makes a concerted effort to this end. However, the suggestion was made that more resources were needed for the 'at-risk' campuses. Three of the Support Function employees believed they either needed more resources now or would need them soon. This Core Value is generally espoused by the administrators and

teachers, with the SF Employees leaning somewhat towards a preference for 'needing more resources'.

Core Value #9 Conclusions

None of the CO administrators believed system processes were optimized and if they ever were, it was for only a fleeting moment. However, all of the administrators and teachers believed that many different kinds of efforts were made to get the most value from dollars spent. However, the SF employees (three out of the four respondents) revealed beliefs that correlated improvement with the availability of resources. It appears that departments that are evaluated daily on the quality of material goods and services are more prone to associate improvement with the availability of resources. Reconciling the different work orientations that exist between departments and/or job functions may be one of the most challenging aspects of system-wide Quality Management implementation (Kekäle & Kekäle, 1995; Kekäle et al, 2004).

Research Question #2. "How and to what Extent Are Practices in the Leander ISD (TX), Aligned with Detert's Quality Management Core Values and the Philosophy of Continuous Improvement?"

Practices are generally classified as cultural artifacts (Detert et al, 2001), but the researcher chose to view 'practice' separate from other material artifacts

and creations, because organizational practices are generally manifested as purposeful actions or processes that conceptually mesh with the 'Systems Perspective' of Quality Management (Table 6, Core Concept # 6). Furthermore, many scholars and practitioners classify Quality Management as a paradigm (Amsden, et al, 1996; Foster, 2001; Berman, 2006), and Kuhn aggressively linked the 'paradigm' concept to practice (1970).

Research Question #2 examines what the people in the District actually do, as reflected through the employees' decisions, actions, and modes of observable conduct, which may provide some sense of the values, norms of behavior, beliefs and underlying assumptions, cognitions, and tacit knowledge that collectively serve as the 'social glue' that binds an organization together (Rokeach, 1973; Smircich, 1983; Schein, 1992). Values become validated through repeated, successful, practices which are then transformed into the underlying beliefs and assumptions. Values that become embodied in the organization's philosophy, particularly if they are based on prior learning, guide the routine norms of behavior as well as serving as "a way of dealing with the uncertainty of intrinsically uncontrollable or difficult events" (Schein, 1992, p. 20). 'Practices' and 'norms of behavior' are closely linked as the former are routinely chosen or ignored based on the latter (March & Olsen, 1989). In effect, internalized values and underlying assumptions guide the norms of behavior which in turn, guide the practices. Thus, the researcher based Research Question #2 on the inference that repeated forms of practice represent norms of

behavior, which in turn reflect group values and underlying cultural assumptions. In terms of the purpose of the study, Research Question #2 does the heaviest lifting because it engages both quantitative and qualitative analyses, and serves as a an intersect for the espoused values, critical incidents, and material creations and artifacts.

Core Value #1 Discussion: "A shared Vision and Shared Goals among Faculty, Staff and Administrators are Critical for School Success."

The survey data revealed that the lowest mean score for CV # 1 came from the administrators of the District and the highest from the Support Function employees (Table 14). However, in comparing the means of the all the Core Values within the Support Function employee group, CV #1 produced the lowest mean (Table 25). It is conceivable that having a common goal or mission where employees are held accountable everyday for service deliverables, may explain this group's respective affinity for this construct. The Mode for all groups was a "2" which suggests an organization that leans substantially towards CV #1. District experience appears to be a factor, with those employees with "8 or more years" recording the most favorable CI observations among the experience groups. There was no statistically significant variation of the means between any of the analyzed groups and the average means for all groups fell between the 'significantly embraces' to 'somewhat embraces' categories on the Likert scale. However, the survey was not designed to address the different 'Guiding

Documents' and associative goals or the extent these vision documents and goals were absorbed into the culture. The interviews, site observations, and District documents provided information and triangulation material that was not as constrained in scope and allowed the researcher to investigate the vision documents and their assimilation into the culture at a deeper level.

At the time of the researcher's field studies, four 'Guiding Documents' served as the guideposts through which the District's vision was expressed: The Graduate Profile, The Ten Ethical Principles, The Leander Way, and The Four Challenges. The Graduate Profile appeared most often in publicized material, followed closely by the Ten Ethical Principles. Some of the teacher respondents emphasized the Four Challenges, with the Leander Way appearing when learning environment and organizational philosophy entered into the interview conversations. Cathy stated later in the interview that the Guiding Documents "all fit together" and are 'interrelated', but the supplementary material collected suggest that they did not individually receive 'equal billing' or exposure through the multiple forms of communication used by the District to distribute them, and the teachers and professional administrators clearly had more exposure to the Four Challenges and the Leander Way.

Gwen and Mike mentioned that the District or campus administrators may emphasize a particular goal from the Guiding Documents during an academic year. Learning all the goals associated with the Guiding Documents can be a daunting task, and according to Rita, acronyms are sometimes used to help new

teachers negotiate the task. Cathy, Beth, and Gwen point to Bob's leadership as a contributing factor and catalyst in the continued promotion of and support for the District's vision.

Of the four Guiding Documents, the Ten Ethical Principles appeared to be more easily and frequently recalled by the elementary teachers and SF employees. The Ten Ethical Principles promote the goals of honesty, integrity, promise-keeping, loyalty, concern for others, law-abidance/civic duty, respect for others, fairness, pursuit of excellence and accountability (Appendix, B2), and collectively guide how the 'Build Relationships' principle of the Leander Way should be lived out. The elementary teachers' responses are consistent with the emotional geography ascribed to this group by Hargreaves, which is characterized by physical and professional closeness, and greater emotional intensity (2000, p. 811) – attributes that could conceivably draw from and fit amenably with the goals of the Ten Ethical Principles. Moreover, these Principles originated from the field of 'character education and development'; they are more universally recognized regardless of an organization's underlying management philosophy, and do not require specialized or technical training in Quality Management or Continuous Improvement to be understood, which may explain the greater affinity to this Guiding Document among the SF respondents.

Subsequent to the researcher's field studies, the District combined the Guiding Documents with sound pedagogical research and practice, brain theory, TEKS learning objectives, and elements of continuous improvement to generate

the 'Leander ISD Learning Model' which was initially prepared for the 2007/2008 school year (Appendix, B8) and revised for the 2008/2009 school year (Appendix B9). At the central core of the Leander ISD Learning Model is the "Focus on Student Learning" which is consistent with the Central Office administrators' espoused beliefs revealed in Research Question #1. The District's July, 2009, web-site iteration of the Guiding Documents (<http://www.leanderisd.org/default.aspx?name=disrict.home>), omits the 'Four Challenges' listing the Graduate Profile, the Ten Ethical Principles, and the LISD Learning Model as the Guiding Documents, but the 'Four Challenges' continues to occupy a position of prominence in the outer concentric ring of the 'Model' along with the Graduate Profile, the Ten Ethical Principles, and the Leander Way (Appendix, B9).

The Continuous Improvement concept that materializes most often from the interview responses to Core Value #1 questions is that of collaboration and teaming which is more reflective of Core Value #6 (Collaboration is necessary for an effective school). All of the teachers interviewed were involved, at least to some extent, with one or more of the following: grade level, vertical, content, department, and/or program area team-planning. Sharing or working in teams was viewed as enjoyable and beneficial by every teacher interviewed. In many instances, the teachers associated 'sharing of vision' with the 'sharing of strategies' used to achieve the vision. The 'sharing and collaboration' theme was generally widespread in the comments rendered by both administrators and teachers as a means through which the vision goals are realized.

A shared vision is often associated with and promulgated through collaboration and teaming. It is not uncommon for the elementary grade level teachers to engage in teaming activities on a weekly basis; the elementary vertical teams and secondary vocational departments meet less often, typically once or twice, or three or more times a year respectively. Frequency of teaming at the secondary level appears higher in TAKS tested content areas and for labs-based coursework where teachers have to plan and coordinate lab use. The Support Function Employees may meet and plan together as often as daily, once a month, or once every three or four months, depending on the department and the nature of the service deliverables. Food service employees are cloistered together as a campus unit, while the plant maintenance and operations employees are more widely dispersed, some assigned by campus, others working in special function teams, and some working across the District darting between emergencies and repair work or temporary assignments. Sharing and collaboration among the Support Function respondents appear to be highly dependent on individual site conditions and the extent personnel is concentrated or diffused in the delivery of services.

Employee education, training, and learning, depicted as Core Concept #7 in Table 6 also emerges as a major focus, represented as an underlying concept for Core Value #5 (Teachers (employees) should be active in improving the overall school operation). The responses to this question were difficult to compartmentalize or restrict to a single Core Value, as the 'sharing of vision' is

achieved through implementation of other Core Values, e.g., CV #2 (determination of needs by the customer/client stakeholders), CV #5 (employee involvement in improving the system), and CV # 6 (collaboration).

Core Value #1 Conclusions

Core Value #1 is not easily approachable from a simplistic either/or stance, between 'shared' and 'personal' vision, and several of the interviews suggest that both are realized significations that ideally should be brought into alignment if not harmony with the former guiding the latter. Alignment between the District's shared and personal visions appears to be most pronounced among the experienced CO administrators and the principal, followed in order by the assistant principal, the elementary teachers, the secondary teachers, and the SF employees, results that are consistent with the descriptive statistics posted in Table 14.

With regard to Core Value # 1, the 'values in action' and practices uncovered from Research Question #2 do not substantially alter the conclusions drawn from Research Question #1, but the reasons why there are inconsistencies in the responses begin to emerge more clearly. This Core Value does not appear to be consistently realized across the demographic profiles because (1). The Guiding Documents were not equally distributed up to and including the time of the researcher's field work, (2). The goals for all the Guiding Documents constitute a complex mélange of ideas that may be difficult to

coalesce into an apprehensible whole, particularly for new and Support Function employees, (3). The emphasis among the plethora of vision goals may change from one year to the next at the District and/or campus/department levels, and (4). The training to reinforce the vision among employees was continually being challenged by the District's growth and the associative infusion of new employees.

In summary, the quantitative and qualitative analyses for this Core Value suggest the following:

1. The more complex the assemblage of vision goals, the more difficult the task of infusing them consistently throughout the workforce.
2. More complex assemblages of vision goals require a longer time frame for assimilation and employee acculturation.
3. The larger the organization, the more difficult the task of infusing system-wide vision goals among rank and file employees.
4. Schools experiencing rapid growth can expect greater difficulty in achieving a shared vision throughout the workforce.
5. Inconsistencies in the delivery mechanisms and/or frequent changing of emphasis of individual vision goals may create accompanying 'hotspots' among and between workgroups, where some goals are preferred or apprehended over others.
6. Different work orientations may align with or more easily accommodate some Core Values and goals over others.

Core Value #2 Discussion: "Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders."

The administrators and employees with "8 or more years" of District experience scored slightly below the "Somewhat embraces the Continuous Improvement Values" point on the Likert scale, while the remaining profiles

scored slightly above. With the exception of the Support Function Employees, all demographic profiles demonstrated the weakest vector for Core Value #2.

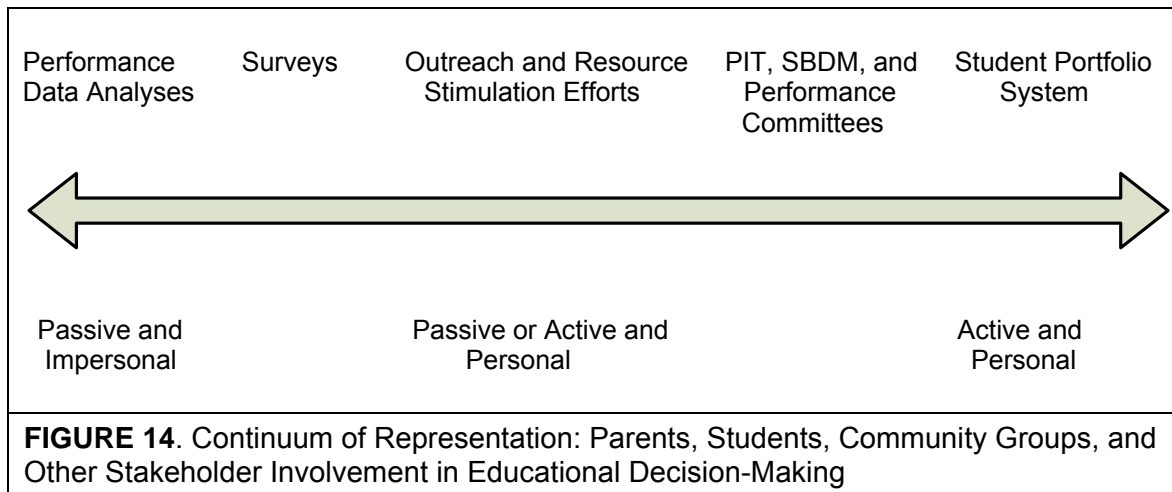
There was no statistically significant variation between the demographic profiles for this Core Value. Overall, the survey participants demonstrated a 'lukewarm' response to this Core Value, with all the group profiles recording means that grouped around the "Somewhat embraces" point on the Likert scale. The disparity between the qualitative and quantitative analyses for Research Question #2, may originate from a coordination failure between the survey descriptor verbiage and the range of manifestations ascribed to this Core Value by Detert and other QM scholars.

The interviews suggest that the descriptor statement used to frame Core Value #2 appears 'on the surface' to be consistent with joint teacher/parent/student interventions, but inconsistent for District-wide decision-making, because the Board and administrators are often viewed as dutifully tasked with this responsibility. The results from the descriptive and inferential statistical analyses appear to be more a reflection of the latter. However, from the site observations, interviews, impromptu conversations, statutory documents, District documents, the Continuous Improvement Conferences, and LISD web material, the researcher uncovered a multitude of ways the District solicits and/or extracts stakeholder input in the interest of determining educational needs: Site Based Planning Committees (SBPC), Site Based Decision Making (SBDM) Committees, various performing committees such as

the Re-zoning and Health committees, Parent Teacher Association, Partners in Education (PIE), Student-led Conferences, local civic clubs, social contracts between teachers and students, various process and educational improvement teams, student performance results, and student (Appendix, B10, B11), teacher (Appendix, B12) , and parent surveys.

Core Value #2 Conclusions

The extent that external Leander ISD clients and stakeholders have input into organizational decision-making conceptually varies along a continuum of practices ranging from ‘input only’ strategies to ‘genuine partnerships’, from passive stakeholder representation expressed through performance results and surveys, to more active, face-to-face, forms of participation at both the micro and macro levels of the District (Figure 14). According to the veteran administrators, student Profile performance data represents one of the ways through which the “voice of the student” is heard. Next along the continuum, are the student (Appendix, B10 & B11), teacher (Appendix, B12), and parent surveys (<http://www.leanderisd.org/docs/4-07%20Harris%20Report.pdf>). The LISD is philosophically predisposed to extracting as much information as possible on client needs through performance data and surveys, which as a system-wide approbation links Core Value #2 with CV# 7(Decision-making should rely on factual information).



Next along the continuum lie purposefully designed ‘outreach’ programs where outside clients/stakeholders are afforded opportunities to learn more about school leadership and operations (Leadership Leander ISD, Principal for a Day), become involved with creating or participating in foundations and/or school support organizations that provide resources for students and teachers (Community Partners, The Leander Educational Excellence Foundation, Career Development Programs, Educational Support and In-Kind Services), and participate in various campus volunteer efforts, all of which are promoted through the Partnerships in Education (PIE) program. These ‘outreach’ efforts have the potential to provide various avenues of involvement and stimulate dialogue, discussion, and relationship building while serving as beneficial information conduits for both inside and outside stakeholders.

Moving further along the continuum and in keeping with the core intent of the descriptor statement, are the process and educational improvement teams,

Site Based Planning Committees, performance committees, the state mandated Site Based Decision-making Committees, and the Student Portfolio System, which collectively represent more intensive ‘face-to-face’ efforts to involve “parents, community groups, students, and other stakeholders” in decision-making. At the macro level, many of the District-wide Process Improvement teams and Site Based Decision-making committees provide opportunities for both internal and external stakeholders to have input into important educational decisions. At the micro level, the practice of conducting Student Portfolio conferences provide opportunities for direct and cooperative decision-making between teachers, and their students and parents. These practices also gain support from Core Values #1 (shared vision), #4 (continuous improvement), #5 (employee involvement in improving the school), #6 (collaboration), and #7 (fact-based decision-making). The Process Improvement Teams and Student Portfolio efforts are particularly effective, because all involved stakeholders know from the outset what their ‘rights and responsibilities’ are in the improvement process – the ‘who’, ‘what’, and ‘how’ factors are clearly established at the beginning and reinforced throughout the endeavor.

The results from the surveys and interviews failed to provide a complete picture of stakeholder involvement in the decision-making processes of the District, because of several factors.

1. The survey was not specific enough, particularly in addressing the many forms of practice that existed for this Core Value.
2. Surveys represent reflections of opinion and generally lack checks as to whether the respondents are telling the truth (Cohen, et al, 2000).

3. The respondent rhetoric provided in the interviews may not correspond to actual practice (Zbaracki, 1998).
4. Tacit assumptions are difficult to uncover because they lie at the unconscious level, and are often manifested in behaviors that occur without thought (Robinson, as referenced in Anonymous, 1974; Schein, 1992).

As stated by Schein, “The only safe approach” to deciphering culture “is by cross checking each bit of information against other bits of information until a pattern finally begins to reveal itself” (1992, p. 194). The collected bits and pieces of information generated through the researcher’s triangulation efforts revealed more involvement in/with this Core Value than indicated through either the survey or interview results. The combined triangulation efforts suggest that the core construct of hearing and acting on the needs of ‘inside’ and ‘outside’ stakeholders, resides at multiple levels in the District through many forms and practices, and is generally consistent with the intent behind Core Concept #1 (Table 6) and a broader interpretation of Detert’s Core Value #2.

The observations for this Core Value, introduces the notion that it is possible for one CV to overshadow another. For instance, if a school were to focus too much attention on ‘data analyses’ and ‘surveys’ such that the “active and personal” involvement is ignored or relegated to a lesser status, then an imbalance would be created between two of the Core Values, i.e. Core Value #2 (Educational needs should be determined primarily by parents, community groups, students, and other stakeholders) and Core Value #7 (Decision-making should rely on factual information). In the researcher’s opinion, the LISD achieved a commendable balance between Core Values #2 and # 7. Schools

should be wary of overemphasizing one Core Value to the detriment of another and strive to create an organizational environment where Core Values are mutually inclusive and reinforcing.

Core Value #3 Discussion: "Improving Education Requires a Long-term Commitment."

The trend of the administrators having the lowest mean score and the SF employees the highest continues with this Core Value. Another trend emerging is the strong CI vectors of the "8 or more years" profile compared to the other 'experience' groups, with the unanticipated 'out of order' results of the "3-7 years" group which recorded a weaker CI vector than the "0-2 years" group. The inferential statistics indicate a statistically significant variation between the Instructional and Support function employees of the Randomized General List (RGL) for this construct. All the demographic profiles scored between "significantly embraces the CI value" to "somewhat embraces the CI value", with the exception of the SF employees who scored midway between "somewhat embraces" and the midpoint or neutral position on the Likert scale (Figure 5).

The administrator respondents recognize that short term commitments do periodically influence District operations but make efforts to achieve a balance with long term commitments or to accommodate them in such a way as to not derail the long term commitments. According to Ann, the "Four Challenges" were designed to refocus on particular long term commitments. Bob asserted,

“Politically I will pick and choose which of those special things that we have to deal with. Some of them I will pay lip service to and then let go, because it’s not in the long-term improvement (interests) of the District, the thing we need to be focusing on”. Ann confirmed Bob’s assertion in her responses to Research Question 2, Core Value #7, complimenting his intuitive ability to sense political tensions surrounding an issue and then leveraging resources and directing efforts to navigate through and around the political pressures without veering ‘off course’ from the District’s vision and long-term commitments.

Core Value # 3 has traction among the administrators considering the conscious effort they exert in trying to maintain focus on the Guiding documents, and even more so if the TEKS learning objectives are included as long term goals. The TAKS tests are measures of mastery of TEKS learning objectives which, in turn, are based on generally accepted curriculum standards that highlight specific knowledge and skills (<http://ritter.tea.state.tx.us/curriculum/>). Because of the state’s emphasis on ‘accountability’, the administrator respondents prefer to focus more on the merits of the TEKS learning objectives, a strategy designed to assuage and redirect the apprehension and tension that often accompanies the TAKS tests.

Ann, Paul, and Beth mentioned the battle that often rages in trying to balance Covey’s “prevention” Quadrant II strategies against emergent crises and emergencies that trigger a Quadrant I mindset. One of Beth’s concerns is that if people do not give a strategy time to work, they will often venture off into

“random acts of improvement” that fail to address the “root cause” of a problem. The application of “quick fix” schemes in isolation from long-term and consensually developed strategies may yield sporadic short-term improvement, but often fail to address the core issues or problems that impede sustainable, system-wide improvement. From Beth’s observations, balancing long and short term commitments is a significant and continual challenge for both teachers and administrators. The administrators’ use of Covey’s Time Management Matrix, suggest that Book studies sometimes venture into the realm of personal improvement in such a way as to expand one’s management perspective, and the multi-disciplinary nature of QM/CI invites such accommodation.

The interviews revealed that the Guiding Documents are generally recognized as the long term commitments, but a variety of short-term pressures compete for educator attention. The pressures from high-stakes accountability testing which emanate from the TAKS and the NCLB and the means through which these pressures are addressed, appeared to be problematic for some of the teachers. The combined pressures to ‘get results quickly’ and the ‘rush’ to adopt or change strategies without assessing long-term effectiveness of existing approaches, and the changing emphasis of goals from one year to the next along with preparations for the Teacher Portfolio, collectively represent ‘short-term’ and at times bothersome distractions several of the teachers identified as diverting their attention away from the long-term commitments and goals.

Variation in several of the teacher responses also suggests that not all campuses focus equally or as effectively on long term commitments. However, the majority of the educator respondents observe long-term commitments generally prevailing over short-term commitments (9 out of 14), and the importance of long-term commitments seems to be conceptualized among the administrators and the teacher respondents as a core tenet of continuous improvement and how their work should be directed in the District. Virtually every process or educational improvement team effort at the District level, as well as the various SBDM committees, tackle problems and issues with one or more goals of the Guiding Documents serving as a compass for steering action. Both the quantitative and qualitative portions of the study suggest that the Support Function employees are influenced more by daily pressures and short-term commitments.

Core Value #3 Conclusions

High-stakes accountability testing created apprehension and consternation within the District as revealed in Champion's study (2007), and as also revealed through Ann's, Beth's, Paul's, and several of the teachers' interviews in this study. As noted by Champion, while high-stakes accountability testing improves curricular focus, it correspondingly instills fear, invokes frustration, and inhibits freedom (2007). Apprehension and fear generated from high stakes testing tempts teachers and staff to focus more on short-term gains

using quick-result schemes rather than risk longer term strategies that offer greater potential – a mindset that arguably borrows from the ‘a bird in the hand is worth two in the bush’ mentality. Waiting for long-term strategies to ‘bake’ often induces rising apprehensions that invite corresponding frustrations. Deming’s enjoinder to “Drive out fear” (2002, p. 23), represents a core strategy for providing employees the freedom to venture forward and take calculated risks while maintaining a focus on the District’s long term vision. Figuratively speaking, in the race across the open and often treacherous terrain of modern day education, there are many paths to the finish line, but the victor is often determined by the runner who is the best conditioned and runs the ‘smartest race’, maintaining a vigilant awareness of approaching obstacles and then applying the knowledge, skills, and timing necessary to best maneuver through the course. However, ‘running a smart race’ is often difficult given the obstacles of high-stakes accountability testing, as highlighted through the apprehensions and concerns expressed by several of the teachers who must annually grapple with the dilemma.

The ‘Leander Way’ is an important Guiding Document that highlights eight goals, two of which indirectly address the impediments of fear and apprehension. The “Build Relationships” and “Build Trust” principles arguably set the stage for the establishment of trusting relationships which in turn provide the footing to take risks. These two Leander Way goals partially represent several of the Win/Win dimensions suggested in Covey’s *The 7 Habits of Highly Effective*

People (1989), and are based on the notion that employees are much more likely to take risks and make decisions to change or continuously improve when they work in an environment of trust, energized through the establishment of an “Emotional Bank Account” with fellow employees from which they have the freedom to make ‘withdrawals’ (1989, p. 221). According to Covey, “without trust, we lack the credibility for open, mutual leaning and communication and real creativity” (Covey, 1989, p. 221) which ultimately serves as a catalyst to open the doors for change.

While Covey is not considered a quality management guru, his personal and organizational improvement perspectives nonetheless provide ideas the LISD administrators believe contribute to the District’s vision and Continuous Improvement implementation. According to Covey, “Trust is the foundation of total quality, and trust is made up of both character (what a person is) and competence (what a person does)” (Covey, 1991). The Leander ISD is not reticent in appropriating ideas to support the District’s vision and the philosophy of Continuous Improvement that come from sources outside of the traditional quality management frameworks, as evident in two of the goals espoused through the Leander Way ‘Guiding Document’. Quality Management collectively represents a “loose union of ideas from systems theory, humanistic and industrial psychology, management theory, human-resource and organizational development, and statistical process control” (Marchese, 1993, p. 10) and is

thus flexible in coexisting with a wide range of personal and organizational improvement perspectives.

There were a number of other identified strategies used by the administrators to alleviate apprehension and maintain a focus on long-term commitments. First, the CO administrators focused on the merits of the TEKS learning objectives rather than on the anxiety-ridden TAKS tests. Secondly, the District offers extensive training and learning opportunities that provide employees with the knowledge and skills to more confidently attack curricular and instruction related problems, improve stakeholder communications, maintain a focus on continuous improvement, and become better acquainted with the District's vision and Guiding Documents. Thirdly, district administrators are responsible for and involved in the planning for training and professional development, and have ample opportunities to reinforce the vision goals through the modeling of professional behaviors that come from that training. Fourthly, teamwork and collaboration are heavily emphasized and cultivated through collaborative problem-solving efforts across the District, which are energized through intensive training and professional development opportunities and reinforced through successful strategy and practice. These efforts allow team members to empathize with each other and redirect their focus on solutions instead of anxieties and frustrations. Lastly, the LISD developed the Student Profile System to provide interim measures of student academic progress so teachers can be active in fine-tuning instruction between annual accountability

tests, therein providing some sense of control. Nevertheless, the TAKS tests and the apprehensions that accompany them remain as acknowledged distractions to maintaining a focus on the longer-term commitments, as expressed or generally inferred across six of the interviews and several other impromptu conversations, and even a comprehensive set of strategies such as used by the Leander ISD was not able to completely remove the apprehensions and frustrations associated with high stakes accountability testing.

The role of the principal is crucial in making sense of uncertainty and calming fears, requiring an extensive repertoire of leadership abilities and insights: intimacy with the culture, able to establish order, discipline, and focus, makes frugal and effective use of resources, possesses knowledge of and involvement with curriculum and instruction assessment, maintains high visibility, engages quality communications, recognizes and rewards individual accomplishments, an advocate and spokesperson for the school to all stakeholders, change agent, adroit in fostering healthy interpersonal relationships, involves teachers in the design and implementation of important decisions, recognizes and celebrates school accomplishments and acknowledges failures, inspires and leads new and challenging innovations, monitors and evaluates school practices and their impact on student learning, adapts his/her leadership behavior to the needs of the current situation and is comfortable with dissent, possesses situational awareness, and effectively promotes intellectual stimulation (Waters, Marzano, & McNulty, 2003). The

principal serves on the frontline in defense of the long term commitments, and the researcher would argue that a judicious balance of most, if not all of these skills, are required in preventing short term commitments from dominating the instructional and operational landscape.

While training and professional development efforts were more comprehensively discussed under Research Question #2, Interview Question #5 (CV#5, employees should be active in improving the school), the impact from such efforts conceivably impact all of the Core Values. District administrators are responsible for formal training and human resource development, and the interviewed administrators enthusiastically embraced this charge. Their involvement in the planning for staff development usually includes a corresponding appraisal of the effectiveness of current instructional and strategic initiatives targeted at long-term goals, objectives, and commitments. Therefore it was not surprising that the administrators demonstrated the strongest vector for this Core Value. And given the years of training and professional development knowledge that aggregate over time and the accumulation of cultural experiences and participation in successful CI-related practice, it was not surprising that among the experience profiles, the “8 or more years” employees consistently scored the strongest vectors for all Core Values. Given the learning and adaptation one must absorb in adjusting to the sights, sounds, environmental variables, logistics, and social behaviors of a new work environment, it was anticipated that the “0-2 years” group would consistently

record the weakest vectors towards the CI values. Surprisingly, the “3-7 years” experience group demonstrated the weakest vector for this Core Value, which was also observed for Core Values, #1, #4, #6, #7, and #8 (Figure 7). While the inferential statistics indicate no significant variation of Between-Subjects Effects, one cannot ignore the descriptive statistical means which indicate that something out of the ordinary might be occurring for employees at the ‘intermediate’ level of experience.

These results suggest that LISD employees may often drift through a ‘disillusionment’ period, where the sheer volume of Guiding Documents and goals, the complexities of the Continuous Improvement philosophy with a menagerie of associated tools and practices, the TAKS tests and the NCLB, and the teacher portfolio, overwhelm the employee’s ability to make sense of how all of these elements fit together into an apprehensible and manageable whole. Therefore, school districts that have complex assemblages of vision goals and who have chosen to venture down the QM/CI path, might choose to prudently differentiate some of the training and professional development by years of experience or accumulated knowledge of and practice in Continuous Improvement. Based on the experience factor results from the survey, CI training could be divided along three separate tracks (Table 67).

There are several caveats attached to Table 67. The delineation of levels by Apprentice, Journeyman, and Veteran categories may chafe the sensibilities of some professional educators and feminists, so other classification schemes

Table 67: Conceptual Differentiation of Continuous Improvement Training and Professional Development by Accumulated Knowledge or Years of District Experience		
Level	Training and Professional Development Emphasis	Exit Competencies
I. Apprentice	Introduction to the school's vision, goals, and cultural values and how they relate to and guide practice; introduction to the fundamentals of the Continuous Improvement philosophy and how it relates to practice; assignment of mentors to familiarize new employees with the school's culture, procedures, and effective practice	The employee has a conceptual awareness of the District's vision and goals, and understands the relationships between the vision goals and his/her current job assignment; understands the Core Values of the Continuous Improvement philosophy and can relate them to viable practice
II. Journeyman	In-depth examination of CI philosophy, tools and techniques and how they serve the vision, mission, and practices of the District; study of successful practices that incorporate aspects of the Continuous Improvement philosophy in addressing the District's goals	The employee crafts plans that reflect the District's vision, goals, and values, and effectively applies them to his/her setting seamlessly as an integrated whole; the employee understands the relevancy of CI values, tools, and techniques in the accomplishment of his/her mission and in meeting the needs of the client/stakeholders
III. Veteran	Advanced exploration into CI values, tools, and techniques, showcasing and troubleshooting real-world application and pilot projects;	The employee has the knowledge, skills, and experience to reflexively apply the appropriate CI tools and techniques to any given problem; CI values have become autonomic; the employee possesses the knowledge, skill sets, and interpersonal relationship abilities to model desirable behaviors and serve as a mentor to others

may be more suitable, depending on the culture of the school district. Secondly, the types of CI training and exit competencies represent nothing more than demarcation points for further discussion and development. Thirdly, the differentiation scheme applies mainly to larger audiences such as that found at Continuous Improvement Conferences and the summer in-services, and does not preclude separate training and professional development opportunities specifically designed for more in-depth CI study (which the LISD provides, Appendix, B15) or different work orientations. Fourthly, the researcher recommends that with the exception of employees on a specific growth plan, that the training level selections should be left solely to the discretion of the individual employee.

The interviews suggest that for those Core Values that demonstrated an 'out of order' descriptive means for the intermediate level of experience, the respondents either did not fully understand the relevancy of the Core Value (stemming from the way they perceived it to be practiced), or had not received enough carefully sequenced, in-depth instruction to confidently apply it at a level they believed would be effective – thus the emphasis in Table 67 stressing the relevancy of CI values and exposure to real world application and successful CI practice for Level II training and competencies. Particular attention should be given to those strategies, tools, and techniques that economize effort, leverage time and resources, and that best match the CI maturity level of the individual teacher/employee. The Leander ISD recognizes the learning burden for 'new'

employees, and has steadily developed and refined learning matrices that can potentially help educators target and monitor training that supports the District's culture and vision and promotes research-based strategy and practice (Appendix, B18, and B19).

At a deeper more complex level, the core issues revolve about incentivizing the focus on long-term commitments, and determining how to instill the intrinsic motivation to 'stay the course' in accomplishing the long-term vision goals and commitments. The role of the principal cannot be underemphasized in effectively addressing both issues. Strong and caring leadership from the mid-management level up, timely, extensive and continual training and professional development, and other strategies aimed at assuaging apprehension and fear, are likely the best collectivity of objectives to guide a District in maintaining focus on long-term commitments. With regard to the issues of apprehension and fear, the most realistic approach perhaps resides not so much in the total elimination of such impediments, but rather their reduction to acceptable and manageable levels.

Core Value #4 Discussion: "A School Should Strive to Continually Improve Education."

The same statistical trends continue, with the administrators having the lowest mean score, the SF employees the highest, and the most experienced RGL employees having the lowest mean from the "experience" groups. This

Core Value had the lowest overall Mode scores and the lowest overall Mean scores of all the Core Values with all but the Support Function employees grouping around the “significantly embraces the Continuous Improvement Values” point on the Likert scale. This Core Value recorded the strongest overall directionality towards the CI end of the Likert scale. However, the inferential statistics indicate statistically significant variation between the Instructional and Support Function employees (Table 45).

The deployment and successes of the process and educational improvement teams at the District-wide, campus, and departmental levels, the ingrained use of the PDSA Cycle for many of the District’s programs, the ongoing training and education efforts, the Teacher Portfolio System, and the Student Profiles are but a few of the ways the District engages efforts to continuously improve. The interviews, observations, support notes, and supplementary materials suggest that the District’s practices are consistent with Core Value # 4 for the teachers and administrators. The SF respondents work in environments where stability, predictability, control, standardized operating procedures, and the ‘fine-tuning’ of existing processes, contribute to consistency in meeting daily production quotas and/or meeting customer needs.

Core Value #4 Conclusions

This Core Value lies at the core of the Continuous Improvement philosophy, and resides as a Core Concept throughout much of the Quality

Management literature (Table 6). Correspondingly, CV #4 permeates through much of the District's professional development, and demonstrated the strongest QM/CI vectors from the descriptive statistics (Figure 5; Figure 7). However, the inferential analysis indicated a significant statistical difference in the 'Between-Subjects Effects' for the Support Function employees (Table 45), which is consistent with the SF interviews where a preference for stability and control was expressed. The general assertion (in much of the quality literature) that quality management balances or reconciles the epistemological paradox between stability/reliability and exploration/innovation, does not mean one should ignore the possibility that different departments within an organization may gravitate towards one epistemology over another based on the contexts of work orientation and the nature of product or service deliverables (Sitkin, et al, 1994). Departments that depend on stability and reliability in the delivery of products or services, may be the most reluctant to embrace change and innovation.

Another spectre that has arisen on the public education horizon is the privatization of ancillary services, such as transportation and food services. Beginning with the 28th Annual Phi Delta Kappa/Gallop Poll of the Public's Attitudes toward Public Schools, 75% and 81% respectively, of the general public reported favorable responses to contracting out transportation and food services (Elam, Rose, & Gallop, 1996). Correspondingly, 40.1% and 21.1% of the school districts responding in the 1996 American School & University's 5th

Annual Privatization/Contract Services Survey indicated they were currently contracting for transportation or food services (Agron, J. 1997). At the time of the researcher's field study, the Leander ISD contracted for food services and was in the process of renewing a contract for transportation. Outsourcing services arguably introduces a layer of bureaucracy between the school and the service employees and adds an external set of variables that must be accommodated. The question that begs to be asked is whether or not outsourcing detrimentally impacts the cultural infusion of the parent organization's beliefs and practices? Figuratively speaking, can the nanny provide the same level of care and instill the parents' values?

To determine if there were any differences between the food service and transportation services (both representing contracted services), and maintenance services (representing District owned and operated services), the survey scores were disaggregated and the means calculated for all three groups, for all nine Core Values (Table 68). The non-contracted, District

Table 68: Core Value Means for Child Nutrition, Transportation, and Maintenance Services										
Group	CV1	CV2	CV3	CV4	CV5	CV6	CV7	CV8	CV9	AVG
CNS N=25	2.44	2.60	3.20	2.44	2.88	2.32	2.96	3.40	3.12	2.82
Trans N=17	3.18	3.53	3.18	2.76	3.18	2.71	3.12	3.41	3.06	3.12
Maint N=34	2.91	3.59	3.88	3.12	3.21	3.47	3.41	3.59	3.18	3.37

operated maintenance services group which consists of custodians and plant services employees, recorded the highest average for all Core Value means (3.37) and the contracted Child Nutrition Services Group the lowest (2.82). Contracted food services clearly demonstrated a stronger vector towards the CI end of the Likert scale over that of the District operated maintenance groups.

To better understand these results, one must examine the work environments. The food service employees are assigned to a home campus and have opportunities to interact daily with the same employees and to some extent with the same students, teachers, and campus administrators. The Graduate Profile and the Ten Ethical Principles are posted in the cafeterias and serve as constant reminders of the District's vision and the leadership of the principal and the behaviors they model are conspicuously visible. The CNS employees are immersed more deeply in the educational social culture of the District, and service-line workers have the opportunity to communicate directly with the same students, teachers, and campus administrators on a daily basis and receive immediate feedback on the quality of their services.

Many of the maintenance employees operate in a totally different environment. Out of the 34 maintenance employee surveys, 13 came from plant services respondents. Many of these employees roam about the District, responding to emergencies as they occur and rarely have time to engage pleasantries with campus employees or to stay in any one place longer than necessary. The focus of their work is on 'things' broken or that need repair, or

correcting 'override' errors created by employees who may have intentional bypassed equipment or system controls. These employees often work alone or in small teams, have fewer opportunities to socially communicate with others outside of their immediate peer network, and usually do not have the luxury to 'hang around' long enough to receive feedback and appreciation for their work. The interviews and site observations along with a more precise breakdown of the survey results suggest that the CV vectors for the SF employees, are not based solely on whether or not a service is being outsourced, but also on long term and repeated exposure to the core vision and goals of the school and the people who model the behaviors and strategies to achieve them, and through client feedback that flows from service efforts. School districts that wish to journey down the QM/CI path should heavily emphasize and take advantage of training, learning, and relationship-building opportunities that reach across work-orientation boundaries.

During the past several decades the general concept of 'quality management' donned a variety of labels which are often used interchangeably in the management and business literature, e.g., Total Quality Management, Continuous Process Improvement, Quality First, Do it Right the First Time, Kaizen (the Japanese sibling to Continuous Improvement), Six Sigma, and Reengineering (Marton, 1997). Regardless of the moniker, the researcher's review of the literature yielded "Nine Core Concepts" that are most common to all (Table 6). And, whether examining the Nine Core Concepts, Detert's Nine

Core Values, or the Leander Way, “Continuous Improvement” resides as a common construct (Figure 13). As previously mentioned, “Continuous Improvement”, “continually improve”, and “continuous improvement” are multiple reflections of the same general idea, with the first representing the philosophy, the second an action, and the last a product. The descriptor statement for this Core Value “A school should strive (action) to make (action) continuous changes to improve (action) education” clearly emphasizes ‘action’ components.

However, without delivery mechanisms, calls for action represent little more than a flash in the pan. The intensive training specific to Continuous Improvement, the numerous and productive process and educational improvement team efforts, the prolific use of the PDSA Cycle, the Student Profiles, and the Teacher Portfolio System, represent regularly used mechanisms through which this Core Value is lived out, and serve as exemplars for other schools to use. Also, successful continuous improvement efforts are difficult to envision and are unlikely to transpire absent contributions from and interaction with the other Core Values.

At the philosophical and implementation levels, QM/CI constructs and associative practices are often classified as having either a ‘hard’ or ‘soft’ orientation (Kekale & Kekale, 1995; Wilkinson, et al 1997; Giroux & Landry, 1998; Bax, 2002; Kekale, Fecikova, & Kitaigorodskaja, 2004). The “hard” orientation “concentrates on the tools and techniques and the systematic measurement and control of the work process, ensuring conformance to

performance standards and the reduction of variability (Wilkinson, et al, 1997, p. 801). Conversely, the 'soft' orientation "places more importance on areas such as increasing the customer orientation of the organization, training, teamwork, employee participation and culture change" (Wilkinson, et al, 1997, p. 801). The LISD provides optional training emphasizing the process improvement tools and techniques more often associated with the 'hard' orientation (e.g. flow chart, check sheet, control chart, histogram, Pareto Chart, scatter diagram, stratification charts, Interrelationship Digraph, Nominal Group Technique, Force Field Analysis, Cause and Effect or Fishbone Diagram). The interviewed CO administrators and principal, teachers in District-produced videos, and some of the teachers at the 'Portfolio' party the researcher attended, all demonstrated a conceptual grasp and/or working knowledge of many of the process improvement tools and techniques. However, and in discounting the lack of knowledge and experience characteristic of new employees, the interviews and site visits suggest that beyond the Plus Delta Tool and rudimentary data comparison tools, the regular and comprehensive use of process improvement tools is not widespread among the teachers and Support Function employees, nor are they equally emphasized among the campuses or departments. There are several factors that possibly contribute to these observations.

First, the tools, techniques, and skills associated with the art and science of teaching, do not necessarily align with the 'hard orientation' tools and techniques of process improvement, although the former can be augmented

and rendered more robust by integrating the latter (which requires intentional planning, effort, and modeling). District training and professional development should include both, and be presented in such a manner that each complements and relates to the other. Secondly, and perhaps more importantly, education is decidedly 'organic' in nature, involving work culture, people, and relationships. The organic attributes of education arguably align more easily with the 'soft orientation' that stresses customer/client orientation, training, teamwork, employee participation, and culture change. The Continuous Improvement Conferences, the beginning and end-of-year celebrations, The Leander Way Guiding Document, Student Conferences, Student/teacher contracts, grade level and content area teaming, many of the book studies, and site based and performance committees, ostensibly draw from varying aspects of the 'soft orientation' of QM/CI. The 'soft orientation' attributes are arguably easier to understand and assimilate than the more rationalistic, technical tools and techniques that characterize the "hard" orientation. The interviews, site observations, literature review, and triangulation materials suggest that schools are likely to be more successful in implementing QM/CI by first focusing on the "soft" orientation attributes and then gradually introducing and implementing the "hard" attributes based on need, environmental conditions, and appropriateness of application.

Core Value #5 Discussion: "Teachers (Employees) Should Be Active in Improving the Overall School Operation."

The administrators and RGL employees with "8 or more years of experience" demonstrated the lowest means and thus the strongest directionality towards the CI end of the Likert scale, while the SF employees had the highest means and the weakest vector. The SF group recorded the lowest Mode, but had the highest standard deviation which indicates a relatively wide variation in the within-group responses (Table 18). However, there was no statistically significant variation between the groups, considering the combined effects from 'p', Partial Eta Squared, Observed Power, and sample size determinants (Tables 43 & 44).

Process and educational improvement teams, experimentation with and piloting of new strategies and sharing the results at the larger unit level, principal/staff decision-making meetings, principal/teacher collaboration in the design of master schedules, the philosophy of "fail forward" to encourage risk taking, the extensive training and learning opportunities the District promotes and provides, and collaboration efforts at practically every instructional level in the organization, suggest that the District is very active in practicing Core Value #5.

The lengthy within-District work histories and lack of turnover among the executive staff, and the sustained personal efforts and commitments of the CO

administrators to quality, suggest that such longevity factors contributed to the proliferation and maturity of the Continuous Improvement movement in the District. The interviews also suggest that it is possible for a Core Value to be practiced to a greater extent than indicated by the espoused values and that the relationship between the two is not always tightly correlated. Underlying beliefs and assumptions reside at the subconscious level, and are often difficult to verbally articulate (Schein, 1992).

Core Value #5 Conclusions

Detert, Louis, and Schroder allude to training and professional development as contributory factors to this Core Value (Detert et al, 2001), but omit any overt reference to learning in the descriptor statement. Quality Management aggressively pursues and promotes individual and organizational learning, which is a hallmark principle of the philosophy (Evans, 1995), and the Leander ISD pursues training and professional development with a vengeance, offering eleven different venues for training (Appendix, B15), not counting Process Improvement Facilitator (PIF) training. However, the interviews, impromptu conversations, Continuous Improvement Conference sessions, and reviewed training materials suggest the SF employees did not participate in nor receive the same frequency or depth of CI training as the professional educators. Food and transportation services are outsourced to private firms and while the corporate headquarters are located outside the District, the rank and

file employees who work for these firms come from local or surrounding communities.

Subsequent to the field study, the researcher had the opportunity to visit with an administrator who worked for the contracted transportation services company. This individual expressed enthusiasm in working with the District, and was eager to learn more about Continuous Improvement through District-provided workshops and seminars. The sharing of QM/CI training with contracted service companies is one way school districts can import their values to external managers/stakeholders. The managers for contracted services can then customize their services to incorporate the values of the parent school organization.

Quality management ideology is complex, “a big tentful of ideas” (Marchese, p. 10), and virtually impossible to fully understand and implement as a comprehensive management paradigm over a short period of time, usually requiring years to fully gestate and for accompanying institutional change to become realized (Atkinson, 1997; Marton, 1999). And the loss or excessive turnover of leaders can detrimentally impact the culture of an organization (Druckman, et al, 1997). The lengthy within-District work histories and lack of turnover among the executive staff, and the sustained personal efforts and commitments of the CO administrators to quality education, suggest such longevity factors contributed to the promulgation, maturity, and stamina of the Continuous Improvement movement in the District. Furthermore, interview

comments suggested that the CO administrators clearly held each other in high esteem.

According to Deal and Peterson, “School management is shaped and fostered by a culture, a historically woven tapestry of values, beliefs, and symbols that support an ethos of always striving to do better” (1994, p. 6). A common history was evident among the CO administrators and to some extent the principal, as their interview responses were remarkably similar and mutually reinforcing, arguably attributable to the common training and experiences they shared over the past dozen or so years. Figuratively speaking, they all seemed to be singing the same words, from the same stanza, from the same hymn. On one occasion, between sessions at the 2008 February Conference, the researcher engaged a conversation with several of the CO administrators about the learning matrices used to structure professional development efforts, and important lessons they had learned from CI practice (both failures and successes). One of the administrators would often begin a sentence and another would finish, as if both were reading from the same invisible script or hymnal. This kind of ‘oneness of spirit’ and overlay of shared assumptions among members of an organization come from a common history, galvanized over time through shared experiences (Schein, 1992). The findings suggest that the successful and sustained implementation of Continuous Improvement depends on the following: (1). The establishment of professional work relationships of mutual respect and trust, (2). Time for these relationships to become solidified

and reinforced, (3). Shared training tied to relevant practice, and (4) Shared experiences comprised of both failures and successes. And finally, Core Value #5 would be difficult to next to impossible to implement without CV # 6 (collaboration).

Core Value #6 Discussion:” Collaboration Is Necessary for an Effective School.”

The same descriptive statistical trends are manifested with this CV, with the Administrators having the lowest mean, the SF employees the highest, and the “8 or more years” group having the lowest mean by experience. There was no statistically significant variation of the means for any of the demographic profiles for this CV.

Cross-functional problem-solving is highly promoted among the executive administrators. While a formal organizational chart exists, the Central Office administrators functionally operate more in accordance with the Systems Diagram model (Appendix, B16). The CO administrators viewed organization charts as a device that lures people down the ‘trail of blame’ in search for ‘guilty’ actors. Conversely, the Systems Diagram model diffuses or obscures the connections to any one perpetrator and focuses instead on processes. The researcher interrupted a meeting between Ann and Cathy, who were jointly working on the summer inservice calendar, finalizing the sessions, and checking for alignment with the Districts objectives (Appendix, C6). Although the formal organization chart specifically assigns Cathy the responsibility for staff

development, Ann was offering her time and expertise to help. The CO respondents also work jointly on planning for the Continuous Improvement Conference and the Administrator Retreat, and on other projects that blur the distinctions depicted in the formal organizational chart.

According to Ann, collaboration is approached in a “more thought-out” fashion because of District growth.

Now, we in fact, work for ways to determine who needs to collaborate, around what issues and how are we going to support that happening, and not just assume that it's happening, and what is the result we expect out of that collaboration because people have gotten together.

The District does not “force” the Continuous Improvement philosophy on anyone, yet manifestations of collaboration were demonstrated to some extent by all of the administrator and teacher respondents and three of the Support Function (SF) employees. While one of the SF employees believed coordination was important, two others provided evidence of collaborating frequently at the peer level, and the fourth collaborated across multiple levels, both within his department and with others outside his department.

Collaboration occurs at many levels in the District, at both the micro and macro levels. The interview responses, District documents, and site observations provided an extensive array of indicators associating Core Value # 6 with LISD practice: the weekly held Principal’s Meetings, bi-weekly Principal’s Meetings, six-week Assistant Principals’ meetings, grade level, vertical, content, department, and/or program area team-planning, process and educational team

improvement efforts, various site-based committee efforts, planning committees, joint Teacher Portfolio projects, collaborative presentations at the Annual February Conferences and summer in-services, and Student Portfolio conferences.

Several limitations emerged from the interviews with regard to how this Core Value is lived out. First, collaboration is more likely to transpire within homogeneous work groups, i.e. peers who share similar work assignments. Second, collaboration across educator groups in the District increasingly assumes the form of 'focus groups' where consensus is sought through short, concentrated sessions seeking incremental improvement/innovation. Third, the researcher uncovered a situation where a process improvement effort in one department had a negative impact on another. Smaller collaborative improvement efforts may not always have the same level of preparation and fail-safe mechanisms in place compared to larger District-wide efforts. Fourth, at the micro level and as noted by one of the teachers, not everyone enjoys teaming and in some instances new or struggling teachers have difficulty reconciling their own teaching styles and individual classroom strategies and preferences with those of the team. Also, some teachers are less verbal and outgoing and may have more difficulty expressing their viewpoints in the team environment. However, Core Value # 6 is generally consistent with District practice, at least as viewed by most of the respondents. and the 'values in action' or 'practices' appear to be in general alignment with the 'espoused' values.

Core Value #6 Conclusions

The Baldrige Education Criteria emphasizes the importance of both internal and external partnerships (Detert et al, 2001; Baldrige, 2008). This Core Value is a reflection of a growing body of research indicating that partnerships, networking, and collaboration are more effective in meeting the demands of educational accountability and improvement initiatives, than the debilitating competition and employee isolation that often characterize traditional educational environments (Detert, et al, 2001). This core value is based largely on the assumption that teaming and collaboration best leverage human and material assets in meeting the needs of the customer/client/stakeholder and achieving product and/or service improvement.

The findings, assimilated from across the Research Questions and Core Values, suggest that collaboration serves as a primary mechanism for building camaraderie, deriving consensus, targeting strategies, and achieving improvement, whether at the 'incremental' or 'breakthrough' levels, and through both 'Inside" and 'Joint Inside & Outside" stakeholder collaboration efforts. As a launch point for further analysis and reflection, the researcher examined collaboration in the LISD through a two by two grid, aimed at categorizing existing collaboration efforts according to continuous improvement 'orientation' level and stakeholder group configuration (Table 69). Table 69 borrows aspects

Table 69. Leander ISD Collaboration Efforts: As Examined through Primary Improvement Orientations and Span of Stakeholder Collaboration		
Primary Improvement Orientation	Inside Stakeholder Collaboration	Joint Inside and Outside Stakeholder Collaboration
Breakthrough Improvement Discontinuous Innovation	<p>*Departmental Level Process Improvement Team Efforts (department level employees, either by instructional or SF level)</p> <p>*Book Studies (District-wide, campus, or various combinations of educators and school officials - board members, administrators, instructional specialists, teachers, teacher aides – often reaches across instructional departments)</p>	<p>*District-wide Process Improvement Team Efforts (board Members, administrators, teachers, parents, students, community members, business representatives)</p> <p>*District-wide SBDM Committee Efforts (board members, administrators, teachers, parents, community members, business representatives)</p>
Incremental Improvement Incremental Innovation	<p>**District-wide Principals Meetings, often referred to as the “Big Admin” meeting: (superintendent, other CO administrators and lead principals – convenes each Tuesday)</p> <p>**Lead Principals Meetings (principals only, every other Tuesday)</p> <p>**District-wide Assistant Principals Meetings (once every six weeks)</p> <p>*Departmental Level Process Improvement Team Efforts (department level Employees)</p> <p>**Principal’s Advisory Counsel (open to all campus employees)</p> <p>**Various Grade Level, Academic Department Level, or Grade/Campus Level Teaming by Academic Content (mostly teachers)</p>	<p>*Student Portfolio Conferences (teachers, parents, students)</p> <p>*Performance and/or Planning Committees (board members, educators, parents, community members, business representatives)</p> <p>*Partners in Education (administrators, teachers, parents, community members and leaders, business representatives, civic organizations and educational institutions, retired citizens)</p> <p>*Campus SBDM Committees (educators, parents, students, community members)</p>

Table 69 (Continued)

Primary Improvement Orientation	Inside Stakeholder Collaboration	Joint Inside and Outside Stakeholder Collaboration
Incremental Improvement Incremental Innovation	*Campus Educational Improvement Teams (campus administrators, educational specialists, teachers, and other instruction-related employees) *Campus Level Book Studies (administrators, teachers, instructional specialists, other instruction related employees, and some occasional involvement of SF employees) *Joint Teacher Portfolio Projects (teachers) *Collaboratively Prepared Presentations at District Training Events	
*Note: 'ad hoc' in nature - group called together for a specific purpose with a defined timeline **Note: 'standing' in nature- group purpose determined by core mission or function, but mission strategies may change over time – stable membership from one year to the next, barring employee turnover or reassignment		

associated with CV #4 (depicting levels of continuous improvement), and CV #2 (examining inside and outside stakeholder involvement in decision-making).

The researcher makes no claims that Table 69 represents a complete listing of all District collaboration efforts, nor should one assume that the placement of a collaboration effort under a particular Stakeholder heading or by a specific Improvement Orientation is `exclusive to that column or row.

For instance, the effort described as “Collaboratively Prepared Presentations at District Training Events” (characterized as an ‘Inside Stakeholder’ collaboration effort emphasizing ‘Incremental improvement’), could conceivably involve a team making a presentation on a “Breakthrough Improvement” strategy. The classification decision for each collaboration effort was made according to the apparent preponderance of use. The basic ‘Inside Stakeholder’ groups include board members, administrators, teachers, other instruction-related staff and employees, and SF employees, while parents, business and community representatives and leaders, and outside civic organizations and educational institutions generally comprise the ‘Outside Stakeholder’ groups. Students could arguably fit both ways and comprise a unique category; they are obviously active participants in the everyday operations of the school, but also occupy the status of primary ‘Client’ and therein constitute the central focus for which schools exist. Also, “Book Studies” and ‘Process Improvement Teams’ arguably fit under both Continuous Improvement Orientations, although ‘preponderance of use’ most often links the former to ‘Inside Stakeholder’ collaboration, and the latter to ‘Joint Inside and Outside Stakeholder’ collaboration at the District-wide level. Given these limitations and assumptions, several trends emerged.

Book Studies tend to be engaged usually by professional educators and the majority of these efforts emphasize “Breakthrough Improvement” ideas (Appendix, B14). The lone interview reference to SF employee book study involvement came from one of the CNS employees who had participated in a

book study on her campus (*Seedfolk*, Fleischman, 1997), which indicates that District principals occasionally conduct their own campus-based book study and may include all employees in the activity. Table 69 suggests the “Incremental Improvement” orientation outnumbers the “Breakthrough Improvement” orientation in identified strategies by a 14 to 4 margin, and viewed by column heading, ‘Inside Stakeholder Collaboration’ groups outnumber those of ‘Joint Stakeholder Collaboration’ by two to one. However, this finding does not diminish the importance of successful ‘Breakthrough Improvement’ efforts involving ‘joint inside and outside’ stakeholder participation. A District-wide Process Improvement Team was responsible for recommendations leading to a non-traditional high school, and a District-wide SBDM committee generated the Graduate Profile. Both efforts exemplify “Breakthrough Improvement” or “double loop learning” whereby the governing values of the organization were changed (Argyris & Schön, 1974). The researcher discovered effective collaboration efforts across all four quadrants of Table 69, which suggests the District’s practices are generally consistent with Core Value #6. However, the LISD leans decidedly more toward incremental improvement efforts through ‘Inside’ stakeholder group arrangements.

Core Value #7 Discussion: "Decision-making Should Rely on Factual Information."

The same descriptive statistical trends are manifested with this CV, with the Administrators having the lowest mean, the SF employees the highest, and the "8 or more years" group having the lowest mean by experience. The Mode for the SF employees and "Secondary Instruction" were 4's which suggests the possibility of midpoint bias, a genuine incongruence between the comparative profiles, or a combination of both. This Core Value also demonstrated the tendency of the "3-7 years" experience group to score higher than the least experienced group, an anomaly that appeared in six of the nine Core Values. The inferential statistics indicate that there is a statistically significant variation of the means between the elementary and high school teachers for this CV, although the observations and comments rendered from the two high school teachers who participated in the interviews, do not directly corroborate the inferential statistical findings.

At the highest levels of the District, at the Board/Superintendent interface, decision-making relies extensively on factual information. Below this level most of the respondents see both data/factual information and personal/professional experience as factoring into decision-making although the former appears to take the more dominant role - except in non-TAKS early childhood grade levels where the experience factor is more prevalent. Different forms of 'factual information' are gathered through various feedback opportunities and data

collection mechanisms, such as the Instructional Services Executive Directors and District-wide Principals meetings, through teacher and employee fact-finding endeavors, the use of the Plus Delta technique as a feedback and evaluation tool, student, teacher, and parent surveys, Student Profile data, TAKS data, the annually scheduled “Data Day”, the inclusion of a “Data Room” on virtually every campus, interest and skill-set inventories, demographic projections, analysis of county and city housing development permit records, and food production, maintenance work order, and equipment repair records.

The bulk of the information gleaned from this interview query, suggests that while Core Value #7 is not the exclusive decision-making determinant for all departments, grade levels, and individual employees, it is nonetheless a dominant influence and referent *modus operandi* behind most instructional strategies for TAKS-accountable grade levels and District-wide management decisions. The emphasis the District places on making decisions based on data and factual information is, in practice, outwardly conspicuous and consistent with Core Value #7 and the tenets of Quality Management and Continuous Improvement. As one teacher observed, “The District is data crazy!”, and the findings support this assertion.

Core Value #7 Conclusions

The Google search engine generated 18,400,000 ‘hits’ (February 26, 2010) for “using data to drive instruction”, and one of the National Quality

Education Conference ‘focus’ areas for November of 2010 is “Using Data to Inform Instruction” (ASQ, 2010). Needless to say, data collection and analysis in schools remains a ‘hot’ topic and a growing interest, fueled by state and national accountability demands. This Core Value relates strongly to the “hard” orientation of Quality management, and the District provides optional in-depth training in the tools and techniques used for managing and making sense of data. However, according to Paul, one of the main problems in the District is “They (the teachers) have data they don’t know how to turn into an action plan that would actually cause them to implement their knowledge”. Paul’s comment was mirrored by several teachers who observed that teachers do not always use the Student Profile data to make decisions that would lead to improved student academic achievement; they go through the motions of collecting and studying the data, but do nothing with it. Employees must first see the need to learn the tools and techniques commonly used in data analysis, and then invest the time and energy to acquire a working knowledge of how to use them. Only then can the practitioner begin to apply the analysis tools appropriately for the purpose of developing an action plan. Without adequate performance measurements and the knowledge of how they relate to practice, any foray into Continuous Improvement will likely flounder and fail.

The Research Question #2, Core Value #4 conclusion suggests that “schools are likely to be more successful in Implementing QM/CI by first focusing on the “soft” orientation attributes”. If schools follow this suggestion, then an

interim deficiency in knowledge will exist for new to intermediate experience level employees who have not had the range of opportunities to learn much about the “hard” orientation and the associative analytical tools. For schools that have followed the CI path over a number of years, savvy veteran teachers could negotiate the more challenging aspects of data collection, analysis, and interpretation while opportunistically coaching and mentoring neophytes through teachable moments. Thus, the more knowledgeable educators and staff could coach, model, and walk initiates through solution strategies and in the process accelerate Continuous Improvement learning. Core Value #7 is intimately linked to CV #4 (continuous improvement) and depends heavily on extensive and continuous staff development, on the job training, and demonstrable successful application.

Successful data analysis and interpretation practices depend to a large extent on the surrounding environmental and cultural conditions. Lana, in reflecting on her experiences in the District, stated “data is not crammed down everyone’s throats; it is not used as a tool for harassment or name-calling or finger-point, or blaming. It is used for what it is - what are the numbers telling us?” Lana also conveys the notion that for data to have meaning “teachers should not be fearful of it and take ownership in interpreting what it means”; in other words, interpretation of the data should not be done by proxy or through the administrators scripting the analysis for them. The findings suggest that to fully actualize the Quality Management/Continuous Improvement philosophy,

aspects from both the “soft” and “hard” orientations should be embraced and appropriated. The wider and more comprehensive the knowledge base, the more extensive the application and scope of meaningful practice.

Core Value #8 Discussion: “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees”

The same statistical trends continue with the administrators having the lowest mean score, the SF employees the highest, and the more experienced RGL employees recording the lowest mean from among the “experience” groups. The Mode for the SF and “3-7 years” employees recorded 4’s, which suggests the possibility of midpoint bias, a genuine incongruence between the comparative profiles, or a combination of both. The inferential statistics indicate a significant variation of the means between the Instructional and Support Function employees for this CV.

The CO administrators point to the many training efforts the District uses to focus problem solving on processes rather than people. Cathy listed three training opportunities that are designed to promote the process-oriented philosophy of the District: The Leadership Academy Retreat, the Administrator Retreat, and the Learning Academy.

There is a tendency on the part of the administrators to label ‘people’ problems as ‘special cause’ problems and process related problems as ‘common cause’ problems. The CO administrators first try to determine if an

identified problem originates from within the system or subsystem processes, since 'common cause' problems can have far reaching consequences, impacting multiple individuals, departments, or campuses. Depending on the nature of the problem, a process modification at a single campus or department level may suffice, or for more widely dispersed or serious problems, a process improvement team may be necessary. If the administration determines that the source of a problem emanates from the actions of a person, then the problem is treated as a 'special cause' situation, and any or several of a number of intervention strategies to improve the knowledge base or perspective of the person is usually employed.

During the interview responses, two CO administrators, one of the campus administrators, and a SF employee, referred to the "bus" metaphor that originates from Jim Collins's book, *Good to Great*, and the bus metaphor also appeared in a response to Interview Question #1. The idea is that the District will first try to help a person so that they can "stay in their seat", but it might also mean "having to change seats" or position, and in the worst case scenario, the person might be asked to "leave the bus". The CO administrators and the principal appeared firm in their commitment to provide a safe and supportive environment so that employees have the freedom to experiment, even to 'fail forward', and therein learn from their mistakes. This commitment makes "asking a person to leave the bus" more difficult in the sense that the Leander Way and The Ten Ethical Principles strive to build trust and remove fear, and to "grow and

learn together”. As expressed by the respondent principal, asking a person to “leave the bus” is difficult because such action seems intuitively opposed to the Leander Way and the Ten Ethical Principles which emphasize building trust, removing fear, and providing people opportunities to learn from their mistakes. Ultimately the solution to this conundrum rests at the core of the LISD Learning Model, that is to “Focus on Student Learning” and make decisions based on “what’s best for kids”.

Process and educational improvement teams represent some of the ways that the District focuses on processes, and grade level or content teaming represent yet some of the other ways. The former generally looks at significantly altering or introducing new processes, the latter usually at fine-tuning existing ones. Awareness of ‘Process Improvement Team’ efforts was generally proportional to years of experience in the District, with all educator respondents with ‘8 or more years’ in the District expressing familiarity with such efforts. Action plans are a desired product of most teaming efforts, as is focusing on improving processes and leveraging assets to achieve goals. The extensive training and education provided to help employees focus on processes, the awareness at the leadership levels to first focus on processes, the frequent use of the Plus Delta technique among many of the administrators and some of the teachers to focus on and evaluate processes, and the emphasis on processes established through the process and educational improvement teams, provide

evidence that the District leans more substantially towards first focusing on processes.

Core Value #8 Conclusions

In the explanatory information accompanying Core Value #8, Detert, Louis, and Schroeder draw a link to Deming's "Drive out fear" principle (Detert et al, 2001; Deming, 2002), which meshes amenably with the "soft" orientation of Quality Management/Continuous Improvement. The 'Drive out fear' principle, as previously noted, also resonates strongly with Core Values #3 (long term commitments), #4 (continuous improvement), and #6 (collaboration). 'Driving out fear' also logically connects with the notion of 'driving out blame'. According to Scholtes, "When managers blame, attack, or patronize, they guarantee that communications won't take place" (1998, p. 351). When communications fail the organization ceases to function effectively. Furthermore, the blame dynamic creates a vicious cycle with little chance of solving the problem, as the people being blamed erect defense mechanisms and often shift the blame to others (Madison, 2005). Blame harms an organization in a variety of ways, some of which are listed as follows: (1) Blame has an emotional component that instills fear and low morale, (2). From the resultant fear people shift their energies away from understanding and learning and towards self preservation, (3). Blame creates biases that alter the accurate assessment of situations, (4). Inhibits creativity, and (5) Blame is expensive because it is counterproductive and leads

to high turnover and system waste (Pawar, 2007). Thus the QM/CI philosophy redirects the organization's efforts from focusing on people to focusing on processes, and associatively from the allocation of blame to the collective acceptance of failure (Cooke, 1997).

According to Deming, 97% of an organization's problems stem from system processes (Hunter, 2009), but other scholars and pundits assign the percentage lower - "85% of all organizational problems fall into process, control mechanisms, and structure, with the bulk of that in process" (Madison, 2005, p. 3). Regardless of the estimates of problems attributable to system processes, the quality literature is in general agreement that the percentages are high, at least in a range approaching 85%. Hence, process improvement has become an enamored strategy in the implementation of Quality Management and Continuous Quality Improvement.

The Leander ISD presented clear and compelling examples of focusing on processes through process improvement efforts, the most noteworthy consisting of Process Improvement and Educational Improvement teaming, at the district-wide, campus, or department levels, involving both 'Inside' and 'Joint Inside/Outside' stakeholder participation (Table 69). Process improvement generally consists of first defining the problem, followed by understanding the process contributing to the problem, measuring the process, simplifying or improving the process, and then evaluating and monitoring the process improvement (Johnson & Chvala, 1996), which meshes amenably with the

PDSA cycle. The PDSA cycle is routinely deployed in the District for incremental process improvement and evaluation purposes, across virtually all system-wide instructional programs. And, the CO administrators and principal also revealed a conceptual and practical knowledge of 'special' and 'common cause' variation in the identification of process errors.

The findings and analysis suggest that many of the District's practices are consistent with Core Value #8. However the inferential statistics suggests that material resources play a larger role for SF employees in the accomplishment of their duties than for Instructional employees whose mission focuses more on knowledge management. Core Value #8 links to virtually all of the other Core Values, but intimately so with CV #2 (stakeholder involvement), #4 (continuous improvement), #5 (employee involvement in making improvements), and #6 (collaboration).

Core Value #9 Discussion: "Quality Can Be Improved within Existing Resources."

The lowest mean score was from the "8 or more years" employees and the highest from the SF employees. The administrators recorded the highest Mode, but again had the lowest standard deviation. There was no statistically significant variation of the means between any of the demographic profiles for this CV.

This Core Value is based on improving internal processes, focusing on customer needs, and/or engaging proactive and anticipatory problem-solving that leverage assets at the design stage of process development. The researcher uncovered a number of District strategies that reflect various aspects of Core Value #9. Some of the strategies are not exclusive to QM/CI such as annual reviews of staffing needs, preventative maintenance, re-using equipment from one year to the next, opportunistic balancing of funding accounts to adjust for developing needs, skill-specific training for SF employees to improve skills and efficiency, and the Board Members' annual superintendent appraisal, based in part, on the superintendent's demonstrated success in 'getting the most bang for the buck'. Other identified strategies have a direct lineage to QM/CI philosophy, strategies, tools, or techniques.

1. Focus group efforts to minimize process redundancy and maximize efficiency
2. PDSA efforts - programs are evaluated on a three year rotating cycle which allows program evaluators to fine-tune strategies,
3. District-wide Process Improvement Team efforts – resource allocation always considered as a part of such efforts
4. Benchmarking using state provided data and the 'just4kids' website to assess comparative performance measures and/or expenditures per pupil data
5. Workshops and training in Continuous Improvement and process improvement that include Deming's Point # 3 (build quality into the process from the beginning) and #5 (Improve constantly and forever the system of production and service...and thus constantly decrease costs) (Deming, 2002)
6. Web-based training inventory for teachers and professional staff – allows for continual monitoring of professional development, keeps a running record of training and reduces the risk of duplication
7. Plus Delta tool used for obtaining feedback and evaluating processes; most commonly used of the QM/CI 'tools – serves as an initiator for incremental process improvement

Many of the District's efforts focus on improving internal processes and focusing on the needs of students, as exemplified through process and educational improvement efforts, and periodic program evaluation efforts using the PDSA Cycle. Other tools and techniques such as 'benchmarking' and the 'Plus Delta' are used as initiators for improving processes and the redirection of funding is also used to accommodate unanticipated program changes. The interview responses indicate that many of the District-wide program and systems-wide management strategies, process improvement and evaluation efforts, training and professional development, and smaller group problem-solving endeavors are consistent with the aims of this Core Value.

Core Value #9 Conclusion

Detert, Louis, and Schroder, explain that this Core Value includes the following goals/strategies: (1). "Focusing on internal processes", (2). "Focusing on customer needs" and (3). "Preventing quality problems from occurring in the first place" (p. 201). Goals (1) and (2) seem respectively confluent with and logical extensions of Core Values # 8 (Quality problems are caused by poor systems and process, not by employees) and #2 (Educational needs should be determined primarily by parents, community groups, students and other stakeholders). Goal/strategy (3) is arguably reminiscent of Deming's principle of "building quality into the product in the first place" (Deming, 2002, p. 23) and

Phillip Crosby's refrain calling for organizations to "do it right the first time" (Crosby, 1979, p. 200).

The outward intent expressed by the descriptor statement (Quality can be improved within existing resources) does not appear as a separate Core Concept refined from the researcher's review of the literature (Table 6), nor is it conspicuously revealed as a distinct Core Value/Principle/Concept in the 2008 Malcolm National Quality Program Performance Criteria for business or education, the ISO 9001-2000 Core Principles, or the EFQM Fundamental Concepts (Table 4).

Conceivably, the seven identified QM/CI strategies/tools revealed in the findings (p. 562) fit just as amenably with the full range of explicit goals and underlying assumptions associated with Core Values #2 (parents, students, community members, and other stakeholder involvement in making decisions), #4 (continuous improvement), #5 (employee involvement in improving the school), #6 (collaboration), and #8 (focusing on processes rather than people), as they do with the expanded set of goals/strategies attributed to Core Value #9. The Central Office administrators demonstrated a propensity to discuss this Core Value from a 'process management and improvement' perspective which connects to CV #4 (continuous improvement) and CV #8 (focusing on processes rather than people), and all of the QM/CI goals/strategies attached to this CV by Detert et al, arguably link to various aspects associated with the strategy of 'process management and improvement'.

The Leander ISD represents what most observers would classify as a 'mature' organization in the practice of QM/CI. Yet in combing through all four of the District's Guiding Documents and the associative 42 vision goals, only two indicate associations with the descriptor statement and these links are nominal at best; the Graduate Profile states, "To be a productive learner: each LISD graduate demonstrates skill in managing systems and resources, such as money, materials, space, and people", while the 'Leander Way' champions "Create Excellence". These particular vision goals are common to many management and organizational improvement perspectives, and 'doing more with less', 'maximizing assets', or 'creating excellence' can scarcely be declared as phenomena exclusive to QM/CI.

No single finding obviates the legitimacy of CV #9 as a stand alone construct. However, bits and pieces from the collectivity of findings suggest that this Core Value lacks the unique characteristics that would distinguish it from other core concepts/constructs. In conclusion, and in drawing pieces together from across the Research Questions, this CV arguably represents an extension of one or more of the other Core Values rather than a separate construct with distinctive characteristics.

Research Question #3. “How Are Personal Experiences in the Leander ISD (TX) Reflective of or Associated with, Detert’s Nine Core Values and the Philosophy of Continuous Improvement?”

Research Question #3, examines ‘personal experiences’ and was designed to explicate critical incidents or events “that either highlight the normal operation of the school organization or contrast sharply with it” (Erlandson, et al, 1993), and for the purposes of this study are best represented through some of the respondents’ stories. Separating the respondents by group was not followed in the same manner as was used for Research Questions #1 and #2 (Figure 6), and generated less material, because the shorter interviews were not conducive to sharing experiences at the ‘story level’, and/or newer employees were less likely to have had enough time to gather memorable experiences or to see significant events unfold. Consequently, conclusions are omitted for Core Values #2 and #7 because there were no critical incidents reported at the ‘story level’. The conclusions are drawn directly from the Chapter IV, Research Question #3 critical incident findings.

Core Value #1 Discussion and Conclusions: “A Shared Vision and Shared Goals among Faculty, Staff and Administrators Are Critical for School Success.”

Six different critical incidents were uncovered that relate to this CV, identified as: “Culture day”, “We flip to serve you”, “Closing down the campus”,

“We are family”, “Open doors”, and “La Verdad”. The respondents’ stories revealed insights that expand the reach of the interview questions. For the LISD educators, the District’s vision and associative cultural beliefs are introduced and advanced through training (Culture day), and supported through a culture where administrators routinely model behaviors that focus attention on the vision goals (We flip to serve you). District and campus ceremonies can serve to reach across all work orientations and play important roles in promoting and validating employee inclusion and creating a sense of organizational unity and common purpose (We are family).

No single process or action is ordinarily capable of representing all the goals within the District’s Guiding Documents. Most are driven by the subconscious appropriation of goals that cluster together from within the ‘Documents’. For instance, the “Closing down the campus” story represents a reflexive response across an entire campus to help a fledgling principal end the school year with a controlled, orderly, shutdown. “Integrity”, “Loyalty”, “Concern for others”, and “Respect for others” coalesced together to transform numerous problems into manageable successful outcomes, fueled conceivably by cultural values extant to the Ten Ethical Principles.

Campuses that experience frequent turnover of leadership are handicapped in acculturating the District’s vision and developing a compatible culture that embraces trust, openness, cooperation, and shared learning (Open doors). Vision documents such as the Ten Ethical Principles, readily transcend

the English to Spanish language barrier, and are made more relevant through departmental leadership willing and capable of bridging the language divide (La Verdad). After reviewing all of the critical incidents, no other Core Value elicited such a range and depth of reactions and emotion.

Core Value #3 Discussion and Conclusions: "Improving Education Requires a Long-term Commitment."

The Core Value produced one critical incident, "Go to your room". This story illustrates how one campus applied the Continuous Improvement brainstorming/multiple-voting tool called "Hot-Dots" to gather input from a group, in this instance from the campus's teachers. Teachers multi-voted on educational issues they considered most important on their campus for the purpose of establishing priorities. A noteworthy point regarding this story is the commitment by the administration to finally follow through and honor the input from the teachers, rather than trying to 'cook the results' to derive a contrary conclusion. This story also suggests that the role of the campus administrators' actions and decisions can build or destroy trust. The critical incident associated with this Core Value, highlights honoring stakeholder input and distributing ownership among the stakeholders, which are hallmark properties of exemplary leadership and essential to building trust and commitment (Bell, 2006), which together bolster long-term commitments and the building of 'Relationships' and 'Trust' aspects of the 'Leander Way'.

Core Value #4 Discussion and Conclusions: "A School Should Strive to Continually Improve Education."

Several critical incidents materialized from this CV query: "Government edicts", "I schedule, you schedule, we all schedule", and "I don't think we are going to break it". The "Government edicts" critical incidents emerged from (a) the state's imposition of a teacher appraisal system perceived to be based on a system of rating and ranking that threatened employee relationships, and (b) the Federal Government's NCLB guideline based on stringent annual progress criteria for special education students. Both of these incidents highlight some of the measures the District was willing to take in response to governmental directives, and in adapting to mandated changes while creating learning environments that served in the best interests of both teachers and students. The first incident resulted in the development of the Teacher Portfolio System which subsequently served as a state-approved substitute for both the TTAS and the later developed Professional Development Appraisal System (PDAS) (Texas Education Code, Section 21.352). The latter incident also illuminates the positive relationships between the administrators and the Board, and that it is not out of the ordinary for central office administrators and the Board to work together as a team towards achieving a common good/purpose (CV#6, collaboration). Both incidents reflect the 'continuous improvement' mindset of

the board and administration and how 'adaptation' to change is lived out in the District.

The 'campus scheduling' incident revealed how one campus focused on using a systems approach, through the solicitation and inclusion of teacher input in designing a master schedule to meet the needs of the students. This story reflects the District's 'Continuous Improvement' philosophy at several levels. First, campuses are complex subsystems that must have synchronicity between different programs, departments, and processes and that a 'systems perspective' is useful if not a necessity in reconciling resource and programmatic conflict. Secondly, having input from all stakeholders lends credibility and utility to the final product, thus highlighting CV #2, (stakeholder input in making decisions) and CV #5 (employee involvement in improving the school). Lastly, expect change - what works this year, may not work the next; change is inevitable and the organization must strive to be agile and flexible, which highlights a core value from the Baldrige Criteria (Baldrige, 2008).

The "I don't think we are going to break it" critical incident, illustrates that meaningful improvement occurs when client/customer input is sought and integrated into decision-making (Core Value #2, stakeholder involvement in the determination of needs). The story also illustrates how a District employee 'piloted' an improvement project, which conceivably incorporate elements from Core Values #4 (making changes to continuously improve), #5 (fact based decision-making), and #9 (leveraging systems resources). It should be noted

however, that 'leveraging system resources' is conceivably 'part and parcel' of CV #4 and CV #5. These critical incidents illustrate a range of strategies the District pursued to continuously improve the school environment for students and teachers, and demonstrates how different Core Values rarely work in isolation from others.

Core Value #5 Discussion and Conclusions: "Teachers (Employees) Should Be Active in Improving the Overall School Operation."

One critical incident was uncovered for this Core Value query, "Don't ask if you don't want to know the answer". This critical incident suggests it is not good enough to provide opportunities for input. When input is sought, it must be honored - if offered. The benefits from a process improvement effort communicated an understanding of an aspect of continuous improvement that extended beyond the stated purpose of the activity. The fact that the improvement team's recommendations were honored and implemented meant more to the respondents than the merits of the recommendations.

Core Value #6 Discussion and Conclusions: "Collaboration is Necessary for an Effective School."

The query for this Core Value produced one critical incident, "What's best for kids". The critical incident associated with this Core Value illustrates that

while collaboration and teamwork are highly encouraged and widely practiced in the District, there is room for those who choose not to work in collaborative teams - as long as they are doing “what’s best for kids”, which is the ‘bottom line’ in the Leander ISD.

Core Value #8 Discussion and Conclusions. “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees.”

Two critical incidents were associated with this Core Value, both of which are presented under “It’s not your fault”. One highlighted an incident where an administrator modeled behavior that focused on how systems processes can fail in the delivery or communication of expectations. Another highlighted a District principal’s recognition that an employee of contracted services was floundering in her job due to a system training failure, and the efforts he/she made in intervening with the contracted company to provide assistance. The focus in both incidents was on system failure, one involving communication of expectations and the other with inadequate contracted-services training. These critical incidents suggest that schools should place a high priority on how expectations are communicated and establish a partnership relationship with contracted-service providers.

Core Value #9 Discussion and Conclusions: "Quality Can Be Improved within Existing Resources."

The critical incident extracted for this Core Value is entitled, "A pat on the back". A group of principals exploring the "just4kids" website were so enthralled with the benchmarking process that they failed to recognize how well their own campuses performed. The critical incident reported for this Core Value is not so much about benchmarking as it is about celebrating student and personal achievements. Celebrating benchmarks of achievement can demonstrate how stakeholders care for each other (Saphier & King, 1985), while serving to reinforce the Continuous Improvement culture of the school.

Research Question #4. "How are the Values, Beliefs, and Underlying Assumptions of the Leander ISD (TX) That Sustain and Promote Detert's Nine Core Values and the Philosophy of Continuous Improvement, Manifested through District Artifacts, Creations, and Processes?"

The artifacts uncovered in this study do not indicate the extent these efforts are effective, just that they exist, possess identifiable linkages to and/or support for one or more constructs of Continuous Improvement, and have the potential to have an impact on the operations of the District. However, when

artifacts are juxtaposed with the “espoused values”, the “values in action”, and the ‘critical incidents’, some sense of their intended purpose, use, and effectiveness begin to emerge. The conclusions are drawn directly from the Chapter IV, Research Question #4 findings.

Core Value #1 Discussion and Conclusions: “A Shared Vision and Shared Goals among Faculty, Staff and Administrators Are Critical for School Success.”

The deconstructions for Research Question #4 for Core Value #1 revealed some of the District’s efforts to procreate and sustain its vision, as manifested through widely distributed ‘vision’ documents and supported through the application of Continuous Improvement philosophy, tools, and processes. The ‘Guiding Documents’, Culture Day, the Teacher Portfolio System which includes a Leader Way component, the ‘Five Whys’, interview screening, pilot projects, and process improvement efforts, all suggest identifiable linkages to and/or support for the District’s vision and Core Value #1. All of the identified artifacts contribute to how Continuous Improvement is lived out, and conceivably serve multiple Core Values.

Core Value #2 Discussion and Conclusions: “Educational Needs Should Be Determined by Parents, Community Groups, Students, and All Relevant Stakeholders.”

The Partners in Education Program and ad hoc or performance committees such as the Rezoning and Health Committees are examples of District efforts to garner stakeholder involvement, and both internally developed and outside consultant-based surveys represent other ways the District gathers input from students, parents, and teachers. The ‘voice of the student’ is also heard through the Student Profiles, Student-led Conferences, and ‘canned’ instruments for ascertaining student skills and interests. Vocational and Technical Education teachers and program specialists meet with 8th grade parents and students through ‘orientation’ sessions to share information about student and job market needs and trends, program offerings, and to determine student interests. The District also maintains articulation agreements with community and technical colleges which serves as an interface between internal and external clients, a means to coordinate and accelerate instruction, and a mechanism to leverage available assets. All of the artifacts and processes referenced to this interview question reflect District efforts to gather stakeholder input for the purposes of making informed decisions, and link meaningfully to Core Value #2 and continuous improvement.

Core Value #3 Discussion and Conclusions: “Improving Education Requires a Long-term Commitment.”

The Guiding Documents serve as the long term commitments for the District. Various other artifacts and processes such as training efforts and opportunities as exemplified through the Continuous Improvement Conference, Book Studies, and the Continuous Improvement Institute, the appropriation of CI concepts and tools such as ‘random acts of improvement’, root cause, and ‘Hot-Dot tool’, grade level teaming efforts, and the use of preventative maintenance, collectively lend credence to the notion that a framework for this Core Value exists and supportive practices in place. The artifacts and processes associated with this Core Value, strongly relate to the Continuous Improvement philosophy in the manner they are lived out, and expand the analysis provided for Research Question #2. The artifacts identified for this Core Value again illustrate utility in supporting multiple Core Values.

Core Value #4 Discussion and Conclusions: “A School Should Strive to Make Continuous Changes to Improve.”

The Teacher Portfolio System represents an alternative to traditional teacher appraisal, one that encourages teachers to experiment with and implement new and innovative tools, techniques, and strategies, or to improve existing strategies, primarily directed at fostering continuous improvement of

student learning and achievement. The portfolios serve to promote professional development, accountability, and instructional improvement or change, but in a manner that teachers in the LISD perceive as less threatening than the traditional professional growth and evaluation systems.

Teachers use the Student Profile system to monitor student academic progress and continuously monitor and adjust instructional strategy (CV #4, continuous improvement), which also contributes to Core Values #1 (sharing a common vision), #2(stakeholder involvement), #3 (making long-term commitments), # 5 (employee involvement in making improvements), #7 (making fact-based decisions), and #8 (focusing on processes). The Content Facilitators support the attainment of the Graduate Profile goals (CV #1 and #3), promote continuous improvement (CV #4), and represent a group of internal stakeholders who are tasked with the responsibility of collaborating with and helping teachers (CV #6). The Student Profile System is annually monitored and adjusted through Plus Delta meetings and other deliberative processes. The artifacts and processes identified in the responses to this question all directly or indirectly support the philosophy of Continuous Improvement and Core Value #4.

Core Value #5 Discussion and Conclusions: “Employees Should Be Active in Improving the Overall School Operation.”

The qualitative portion of the study does not suffer from the same restraints as the quantitative portion, and some of the respondents were quick to associate this interview question with education and training. Artifacts such as the Book Studies and the different training opportunities available to employees focus on improving instructional services, while the process and educational improvement teams, and teacher portfolios demonstrate ways that District employees actually apply the knowledge gained from the education and training. Core Value #5 would be difficult to next to impossible to implement without CV # 6 (collaboration). The artifacts and processes unearthed in the question are consistent with both Continuous Improvement and Core Value #5.

Core Value #6 Discussion and Conclusions: “Collaboration is Necessary for an Effective School.”

Although there is a formal organization chart, the executive administrators often follow a ‘Systems’ approach in carrying out tasks and solving problems. This approach encourages collaboration and cross-functional problem solving. The weekly held ‘Principals’ meeting, Book Studies, grade-level and content level teaming, Student Profile and other benchmarking activities, Process Improvement Teams, Process Rating Tools, brainstorming

sessions, and other data analyses teams, were other artifacts and processes mentioned in response to this question. All of the artifacts and processes of interest are cohesive with aims of Continuous Improvement and CV #6.

Core Value #7 Discussion and Conclusions: "Decision-making Should Rely on Factual Information."

According to Detert et al (2001), "an artifact of this criterion would be a comprehensive, integrated information system", which the Student Profile System fulfills while also potentially contributing to CVs #1 (shared vision), #2 (stakeholder involvement), #3 (long-term commitment), #5 (employee involvement in improving the school), and #8 (focusing on processes). CNS competitive bidding and production records are manifestations of Core Value #7 which also support CV #9 (leveraging system resources). The ISED (Instructional Services Executive Directors) meetings not only support CV #7 (making fact-based decisions), but CV #4 (continuous improvement) and #6 (collaboration), and the Mentorship Program provides a mechanism where decision-making strategies are communicated and explored, along with opportunities to impact CV #1, #4, #5, and #6. The TAKS Learning Academy represents a product of decision-making based on factual information and also supports CV #1, #4, #5, and #6, as logically extended through practice.

The artifacts mentioned in the responses to this question, similarly reach across and demonstrate applicability to multiple Core Values, a claim that Detert

et al make in describing the Core Values as “mutually reinforcing” (2001, p. 203). All of the artifacts or processes identified in this study impact or contribute to multiple Core Values. The artifacts/processes delivered in response to this question are supportive of Core Value #7 and aspects of Continuous Improvement.

Core Value #8 Discussion and Conclusions: “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees.”

District-sponsored education and training opportunities are mechanisms through which employees learn about the philosophy and practices of Continuous Improvement, and Process Improvement Teams (PIT) and Educational Improvement Teams reflect some of the ways these education and training efforts support group action and problem solving. District-wide Process Improvement Teams evolved over time to include positions with differentiated responsibilities, such as Sponsors, Team Leaders, and Facilitators who serve in roles to guide process improvement efforts in accordance with a District-developed process improvement flow chart. The CO administrators and the elementary principal inferred that improvement efforts occur more frequently at the campus or ‘micro’ levels and that smaller process improvement efforts gravitated towards more time efficient and less resource demanding strategies such as ‘focus group’ discussions and brief, concentrated, brainstorming sessions. In military parlance, for large process improvement efforts that impact

the entire system and traverse functional, campus, and departmental boundaries, the District prefers to employ the 'big gun' of Process Improvement Teams; for smaller campus and departmental efforts, focus groups and other short-term intensive brainstorming approaches are the decision-making implements of choice.

Stories of events and people have the potential to transmit an organization's beliefs, values, and culture (Deal & Peterson, 1999), and activities such as 'Culture Day', District-produced videos, the Continuous Improvement Conference, and Teacher Portfolios, serve to distribute these stories and therein promote and sustain the District's culture. Cultural idioms of support combined with the expressions associated with the Continuous Improvement Philosophy and Tools, contribute to the values, models of behavior, and technologies that characterize the culture of the District. Student-led Conferences again appears and highlights the potential for this artifact to reflect multiple Core Values, and arguably ranks with Process Improvement Teams in supporting all of the Core Values. All of the identified artifacts/processes are consistent with Continuous Improvement and Core Value #8.

Core Value #9 Discussion and Conclusions: "Quality Can Be Improved within Existing Resources."

Program evaluations using a 3 year PDSA cycle are commonplace in the District. The Continuous Improvement Conference is again referenced as a

resource that promotes process improvement, focuses attention on customer needs, and emphasizes establishing and sustaining the quality of service deliverables. Bob nostalgically recalled the prevalence of Storyboards that were prominently showcased at earlier CI Conferences. Responses to Question #9 included references to Storyboards, Student-led Conferences, Process Improvement Teams, and the Plus Delta tool. While the researcher uncovered material artifacts, creations, and processes that associate with the intent behind CV#9, these same phenomena also draw linkages to other Core Values.

Research Question #4 Summative Analysis and Conclusions

Research Question #4 concludes with a summative analysis of all the uncovered artifacts and creations (Table 66). Eight of the identified artifacts link to and/or have the potential to support all Nine Core Values: The LISD Learning Model (as an ideological template for driving practice), the Continuous Improvement Conference, Continuous Improvement Institute, Process Improvement Teams, Educational Improvement Teams, Student-led Conferences, Story Boards, and 'Employee Education'. On the surface, it appears that Core Value #4 (A school should strive to make continuous changes to improve education), was the least referenced by the respondents. However, underlying the survey descriptor for this Core Value, is the 'continuous improvement' intent (Detert et al, 2001), and under this 'expanded' scope are

linkages to many incremental and breakthrough improvement strategies and efforts, and therefore achieves the highest 'Researcher Referenced' tally.

The Leander ISD Learning Model did not exist at the time of the researcher's field studies, but emerged in the interim between the field studies and the completion of Chapter IV, and is purposefully included to illustrate the efforts made by the administration to continuously refine and improve the framework guiding the District's vision and practices. In similar fashion, 'Employee Education' and training is not a conspicuous element in the survey descriptors nor was it expressly framed in any of the 24 interview questions, although the topic appears in the Core Value #5 ruminative material from the Detert et al 2001 article and serves as a contributory factor in 'determining teacher capacity' from the Detert & Pollock 2008 publication. The quality literature is very emphatic about the importance of employee education and training (Table 6, Core Concept #7) and the topic appears as a recurrent theme throughout many of the interviews, expressed as individual beliefs, as well as through actual District training events, activities, conferences, workshops, seminars, retreats, and Book Studies, etc.

The District's emphasis on employee education and training , appears somewhere in the collective responses and triangulation materials gathered for every Core Value for Research Questions #1, #2, and # 4. Furthermore, 'Employee Education', as a generalized expression that encompasses all of the District's formal professional development and training efforts (Appendix, B15),

was among the top respondent-referenced artifacts depicted in Table 66, as was the Continuous Improvement Conference (which is encompassed within these efforts), and the Student Profiles – each accruing four ‘shaded’ checkmarks across the horizontal grid.

In viewing the vertical columns of the grid (Table 66), Core Value #8 (focusing on processes), garnered the highest respondent count at 18, with Core Value #3, long-term commitment, representing the second highest at 16. The surprising and relatively high count for CV #3 may be linked to the prolific number of ‘Guiding Documents’ that serve as frequent reminders of the long-term goals of the District, and the different mechanisms, tools, and techniques, and training efforts through which the vision goals are frequently brought into focus. Core Value #2 accumulated the fewest artifact references from the respondents, but as suggested in the analysis for Research Question #2, should not be interpreted as a lack of interest on the part of the District, as the Partners in Education Program alone, constitutes a significant outreach effort to garner input, information, and support from ‘outside’ stakeholders.

Taken as a whole, the uncovered material artifacts, creations, and processes and the manner in which they are deployed, suggest that the Leander ISD represents an organization that is relatively mature in its implementation of QM/CI. To achieve this level of maturity requires a support infrastructure of considerable depth and scope, and years to gestate. Any school desiring to travel down the QM/CI path, should first focus on developing infrastructure

support and then exercise the patience to allow it to mature, making adjustments and fine tuning processes along the way. Figuratively speaking, Quality Management/Continuous Improvement resembles a journey more than a destination (Ayers, 1993; Hawkes & Adams, 1994; Shin, Kalinowsky, & El-Enein, 1998; Barnes, 2008; Keller, 2008).

Section 2. Evaluation of Institutional Values through the Organizational Culture Framework: An Analysis of the Nine Core Values proposed by Detert, Louis, and Schroeder (2001)

Section 1 of Chapter V presented discussions and conclusions designed to specifically address the four research questions of the study. Section 2 reconfigures this information based on a holistic analysis constructed from across the research questions and the quality literature, viewed through the organizational culture framework proposed by Schein. The following analyses focuses on coherency and consistency (or the lack thereof) across Schein's three levels of culture: (1). Espoused values, (2).Practices (that reflect the norms of behavior), and (3). Artifacts, creations, and processes that support QM/CI values and actual practice in the District. The researcher's decision on whether or not to keep or eliminate a Core Value depended on several factors besides the outward intent of the descriptor statement: (1). the underlying intent specifically extracted from the 'explanatory' material accompanying the

descriptor statement, (2). the extent actual practices could be identified in the LISD that were manifestly representative of the Core Value and regularly used, and (3). the extent a Core Value serves as a complement to other CVs.

Secondarily, in those situations that were 'hard to call', the researcher also looked at the relationship to the Core Constructs from Table 6, and the extent the Core Value rose to the level of distinctiveness characteristic of Core Values/Principles/Concepts as derived from the Baldrige, ISO 9000, and the EFQM (Table 4). The goal of this section is to reach across the totality of findings and conclusions from all four Research Questions to assess the viability of each Core Value, as lived out in the organizational culture of the Leander ISD.

Core Value #1 Discussion and Conclusions: "A Shared Vision and Shared Goals among Faculty, Staff and Administrators Are Critical for School Success."

This Core Value is a reflection of Deming's admonition to "Create a constancy of purpose toward improvement of product and service" (p. 23). "Vision grabs", initially the leader, and then spreads throughout the organization through effective communications that convey the meaning of the vision (Anderson, 1994, et al, p. 26)... "it animates, inspirits, and transforms purpose into action" (p. 29). A common culture serves as the glue that promotes integration across the organization and encourages identification and sharing of information and resources, "something that never occurs without shared values"

(Tushman, & O'Reilly, p. 288). Detert, Louis, and Schroeder assert that one of the cultural values critical to school success, is having a shared vision and shared goals.

Research Question # 1 indicated that aside from the CO administrators and the principal, the District's vision as manifested through 42 goals, was not consistently and uniformly espoused across the interview profiles, and that some groups were more familiar with or preferred some 'Guiding Documents' over others. Collaboration/teamwork was the most commonly referenced goal in the interviews. Research Question # 2 revealed that the District expends considerable effort in broadcasting the District's vision through a variety of publicized efforts and training, although the SF employees do not generally receive the same type or level of training as the District's educators. Research Question # 3 indicated that CI-specific culture training, administrator modeling of vision goals, cooperative intra-campus efforts, total employee inclusion at celebratory events, principal leadership, and departmental leadership in reaching across language barriers, all serve to promote the District's vision. The critical incidents revealed salient practices that relate directly to the intent of the descriptor statement. For Research Question # 4, the 'Guiding Documents', Culture Day, the Teacher Portfolio System which includes a 'Leader Way' component, the 'Five Whys', interview screening, pilot projects, and process improvement efforts, all link to and/or support the District's vision, goals, and the aims of Core Value #1. The District's vision was expressed through four Guiding

Documents consisting of the Graduate Profile, the Ten Ethical Principles, the Leander Way, and the Four Challenges.

As revealed in the conclusions from Research Question #2, the task of acculturating vision goals is more difficult for large and/or rapidly growing school systems, and for schools with a complex set of vision goals that require a longer timeline for assimilation. Furthermore, inconsistencies in the delivery mechanisms and/or frequent changing of emphasis among the vision goals may create accompanying 'hotspots' among and between workgroups, where some goals are preferred or apprehended over others, and different work orientations may feel a greater affinity for or more easily accommodate some Core Values and vision goals over others.

Vision is often discussed in the quality literature through the context of visionary leadership (Bennis & Nanus, 1997) and that "it is the leader's responsibility to create and communicate a vision to move the firm toward continuous improvement" (Anderson et al, 1994, p. 473). Had this Core Value been expressed solely through the 'visionary leadership' perspective, the results would have been more even more conclusive. As gleaned from interviews, impromptu conversations, and administrator-led Continuous Improvement Conference presentations, the CO administrators and principal clearly demonstrated a comprehensive grasp of QM/CI philosophy and practice, and were enthusiastic champions and defenders of the District's vision.

Another point that needs to be examined in assessing the viability of CV #1 as a construct for QM/CI is whether or not it interacts with and mutually supports other Core Values. Detert, Louis, and Schroeder claim the Core Values are mutually reinforcing and that “we would expect them to be at least modestly related when observed in the organization” (2001, p. 202). The findings and conclusions from all four Research Questions, suggest that Core Value # 1 is interactive with Core Values #2 (Educational needs should be determined primarily by parents, community groups, students, and other stakeholders), #5 (Teachers [employees] should be active in improving the overall school operation), and #6 (Collaboration is necessary for an effective school).

Determining the viability of Core Value #1, as lived out in the Leander ISD, presents a challenge as the analysis must negotiate many twists and turns. Detert et al raise the bar for this Core Value by stating, “A shared vision and shared goals requires that all staff members know and understand the organization’s vision and are willing to align their behavior accordingly” (2001, p. 193). The ‘Guiding Documents’ and associative goals, clearly represent the District’s vision. However, the researcher contends it is unreasonable to expect all new and fledgling employees to acquire a comprehensive grasp of the District’s complex vision with 42 goals and a working knowledge of Continuous Improvement, within a short year or two of exposure to the District’s culture and training.

In examining the participation rates in the survey and interviews, the “0-2 years” experience group represented respectively 33.8% and 44.4% of the respondents (from Table 53, and Table 61), which obviously influenced the end results from both research methodologies - manifested as a higher standard deviation for the former (Table 14) and greater fragmentation of beliefs expressed in the latter. Arguably, the viability of Core Value #1 cannot be fully evaluated, absent any consideration of the experience factor, for which the descriptor statement and expanded intent make no allowance.

It is reasonable to assume that the “0-2 years” group did not have the time to assimilate a working knowledge of how the vision goals and Continuous Improvement fit together in actual practice. While the “3-7 years” group scored slightly worse, both groups scored in the third quartile between the “significantly embraces” and the “somewhat embraces” points on the Likert scale (Table 14). The “8 or more years” experience group outscored both of the other groups scoring relatively close to the “significantly embraces” point on the Likert scale, and rivaled the administrators in vector directionality (comparing Figure 5 with Figure 7). Again, the experience factor appears to play a significant role in influencing the outcomes for this Core Value.

The administration engages many strategies to share and transmit the vision goals and the tenets of Continuous Improvement, including publication efforts, education, training, and modeling of behaviors, and there is a plethora of identified artifacts, creations, and processes that promote the District’s vision

and goals. Clearly, any deficiencies in how CV#1 is lived out in the District, do not stem from lack of administrative effort, enthusiasm, or shortage of strategies.

As acknowledged by Detert et al, this Core Value is not recognized as a key quality value in the Baldrige Education Criteria (2001). CV #1 is not outwardly visible in any of the District's 'Guiding Documents', it does not appear as a separate Core Concept refined from the researcher's review of the literature (Table 6), it fails to make allowance for the 'experience' factor, and the quality literature usually associates 'constancy of purpose' with visionary leadership. Additionally, the findings suggest that the institutional impact of CV#1 is influenced by the size and growth rate of the organization, the complexity of the organization's vision and goals, and by work orientation within the organization. Large, fast-growing school districts, with a complex vision and many associative vision goals, will most likely experience difficulty in realizing this Core Value.

On a more optimistic note, the findings suggest that vision goals that tap into the "soft" orientation of QM/CI, i.e., client/customer focus, training, teamwork, employee participation, and culture change, are more likely to be consistently and universally assimilated. "Life long learning" and "Doing what's best for kids" are some of the expressions that were oft repeated by administrators and teachers alike, and teamwork and collaboration efforts are widespread in the District. Also, the findings and conclusions from all four Research Questions, suggest that Core Value # 1 is interactive with Core Values

#2 (Educational needs should be determined primarily by parents, community groups, students, and other stakeholders), #5 (Teachers [employees] should be active in improving the overall school operation), and #6 (Collaboration is necessary for an effective school).

In summary, the District's vision documents and associative goals were cognitively imbedded and ardently supported among the interviewed senior administrators, and were conspicuously publicized throughout the District, shared through a variety of training and professional development efforts, and reinforced through celebratory events, cooperative ventures, and demonstrated leadership behaviors. However, knowledge of the District's vision and vision goals, was only partially realized among the teachers and SF employees, and most incomplete among the inexperienced employees. In the researcher's opinion the positives outweigh the negatives, considering the percentage of inexperienced employees that participated in the study and the District's overall accomplishments in promoting and sharing its vision when belabored by the District's size, unrelenting growth, and complexity of vision.

However, one should approach the findings with caution. First, the researcher acknowledges that the research design of the study may not contain the specific mechanisms or methodologies to best uncover the organization's underlying cultural assumptions. A deep and immersive ethnographic study would have conceivably exploited this level of culture more thoroughly and revealed patterns and consistencies missed through surveys, interviews,

document reviews, and abbreviated site observations. Second, the organizational culture literature clearly supports the notion that it is critical for organizations to have a shared vision that aligns purpose with strategy and action across the system (Detert et al, 2001). But, this perspective clashes somewhat with the quality literature where the visionary leadership dynamic is championed (Baldrige national quality program: Educational criteria for performance excellence, 2008). Had this Core Value been framed solely from the visionary leadership perspective, the District's practices and beliefs would have demonstrated even greater connectivity and traction. The collectivity of findings in the District, combined with the aforementioned caveats, merit the retention of CV #1 as a viable Core Construct, provided one of the 'underlying intent' statements is adjusted to accommodate a more realistic expectation for inexperienced employees. The underlying intent statement could be changed to read, "A shared vision and shared goals requires that all employees strive to know and understand the organization's vision and are willing to align their behavior accordingly".

Core Value #2 Discussion and Conclusions: "Educational Needs Should Be Determined Primarily by Parents, Community Groups, Students, and Other Stakeholders."

This Core Value focuses on the QM tenet of "customer-driven quality" and examines the interface between decision-making input and authority regarding

students and their learning needs (Detert, et al, 2001). The idea conveyed is that “the needs and requirements of various stakeholders must be the primary determinant of organizational actions” (Detert, et al, 2001, p. 194), which borrows from the TQM dispensation that “Quality is what the customer says it is” (Marchese, 1993, p. 10).

Research Question #1 indicated that District employees overwhelmingly espoused the idea of gathering and considering input from both inside and outside stakeholders, but most believed that the final decision-making should be left to administrators and professional educators. Research Question #2 revealed that in fact, a broad range of effective strategies were used to involve inside and outside stakeholders in educational decision-making, ranging across a continuum from ‘passive and impersonal’ to ‘active and personal’ (Figure 14). Research Question #4 revealed more detailed information about the specific mechanisms used to involve inside and outside stakeholders in decision-making.

In refining the intent behind this Core Value, Detert, Louis, and Schroeder state, “In learning-centered education, students, teachers, parents and community groups should have a substantial voice in the curriculum and programs offered by the school” (2001, p. 191). Detert et al further refine the intent by supplying the following proviso:

Being “customer driven” does not mean satisfying every demand from every stakeholder, nor does it mean abdicating professional judgment: the consequences of such behavior would undoubtedly result in biased, inchoate and inequitable educational programs. It means that the needs and desires of

stakeholders are to be taken very seriously in designing and carrying out educational programs (2001, p. 194).

The findings and conclusions suggest that this Core Value possesses viability as a Core Construct, but should perhaps be reworded to more accurately reflect the underlying intent, i.e. "Students, teachers, parents, and community groups should have a substantial voice in the curriculum, and programs offered by the school" (Detert et al, 2001, p. 191).

***Core Value #3 Discussion and Conclusions: "Improving Education
Requires a Long-term Commitment."***

The "long-term" commitment value is not universally endorsed by the QM literature, but does convey an emphasis on a longer time horizon which is contrary to the struggles many teachers face in keeping students engaged on a daily basis and the emphasis on short-term improvements emphasized by state accountability tests (Detert et al, 2001).

Research Question #1 revealed that the CO administrators generally consider the District's 'Guiding Documents' and the Continuous Improvement philosophy as long-term commitments, which link this Core Value to CV #1 (shared vision) and CV #4 (continuous improvement). Some of the respondents associated training and/or professional development with CV #3, as both a manifestation of long-term continuous learning commitments, and a means through which long term commitments become memorialized. Research

Question #2 revealed at least six strategies the District engages to either focus on long-term commitments or minimize the negative impact from short-term commitments. RQ2 also uncovered an anomaly among the employees with 3-7 years of in-District experience that suggests these employees may often drift through a 'disillusionment' period where they are overwhelmed by the complexities of the District goals and the Continuous Improvement philosophy and how the goals and philosophy relate to practice. A recommendation was subsequently offered by the researcher to 'stage' training according to years of experience or accumulated knowledge. And finally, work orientations that are production-line oriented or that depend on a regular supply of material resources, are more likely to gravitate towards short-term commitments. However, even these employees viewed their jobs from the long-term perspective of always striving to meet the needs of kids and/or the teachers.

Research Question #3 uncovered an unexpected relationship between long-term commitment and honoring stakeholder input and distributing ownership among all contributing stakeholders. Research Question # 4 identified nine different artifacts/processes that either directly or indirectly contribute to or support the maintenance of long-term commitments. The Chapter IV findings and Chapter V conclusions, and the inferred linkages with other Core Values, collectively suggest that Core Value #3 qualifies as a viable Core Construct, as lived out in the Leander ISD.

Core Value #4 Discussion and Conclusions: “A School Should Strive to Continually Improve Education.”

This Core Value is a reflection of Deming’s enjoiner “to improve constantly and forever the system of production and service” (2002, p. 23). Core Value #4 “represents a mind-set in which things are never viewed as good enough” and the organization is constantly looking for ways to improve (Detert et al, 2001, p. 195).

Research Question #1 revealed a wide range of beliefs espoused by the interview respondents, with the CO administrators enthusiastically embracing change, and the remaining participants varying in their responses from analytically and purposefully predisposed in the planning for it, to laissez faire acceptance, to accepting it if in manageable ‘bites’, to reserved caution, to preferring a predictable and consistently stable production environment. The innovation diffusion scholars contend that such variation is to be expected, based to a large extent on individual perceptions of and accommodation to fear and blame. Research Question #2 unveiled the ‘hard’ and ‘soft’ orientations attributed to QM/CI and revealed five primary strategies used in the District that support the implementation of ‘continuous improvement’. Heading the list of strategies was the intensive training the District provides in promoting Continuous Improvement, and the researcher’s analysis revealed the importance of training and collaboration across work-orientation boundaries. Also, successful continuous improvement efforts are difficult to envision and are

unlikely to transpire absent contributions from and interaction with one or more of the other Core Values. Conceptually, Core Value #4 invites the integration of all of the Core Values.

Research Question #3 unveiled a critical incident that suggested direct interaction between CV #4 (continuous improvement), CV #2 (stakeholder involvement in the determination of needs), and CV #5 (fact-based decision-making). Research Question #4 provides an in-depth description of how the Student Profiles, Teacher Portfolio System, and Content Facilitators promote 'continuous improvement' and how these District creations involved other Core Values. Analysis of the evidence from the findings and conclusions suggest that Core Value # 4 resides as the cornerstone of QM/CI philosophy and in practice interacts the most with other Core Values. Core Value #4 qualifies as a viable Core Construct, as lived out in the Leander ISD.

Core Value #5 Discussion and Conclusions: "Teachers (Employees) Should Be Active in Improving the Overall School Operation."

The QM literature is somewhat divided with respect to how this Core Value is lived out. One camp stresses the Deming Management Method where cooperation, learning opportunities, and employee fulfillment are emphasized (Anderson, Rungtusanatham, & Schroeder, 1994), another calls for teamwork (Dean & Bowen, 1994), while a third perspective cites professional development

as the key component through which employees are valued (Barth, 1990; Beck, 1994, as cited by Detert et al, 2001, p. 196).

Research Question #1 revealed that the CO administrators and principal believed that they influenced school improvement at the District level, and all but one of the remaining respondents believed that they had significant roles in influencing the operations in their classes, grade level teams, or department, the one exception believing that she had a role but that it was limited by operational guidelines and manpower. Employee development and training appears throughout many of the educator responses across virtually all the Core Values, which suggests that the training and professional development component serves a paramount role in the support of Continuous Improvement, to the extent that it should be considered as a separate “Core Value”. The findings bolster the notion that employee involvement in improving the school is more likely to become realized and functionally effective at the smaller divisional levels within the organization, i.e. campus, department, and grade-level teams.

Research Question #2 revealed seven strategies that highlight the implementation of this Core Value, and the role of training is pronounced as evident through the many training and professional development opportunities provided, and highly valued by the interviewed educators. The findings and conclusions suggest a positive correlation exists between leadership commitment/longevity/stability and the establishment and sustained organizational health of a Continuous Improvement culture, which in turn affects

active and personal involvement of employees in contributing to school improvement. The findings and conclusions also suggest that the successful and sustained implementation of Continuous Improvement depends on the following: (1).The establishment of professional work relationships of mutual respect and trust, (2). Time for these relationships to become solidified and reinforced, (3). Shared training tied to relevant practice, and (4) Shared experiences comprised of both failures and successes. And finally, Core Value #5 would be difficult to next to impossible to implement without CV # 6 (collaboration). Collectively the findings and conclusions from the four Research Questions suggest that Core Value #5 resides in the District as a viable construct.

Core Value #6 Discussion and Conclusions: “Collaboration Is Necessary for an Effective School.”

According to Detert et al, Core Value #6 “explicitly focuses on the importance of interdependency for achieving maximum effectiveness” and centers “on the belief that collaboration leads to better decisions, higher quality, and higher morale” (2001, p. 197).

The Research Question #1, Core Value #1 (shared vision) interview responses suggest that ‘collaboration and teamwork’ serves as a strongly espoused value for transmitting the shared goals and values of the organization and that a symbiotic relationship exists between these two Core Values. A shared vision is virtually impossible to achieve outside of collaboration. The

central office administrators believe this Core Value to be the most critical component of the Continuous Improvement philosophy, best realized in environments and work relationships of trust. While the 'building relationships of trust' component of the Leander Way and the kindred 'drive out fear' principle from Deming are not represented in the Core Value descriptors, they do arguably reside as catalysts for the successful acculturation of this Core Value. Research Question #2 identified at least ten different varieties of efforts that support this Core Value. The conclusions indicate that collaboration occurs most often within homogeneous workgroups, District educators increasingly resort to 'focus group' alliances where consensus is sought through short, concentrated, brainstorming sessions, smaller collaborative improvement efforts may not have the same level of preparation and safeguards in place as District-wide improvement efforts, new or struggling teachers may have difficulty reconciling their own teaching style and classroom strategies with those of the team, and some teachers may be less verbal and outgoing in expressing their viewpoints in a team environment. Regardless, collaboration is widespread in the District and the CO administrators consider it the most essential attribute of Continuous Improvement.

Research Question #3 revealed that while collaboration and teamwork are highly encouraged and widely practiced in the District, there is room for those who choose not to work in collaborative teams - as long as they are doing "what's best for kids", which is the 'bottom line' in the Leander ISD. Research

Question #4 revealed eight varieties of collaboration efforts and the CO administrators prefer a 'systems' approach where tasks are often shared across job titles and the distinction between positions is often blurred. Collectively the findings and conclusions from the four Research Questions suggest that Core Value #6 resides in the District as a viable construct.

Core Value #7 Discussion and Conclusions: "Decision-making Should Rely on Factual Information."

This Core Value originates from the 'management by fact' concept emphasized in the Quality Management literature (Detert et al, 2001), and is based on "the key idea that any system based on cause and effect requires measurement and data to make improvements" (pp. 198,199).

Research Question #1 indicated nine respondents believed data should drive decision-making, eight believed decision-making should be based on both data and personal/professional experience, and one believed personal experience should be the dominant driving force. This Core Value appears to cluster more strongly with those teachers who are in close proximity with and who must prepare for grade level or content area TAKS testing. The espoused values were not aligned consistently with Core Value #7 either across or within all groups. However, the across and within group variations do not negate the finding that 17 of the respondents believed that facts and data either drive decision-making, or in some way contribute meaningfully to it. Research

Question #2 revealed that the administrators depend heavily on feedback from other stakeholders and specific data gathering mechanisms: the ISED meetings, the Principals' Meeting, other scheduled Central Office departmental meetings, teacher or employee representatives that devote time and expend effort to collect and report constituent findings and recommendations, and through student and employee surveys. The principals and teachers harvest data through the Student Profile System which serves as an interim measurement between annual TAKS tests. One of the TAKS elementary grade level teachers, and another from special services, use data so frequently and routinely, that there is no longer a distinction between fact-based and experience-based decision making – the two have become mutually inclusive and seamlessly integrated. As one teacher observed, “The District is data crazy!”, and the findings support this assertion. However, teachers in the early primary grade levels where there are no TAKS tests, tend to rely more on experience-based decision-making. The Research Question #2 conclusions related this Core Value to the “hard” orientation of Continuous Improvement and revealed that one of the data management problems observed in the District is that teachers sometimes have difficulty in developing a meaningful action plan from the data they harvest. This particular problem seems more prevalent among new or inexperienced educators.

Research Question #4 covered an extensive range of artifacts, creations, and processes used in the District that support or link to CV #7 and added

details not included in RQ #2. For instance, the following artifacts associated by the respondents to CV #7 also link to other Core Values as revealed in Table 66: The Instructional Services Executive Directors Meeting (CV #s, 1, 4, 6,), Mentorship Program (CV #s 1, 4, 5, and 6), Student Profiles (CV #s 1, 2, 3, 4, 5, 8, 9), TAKS Learning Academy (CV #s 2, 4, 5, and 9), Plus Delta Tool (CV #s 4, and 9), Competitive Bidding (CV #s 4, and 9), Production Records (CV #s, 4 and 9), Data Day (CV #s, 4 and 5), Data Rooms (CV #4 and #5). Collectively the findings and conclusions from the four Research Questions suggest that Core Value #7 resides in the District as a viable construct.

Core Value #8 Discussion and Conclusions: “Quality Problems Are Caused by Poor Systems and Processes, Not by Employees.”

This quality value “represents the belief that people want to do a good job, but are often thwarted by the system in which they work...poor systems can lead to erroneous or incomplete information upon which to act” (Detert et al, 2001, p. 200). Research Question #1 uncovered that 15 out of the 18 respondents believed the District leans more heavily towards focusing on processes, and seemed approving of this propensity. This Core Value ostensibly borrows from the “Drive out fear” principle from Deming (2002, p. 23, Detert et al, 2001) and spotlights whether or not an educational system preemptively blames employees when things go wrong, or looks first at trying to identify and correct underlying system or process failures. This is yet another of the Core

values that demonstrates a strong association with Deming's 'Drive out fear' principle.

Research Question #2 revealed three of the District training opportunities that are designed to promote the process-oriented philosophy of the District: The Leadership Academy Retreat, the Administrator Retreat, and the Learning Academy. There is a tendency on the part of the administrators to label 'people' problems as 'special cause' problems and process-related problems as 'common cause' problems. The CO administrators first try to determine if an identified problem originates from within the system or subsystem processes, since 'common cause' problems can have far reaching consequences, impacting multiple individuals, departments, or campuses. Depending on the nature of the problem, a process modification at a single campus or department level may suffice, or for more widely dispersed or serious problems, a process improvement team may be necessary. If the administration determines that the source of a problem emanates from the actions of a person, then the problem is treated as a 'special cause' situation, and any or several of a number of intervention strategies to improve the knowledge base or perspective of the person is usually employed. Four different interview respondents borrowed the "bus" metaphor from Jim Collin's book, *Good to Great*, in explaining how the District accommodates 'people' problems. The idea is that the District will first try to help a person so that they can "stay in their seat", but it might also mean "having to change seats" or position, and in the worst case scenario, the person

might be asked to “leave the bus”. The CO administrators and the principal appeared firm in their commitment to provide a safe and supportive environment so that employees have the freedom to experiment, even to ‘fail forward’, and therein learn from their mistakes. This commitment makes “asking a person to leave the bus” more difficult in the sense that the Leander Way and The Ten Ethical Principles strive to build trust and remove fear, and to “grow and learn together”. Ultimately the solution to this conundrum rests at the core of the LISD Learning Model, that is to “Focus on Student Learning” and make decisions based on “what’s best for kids”.

Research Question # 2 probed the link between CV #8 and Deming’s “Drive out fear” principle and how focusing on people rather than processes energizes the blame dynamic. The overwhelming odds that problems originate from system processes rather than from ‘people’, was also explored. And finally, RQ #2 extracted several practices in the District that highlight CV #8: process and educational improvement teams, at the district-wide, campus, or departments levels that involve both ‘Inside’ and “Joint inside and outside stakeholder involvement, the routine use of the PDSA cycle to annually evaluate program effectiveness, and the appropriation of the QM/CI ‘special’ and ‘common’ cause concepts to aid in the identification of process errors.

Research Question #3 revealed two critical incidents that suggest schools should (1). Place a high priority on how expectations are communicated and (2). Focus on establishing a partnership relationship with contracted-service

providers. Research Question #4 emphasized the importance of District-sponsored employee education and training and revealed the differentiation of responsibilities that accompanies District-wide Improvement team efforts. RQ #4 also revealed that for large process improvement efforts that impact the entire system and traverse functional, campus, and departmental boundaries, the District prefers to employ the 'big gun' of Process Improvement Teams; for smaller campus and departmental efforts, focus groups and other short-term intensive brainstorming approaches are the decision-making implements of choice. Institutional stories about events and people are regularly used in training events, District-produced videos, and Teacher Portfolio projects to promote and sustain the District's culture of Continuous Improvement; cultural idioms of support combined with the expressions associated with the Continuous Improvement Philosophy and Tools, are scattered throughout the institutional landscape and also contribute to the values, models of behavior, and technologies that characterize the culture of the District. Collectively the findings and conclusions from the four Research Questions suggest that Core Value #8 resides in the District as a prevalent and viable construct.

Core Value #9 Discussion and Conclusions: “Quality Can Be Improved within Existing Resources.”

According to Detert, Louis, and Schroeder, this Core Value is based on the following, general QM values:

Improving internal process, focusing on customer’s needs, and preventing quality problems in the first place, can achieve improvements...design quality and prevention leads to better products or services...preventing student failure is less costly (in terms of time, money, and negative effects for student development) than detecting and “fixing” failure late in the educational process...This quality value is related to the idea of the fundamental importance of organizational attitudes about stability versus changing/learning/innovating (Detert et al, 2001, p. 201).

Detert, Louis, and Schroder, explain that this Core Value includes the following goals/strategies: (1). “Focusing on internal processes”, (2). “Focusing on customer needs” and (3). “Preventing quality problems from occurring in the first place” (p. 201). Expanding the underlying intent further, Detert et al state:

Put simply, if one does not believe that quality can be improved with the same or fewer resources then status quo behavior is the result when resources remain the same. If one believes that quality can always be improved within any set of resource constraints (this being the QM value), then one is always in search for ways to improve the system (p. 202).

So ‘doing more with less’ adds yet another underlying intent to what is already a crowded agenda. Reconciling the primary descriptor statement with the underlying intent is a task that demands assiduous pursuit because incongruity between the two has the potential to create goal ambiguity.

Research Question #1 revealed that none of the CO administrators believed system processes were optimized and if they ever were, it was for only a fleeting moment. However, all of the administrators and teachers believed that

many different kinds of efforts are made to get the most value from dollars spent. However, the SF employees (three out of the four respondents) revealed beliefs that correlated improvement with the availability of resources. It appears that departments that are evaluated daily on the quality of material goods and services are more prone to associate improvement with the availability of resources. Reconciling the different work orientations that exist between departments and/or job functions may be one of the most challenging aspects of system-wide Quality Management implementation (Kekäle & Kekäle, 1995; Kekäle et al, 2004).

Research Question #2 uncovered seven strategies (p. 562) that have direct links to QM/CI philosophy, strategies, tools, or techniques which are consistent with the multiple 'underlying' intents of CV #9. However, these identified QM/CI strategies/tools fit just as amenably with the full range of explicit goals and underlying assumptions associated with other Core Values, i.e. CV #2 (educational needs should be determined primarily by parents, community, groups, students, and other stakeholders), #4 (continuous improvement), #5 (employee involvement in improving the school), #6 (collaboration), and #8 (focusing on processes rather than people).

Furthermore, the outward intent expressed by the descriptor statement (Quality can be improved within existing resources) does not appear as a separate Core Concept refined from the researcher's review of the literature (Table 6), nor is it conspicuously revealed as a distinct Core

Value/Principle/Concept in the 2008 Malcolm National Quality Program Performance Criteria for business or education, the ISO 9001-2000 Core Principles, or the EFQM Fundamental Concepts (Table 4). However, in deference to Detert et al, “Work Systems Design” is included as a scored item among the 2008 Baldrige Evaluation Criteria, but is only assigned a maximum of 35 points from a possible total of 1000 points, whereas a separate item under the same group criteria, “Work Process Management and Improvement” is assigned 50 points. The Central Office administrators demonstrated a propensity to discuss this Core Value from the “Work Process Management and Improvement’ criterion which generically connects to CV #4 (continuous improvement) and CV #8 (focusing on processes rather than people), and all but one of the underlying QM/CI goals/strategies attached to this CV by Detert et al, arguably link to various aspects associated with process management or improvement. Perhaps more telling is the difficulty Detert, Schroeder, and Cudeck experienced in developing and statistically validating this Core Value for the SQMCS (The School Quality Management Culture Survey): “the estimates for the ninth factor – that attempting to assess ‘Quality at the Same Cost’...were unstable (p. 319)...the results consistently suggest we have failed at this stage to find multiple items representing this idea (CV #9) in educational settings” (2003, p. 325).

The Leander ISD represents what most observers would classify as a ‘mature’ organization in the practice of QM/CI. Yet in combing through all four of

the District's Guiding Documents and the associative 42 vision goals, only two indicate associations with the descriptor statement and these links are nominal at best; the Graduate Profile states, "To be a productive learner: each LISD graduate demonstrates skill in managing systems and resources, such as money, materials, space, and people", while the 'Leander Way' champions "Create Excellence". These particular vision goals are common to many management and organizational improvement perspectives, and 'doing more with less', 'maximizing assets', or 'creating excellence' can scarcely be declared as phenomena exclusive to QM/CI.

Research Question #3 reported a critical incident entitled, "A pat on the back" which cautioned against obsessing on benchmarking and 'what others are doing' to the extent that local student and personal achievements are ignored or overlooked. Research Question #4 focused on showcasing the PDSA cycle, the Continuous Improvement Conference, classroom storyboards, Student-led Conferences, Process Improvement Teams, and the Plus Delta Tool, all of which represent various manifestations of organizational learning and/or process management/improvement. Core Value #9 links to other Core Values, i.e., CV # 5 (Employee involvement in improving the school) and CV #6 (collaboration), and borrows aspects from CV #2 (Educational needs should be determined primarily by parents, community, groups, students, and other stakeholders), CV #4 (continuous improvement), and CV #8 (Quality problems are caused by poor systems and process, not by employees). Arguably, Core Value #9 represents

an extension of CV #s 2, 4 and 8, rather than serving in a complementary role or as a mutually supportive association or link.

The researcher has no disagreement with the underlying intent behind Core Value # 9, as “Focusing on internal processes”, “Focusing on customer needs” and “Preventing quality problems from occurring in the first place” (Detert et al, p. 201), are consistent with the philosophical tenets of QM/CI. Nor is the researcher in disagreement with the outward intent of the descriptor statement, “Quality can be improved within existing resources”. Certainly, systems can make improvement by leveraging assets or ‘doing more with less’. The question is whether or not the outward intent fits more cohesively with some other aspect of quality management.

Hackman and Wageman make a compelling case about organizational learning that relates directly to the outward intent of Core Value #9.

There are two quite different varieties of human learning. One variety, that on which TQM philosophy is based, is the wired-in human inclination to grow and develop in competence. This inclination is well known to anyone who has observed the joy experienced by very young children as they learn to pull themselves to a standing position in their cribs, take their first unsupported steps, or use language to express their wishes and feelings. The other variety is the robust but often-overlooked capacity of human organisms to adapt to the many problems that life inevitably brings. The human organism is capable of learning to make do even under conditions of profound disappointment and adversity, such as losing a spouse, a limb, or a means of livelihood.

These two opposing inclinations – to stretch and grow, and to adapt and make do – are present in all of us. Schools and work organizations are among the most important settings in which these opposing varieties of learning are engaged and played out...An excessive emphasis on either type of learning can be dysfunctional. Too strong an orientation toward adaptation can result in what commonly has been found in survey studies of job satisfaction at highly controlling organizations. People report on the surveys they are satisfied, but closer analysis reveals that such “satisfaction” mainly expresses their acceptance of a life bereft of opportunities for career and personal growth.

Growth-oriented learning has atrophied for such people, and their organizations are obtaining but a small portion of what they actually have to offer. Too strong an orientation toward personal growth and development also is sometimes observed in work organizations, especially those that are driven by humanistic, democratic, or spiritual ideologies. Members of such organizations may be encouraged to pursue their personal aspirations to such an extent that the capability of the organization to mount efficient collective action is compromised, eventually threatening its very survival. (1995, pp. 330-331).

Peter Senge defines a learning organization as one “that is continually expanding its capacity to create its future” through the integration of “adaptive” and “generative” learning (1990, p. 14), which blends well with Hackman and Wageman’s interpretation of learning, which divides learning into the categories of “adapt and make do” and “stretch and grow”. These ideas correspondingly mesh with those from Sitkin, et al who contend, “The precept of continuous improvement captures the desire of TQM proponents to enhance the reliability and control of performance (e.g. doing things right the first time) and simultaneously reflects the pursuit of enhanced learning and experimentation (e.g., continuous learning) in order for organizations to continue to develop new skills and capabilities” (1994, p. 542). Arguably, “reliability and control of performance”, and “enhanced learning and experimentation, are reflections of organizational learning, the former more representative of adaptation and incremental improvement (single loop learning), and the latter with breakthrough improvement (double-loop learning). Apropos, the Core Value #9 descriptor statement (Quality can be improved within existing resources) and the range of goals associated with the underlying intent, suggest this Core Value more appropriately symbolizes multiple refractions from within the organizational

learning dimension associated with quality management, rather than struggle under the guise of being a distinct construct. Given that 'organizational learning' is not conspicuously present in any of the Core Value descriptor statements, and because the revealed practices and artifacts associated with this CV (Table 66) fall just as easily under the auspices of several of the other Core Values, Core Value #9 fails to exemplify the characteristics expected of a viable, distinct, core construct.

Summative Analysis and Conclusions

The preceding analyses retained eight of the nine Core Values, which to varying extent, were manifested across Schein's multiple levels of culture in the Leander ISD. However two groups of ideas emerged with regularity throughout many of the findings and conclusions that also deserve consideration.

One of the Leander ISD's Guiding Documents is the "Four Challenges". When the field studies began in the spring of 2005, this Guiding Document consisted of the following four challenges:

1. Eliminate the link between economic disadvantage and low achievement, while improving overall student performance;
2. Ensure that all students read at or above grade level;
3. Increase the percentage of students enrolling in and successfully completing our most challenging courses; and,
4. Accomplish the above while maintaining our district's culture of respect, trust, continuous improvement, and learning.

In June of 2008, the “Four Challenges” were revised, but the revision did not significantly alter the intent. As stated on page 7 of Chapter I of this study, “Although the first three goals may be examined as associative phenomenon, it is the fourth that drives the primary focus of this study”. The findings suggest that Challenge #4 can be broken down into two separate ‘culture’ tracks, one involving ‘respect and trust’, the other ‘continuous improvement and learning’, the former linking to “drive out fear and blame’ the latter to ‘organizational learning’.

Employee training and professional development was a recurrent theme throughout many of the interview responses, and the District pursues employee education with a vengeance, hosting over a dozen separate types of learning opportunities, not counting the Teacher Mentorship Program. But training and professional development is of little use if not translated into successful practice. It is interesting to note that the topic of ‘organizational learning’ emerged as a popular subject about the same time that TQM and Continuous Improvement were burgeoning during the early 1990s. Senge popularized the “learning organization” concept (1990), and Hackman and Wageman observed a strong correlation between TQM and organizational learning (1993), as did Barrow (1993), and Garvin (1994). After all, does not Continuous Improvement invite continuous learning? According to Garvin (1994), organizational learning involves six different activities: (1). Systemic problem solving, e.g. Plan, Do, Check, Act, (2). Experimentation, (3). Learning from past experience, (4).

Learning from others, (5). Transferring knowledge, and (6) Measuring the effectiveness of learning from results. The organizational learning process can be defined through a simple definition such as “detecting and correcting error” (Argyris, 1977, p. 116), to a more complex description calling for “shared insights, knowledge, and mental models” that collectively build from “past knowledge and experience” (Stata, 1989, p.64). Knowledge can be acquired and shared from/through internal or external sources and processes, and directed at either incremental or transformative change, through formal and informal means, occurring at the personal and/or collective levels (Huber, 1991; DiBella, Nevis, & Gould, 1996). However, true knowledge is more than just information: “it includes the meaning or interpretation of information, and a lot of intangibles such as the tacit knowledge of experienced people that is not well articulated but often determines collective organizational competence” (Nevis, DiBella, & Gould, 1995, pp. 74-75).

Organizational learning begins with socialization, and proceeds through formal and informal communications, training, professional development, mentoring, coaching, and traverses through planning, benchmarking, experimentation, trial and error, practice, and reflection – it represents the combined collectivities of formal and informal training and accumulated experiences, that operationally coalesce to improve the system and system processes. Furthermore, organizational learning in schools relies heavily on cultures that embrace both continuous learning and continuous improvement

(Leithwood, Jantzi, & Steinbach, 1995). Process improvement can take the form of either incremental or breakthrough improvement which conceptually mesh with Argyris and Schön's 'single-loop' and 'double-loop' learning. The single-loop moniker involves "learning to design actions that satisfy existing governing variables", while with double-loop learning "we learn to change the field of constancy itself" (Argyris & Schön, 1974). Clearly, QM/CI relies heavily on organizational learning.

The conclusions suggested modifications to Detert's Nine Core Values, including a rewording of the underlying intent for CV#1 (shared vision) to accommodate the 'experience factor', a rework of the CV #2 (stakeholder involvement in making decisions) descriptor statement according to underlying intent, and the elimination of CV #9 (quality can be improved within existing resources). The literature review established that Quality Management included an "Emphasis on Employee Education/learning/training" (Table 6, Core Concept #7). The Chapter IV findings and Chapter V conclusions revealed widespread training and professional development efforts in the District (Appendix, B14 & B15) and an enthusiastic support of such efforts by the administrators and teachers. And the literature also supports the notion that the QM/CI philosophy and Organizational Learning (OL) are compatible if not mutually inclusive. The next recommended modification consists of adding a Core Value that addresses the learning dimension of QM/CI, which matches the practices, beliefs, and artifacts of the Leander ISD.

Proposed Core Value #9: Continuous Improvement depends on the free exchange of ideas, knowledge, and experience for the purposes of liberating both incremental and breakthrough improvement.

The proposed Core Value #9 not only addresses the learning dimension but links closely to CV #4 (A school should strive to make continuous changes to improve education), CV # 5 (employees should be active in improving the overall school operation), and CV #6 (collaboration). Additionally, the 'new' CV#9 opens the door for the sharing of best practices and internal and external benchmarking which indirectly address the leveraging of assets.

The next group of ideas that deserve exploration is that of "driving out fear" and the 'elimination of blame'. The "Drive out fear" topic was discussed in and contributed to the findings and conclusions for CV #3 (long-term commitments), #4 (continuous improvement), #6 (employee involvement in making decisions), and #8 (focusing on processes rather than people). System 'blame' was linked to 'Drive out fear' and likewise discussed in CV #s 4, 6, and 8. The "Drive out fear" admonition comes from Deming's 14 Points (2002), and the 'blame dynamic' was linked to the 'fear' factor, and thoroughly explicated as a negative influence on organizations by Scholtes (1998), Madison (2005), and Pawar (2007). The Leander ISD cleverly addresses fear and blame through the Leander Way Guiding Document, which appropriates the "Build Relationships" and "Build Trust" principles. The Ten Ethical Principles also contribute to the removal of fear and elimination of blame through the "Honesty", "Integrity", "Promise-keeping", "Loyalty", "Concern for others", "Respect for others", and

“Fairness” principles. Combined and compounded, these principles can have a profound impact on a school system. For these reasons, the researcher recommends a 10th Core Value.

Proposed Core Value #10: *Continuous improvement is optimized through relationships of trust, guided by principles of ethical behavior.*

This Core Value reflects the practices and beliefs of the Leander ISD, and links to or directly impacts CV #4 (continuous improvement), CV #5 (employee involvement in making decisions), CV #6 (collaboration), and also connects to Core Concept # 9 (Emphasis on Promoting Social Responsibility (Table 6).

Given the proposed changes, one only has to juxtaposition Detert’s original Nine Core Values next to the actual practices and beliefs of the Leander ISD (Table 70), to determine which values are common to both and if any are exclusive to one or the other. The checkmarks under the LISD column represent the manifestation of practices, norms of behavior, and creations present in the District, that are associated with values derived from the Quality Management philosophy. Hopefully the findings and conclusions provide a ‘starting point’ for schools wishing to travel down the QM/CI path, as knowing which Core Values drive the philosophy, is crucial for negotiating a successful journey.

The researcher makes no claims that the results are transferable to other school settings, or that the researcher’s adaptation of Detert, Louis, and Schroeder’s conceptual framework is transferable for non-teacher employees or that the researcher-crafted survey cannot be further refined. The findings of the

Table 70. Common QM/CI Values: As Reflected through Leander ISD Practice and Beliefs, and as Proposed by Detert, Louis, and Schroeder (2001)		
Core Value	LISD	Detert et al
CV #1: <i>Core Value #1. A shared vision and shared goals among faculty, staff and administrators are critical for school success.</i>	√	√
<i>CV #2: Educational needs should be determined by parents, community groups, students, and other stakeholders.</i>		√*
<i>CV #2: Students, teachers, parents, and community groups should have a substantial voice in the curriculum, and programs offered by the school (revised according to associative underlying intent proposed by Detert et al)</i>	√	√**
<i>CV #3: Improving education requires a long-term commitment.</i>	√	√
<i>CV #4: A school should strive to continually improve education.</i>	√	√
<i>CV #5: Teachers (employees) should be active in improving the overall school operation.</i>	√	√
<i>CV #6: Collaboration is necessary for an effective school.</i>	√	√
<i>CV #7: Decision-making should rely on factual information.</i>	√	√
<i>CV #8: Quality problems are caused by poor systems and processes, not by employees.</i>	√	√
<i>CV #9: Quality can be improved within existing resources.</i>		√*
<i>CV #9 (Proposed): Continuous Improvement depends on the free exchange of ideas, knowledge, and experience for the purposes of liberating both incremental and breakthrough improvement.</i>	√	
<i>CV #10 (Proposed): Continuous improvement is optimized through work relationships of trust, guided by principles of ethical behavior.</i>	√	
Total	10	8
Note: √* represents deleted original Core Values Note: √** represents associative underlying intent		

qualitative portion of the study may, to varying extent, transfer to similar settings or similar respondent populations, but researcher judgment must be prudently if not cautiously exercised for such an endeavor, as unlike much of empirical research, it is the obligation of the receiving context to determine applicability.

Recommendations for Further Study

The research design for this case study employed both quantitative and qualitative methodologies, which included surveys based on randomized sampling, purposefully selected interviews, site observations, examinations of school documents, media productions, and school web material, a review of the quality management literature, and a look at the historical development of quality management theory and practice. Such an approach provides multiple triangulation sources for detecting consistencies and inconsistencies useful for revealing patterns and generating findings and conclusions. However, the study was carried out by a lone researcher attempting to understand an organization's culture from an 'outsider' perspective.

According to Schein, the study of culture is best accomplished by integrating both the outsider and insider perspectives.

The outsider cannot experience the categories of meaning that the insider uses because she or he has not lived long enough in the culture to learn the semantic nuances, how one set of categories relates to other sets of categories, how means are translated into behavior, and how such behavioral rules apply situationally (sic)...The insider cannot tell the outsider what the basic assumptions are and how they are patterned because they have dropped out of awareness and are taken for granted. The insider can become aware of them only by trying to explain to the outsider why certain things that puzzle the

outsider happen the way they do or by correcting interpretations that the outsider is making. This process requires work on the part of both the insider and outsider over a period of time (Schein, p. 170)

One possible solution would be to engage an ethnographic study, wherein an outsider immerses herself/himself in the culture over an extended period of time.

Ethnography focuses on the emic or 'insider' perspective and "involves the study of individuals to determine how they themselves define reality and experience events" (Gall, Borg, & Gall, 1996, p. 608). Such an effort could be achieved through a semester or year long internship in an organization where the researcher provides a useful service in exchange for access to the 'inner workings' and machinations of daily routines within the organization. An ethnographic study would in all likelihood provide a more in-depth perspective regarding the viability of all the Core Values, including the newly minted ones derived in this study. Another approach to garner both perspectives, would be to launch a collaborative effort between two researchers, one already an employee of a District representing the insider perspective, and the other not working for the District and providing the outsider perspective. As mentioned in the Methodology Chapter, the researcher viewed the thick descriptions provided in the interviews as a reflection of situational context, and therefore representative of the emic perspective (pp. 118 -119). However, the overall thrust of the research was cast from the etic perspective, and the researcher acknowledges that the research design used for this study is limited in peeling away the layers of rhetoric and behavior that obscure underlying cultural assumptions. A

subsequent, well designed and carefully executed ethnographic investigation could help fill in any gaps that were missed in this study and serve to verify its dependability. Dependability in Naturalistic Inquiry is essential to determining the likelihood the results are repeatable in contexts with similar settings or respondents (Erlandson, et al, 1993).

This study revealed some interesting findings regarding Quality Management/Continuous Improvement theory and practice, but also raised some questions. For instance, Core Value #1 (shared vision) can be approached from either the organizational culture or the quality management perspectives. The former emphasizes shared vision and goals (Detert et al, 2001), the latter senior leadership's role in setting values and direction. The more recent Baldrige Criteria specifically designate visionary leadership as a Core Value (2008 Baldrige Criteria).

In assuming the chicken comes before the egg, one would assume that a shared vision starts with leadership. There are ample clues that the leadership culture within the Leander ISD contributes significantly to how the vision and vision goals are interpreted and lived out. The findings also suggest that leadership culture, organizational culture, and QM/CI culture are interconnected and mutually interdependent. Future research could examine the nexus of these three levels of culture to better understand how the Core Values explicated in this study relate to and realistically shape the leadership culture and administrator behaviors of schools that espouse the QM/CI philosophy. Do some

administrator cultures prefer some QM/CI goals over others? Are these preferred goals somehow easier to translate into practice?

Another issue that arose in the analysis of Core Value #1 (shared vision) is the sophisticated nature of modern education and how correspondingly complex school visions have become. As this study suggests, a vision with a complex set of goals is difficult to assimilate across and within the various membership groups of a District. Do schools that espouse the QMCI philosophy have a more difficult task in reconciling the demands of modern day education and governmental accountability, or is the task easier? At what point does the vision and associative collectivity of goals reach a saturation level such that the attainment of any one goal is handicapped because of competition with other goals, or rendered ineffective because of a constantly changing of emphasis between goals? Given the climate within today's public school systems, is it better to target a few things to do exceedingly well, or be a "jack of all trades", and struggle to do many things moderately well. Unfortunately, today's pressures compel schools to try to do many things exceedingly well, which even for schools that embrace and effectively practice the QM/CI philosophy is an extremely difficult task. As pointed out by Champion, many schools focus almost entirely on accountability testing results as the sole measure of success and neglect teaching and meeting the needs of the 'whole' child (2007). A future study could direct efforts at examining the interface between vision goals and practice to determine which types of goals are easiest to translate into

successful practice. Such a study could compare the goals of QM/CI schools with traditional schools, and then look for and compare demonstrable indicators of successful practice between the two.

Several other findings also indicate a need for further study. Core Value #2 (Educational needs should be determined by parents, community groups, students, and other stakeholders) remains a conflicted topic and further research could explore how and why 'outside stakeholder' involvement draws such a negative reaction from 'inside' stakeholders. How widespread is the belief from 'inside' stakeholders that 'outside' stakeholder involvement in decision-making should be limited, and do QMCI schools accommodate outside stakeholders involvement more effectively than traditional schools? Also, the original Core Value #9 (Quality can be improved within existing resources) could be explored solely from the perspective of "Work Design" to determine if this approbation rises to the same level of organizational influence as the other CVs. Is 'Work Design' a guiding modus operandi and decisive influence in schools that embrace the QM/CI philosophy? Another research direction would be to explore the viability of the 'new' Core Values explicated from this study, namely the 'proposed' Core Value #9 (emphasizing the organizational learning component) and Core Value #10 (removing fear, eliminating blame). Are these two 'proposed' Core Values evident or prominent in other schools that embrace the QM/CI philosophy?

As revealed in the 'Acknowledgements' section of this study, the researcher was heavily involved with Quality Management from 1992 through 2000 while serving in the capacity of superintendent of schools of a midsize school district in south-central Texas. We observed significant improvement in teacher and student morale, and in student academic performance after implementing various aspects of quality management. Most of the QM efforts were driven by 'Seven Constructs', which were pieced together from the quality management literature and quality gurus and thinkers of the period (Appendix B20). However, upon my departure, and within a year's period, much of the Quality Management groundwork ceased to be supported by the new-to-District administration, and within a three year period the "Seven Constructs" were little more than a faded memory.

The Leander ISD represents an organization that has demonstrated stamina and longevity in pursuit of QM/CI, arguably due to stable leadership and the promotion of leadership from within the system. This study strongly suggests that stable, committed, leadership is critical to school improvement and the sustenance of a culture of continuous improvement. These findings along with the researcher's own personal experiences provide kindling for further inquiry. Are school cultures that embrace continuous improvement more susceptible to disruption when key leadership positions are filled 'from the outside'? How critical are 'in house' leadership preparation programs to sustaining the culture of Continuous Improvement and maintaining a healthy organizational climate?

And what are the characteristics of successful QM/CI leadership preparation programs in public schools that are established for the purpose of sustaining a QM/CI culture?

Closing Thoughts

Chapter I reveals the diversity of opinion regarding the efficacy of Quality Management as theory and practice, and moreover there seems to be no shortage of distracters who dismiss or marginalize the usefulness of the philosophy in educational settings (Detert et al, 2003). The findings and conclusions from this study generally challenge such notions as the Leander ISD has deployed the philosophy with considerable positive effect. However, nuances associated with the philosophy continue to surface and the potential for exploration remains fertile for future research endeavors. The 'new' QM/CI values proffered in this study, as explicated through the organizational culture framework, may portend others to follow. According to Max DePree, "Values are taken for final statements when, in fact, they are only the beginnings" (p. 144).

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APPENDIX A1

Distribution Number _____

INFORMATION SHEET

Continuous Improvement in the Leander ISD: A Quantitative and Qualitative Assessment of Culture and Core Values

The purpose of this study is to determine the extent Continuous Improvement values are understood, communicated, and lived out in the Leander ISD, and what processes exist in the District to support those values. The results of the study could have an impact on the understanding and management of the processes that contribute to a continuous improvement culture and enable the District to more effectively meet student and staff needs. Data collection for the study will consist of a nine-item survey, interviews, and researcher observation.

You were selected to be a possible participant through random selection of employees of the Leander ISD or because you occupy a specific leadership position in the Leander Independent School District. An estimated 320 to 350 employees will be asked to participate in the survey portion of the study. Following the organization and tabulation of data from the survey phase of the study, a second phase of the research will ensue wherein 20 of the survey respondents will be invited to participate in audio taped interviews. If you are invited to participate in the interview portion of the research, you will be afforded the option to accept or decline participation through an informed consent agreement. The data gathering portions of the study will extend from August 30, 2004 to no later than February 28, 2005. This research will be conducted by Joe E. Robinson as a dissertation study towards a doctor of philosophy degree from Texas A&M University.

If you agree to be in this portion of the study, you will be asked to respond to a nine-item survey. The time required for the survey should take no more than 20 to 30 minutes. The survey will be coded according to gender, department/campus, type of position held, and the number of years of experience in the District and contain no personally identifiable information other than a distribution number accessible only by the researcher. The risks associated with the survey may include frustration regarding clarity of instructions/directions and the time taken for the activity. There is no monetary compensation or personal benefit designated for your participation in this research.

This research study has been reviewed and approved by the Leander ISD and the Institutional Review Board – Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you may contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of the Vice President for Research at (979) 845-8585 (mw_buckley@tamu.edu).

In accordance with Institutional Review Board requirements, the following information is provided. The records of this study will be kept private. No identifiers linking you to the study will be included in any sort of report that might be published except with your permission. Research records will be kept stored securely and only the researcher will have access. Your decision whether or not to participate will not affect current or future relations with Texas A&M University. If you decide to participate, you are free to refuse to answer any of the questions that may make you uncomfortable. You can withdraw at any time without your relations with the University, current employer, job, benefits, etc., being affected. Should you choose not to participate, mark an "X" through the distribution number on this page and return the entire packet to one of the researcher's mailboxes. You can contact the researcher Joe E. Robinson, jerobinson@neo.tamu.edu, 979-690-7629, or Dr. Bryan R. Cole, b-cole@tamu.edu (Dissertation Advisor), 979-845-5353, with any questions about this study.

By completing the attached instrument and returning it to the researcher's campus or department mailbox, you hereby volunteer to participate in the survey portion of the research.

APPENDIX A2

CONSENT FORM

Continuous Improvement in the Leander ISD:
A Quantitative and Qualitative Assessment of Culture and Core Values

The purpose of this study is to determine the extent Continuous Improvement values are understood, communicated, and lived out in the Leander ISD, and what processes exist in the District to support those values. The results of the study could have an impact on the understanding and management of the processes that contribute to a continuous improvement culture and enable the District to more effectively meet student and staff needs. Data collection for the study will consist of a nine-item survey, interviews, and researcher observation.

I was selected from the list of employees who participated in the survey portion of the study. From this pool of participants, at least seven will be invited for audiotaped interviews. The data-gathering portion of the study will extend one year from August 30, 2004. This research will be conducted by Joe E. Robinson as a dissertation study towards a doctor of philosophy degree from Texas A&M University.

I can expect at least the equivalent of one conference period or 50 minutes to be dedicated for this purpose. The interview process will be kept as short as possible for the convenience of the participant. The risks associated with the interview may include frustration regarding clarity of the questions and time taken for the activity. I will receive no monetary compensation or personal benefit for participating in the research.

This research study has been reviewed by the Leander ISD and the Institutional Review Board – Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, I can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of the Vice President for Research at (979) 845-8585 (mwbuckley@tamu.edu).

In accordance with Institutional Review Board requirements, the following information is provided. This study is confidential. The records of this study will be kept private. No identifiers linking me to the study will be included in any sort of report that might be published except with my permission. Research records will be kept stored securely and only Joe E. Robinson, the researcher will have access to the records. Only the researcher, Joe E. Robinson will have access to the audio records which will be erased at the end of three years. My decision whether or not to participate will not affect my current or future relations with Texas A&M University. If I decide to participate, I am free to refuse to answer any of the questions that may make me uncomfortable. I can withdraw at any time without my relations with the University, current employer, job, benefits, etc., being affected. I can contact Joe E. Robinson, jeroberinson@neo.tamu.edu, 979-690-7629, or Dr. Bryan R. Cole, b-cole@tamu.edu, 979-845-5353, with any questions about this study.

I have read the above information. I have asked questions and have received answers to my satisfaction. I have been given a copy of this consent document for my records. By signing this document, I consent to participate in the interview portion of the study.

Signature: _____ Date: _____

Signature of Researcher: _____ Date: _____

APPENDIX A3

Demographic Profile Sheet

Dear Research Participant:

Your participation is important and by completing this form and participating in the survey, you are contributing to appropriate representation for your campus or department in the study.

Important! Please check all applicable blanks:

Gender: Male _____ Female _____

Administrative Position (if applicable): Central Office Administrator _____ Principal _____ Assistant Principal _____

Service Function: Instruction _____ Transportation _____ Food Services _____ Maintenance and/or Facilities Support _____ Other _____ (e.g. Guidance & Counseling, Technology Support, Social Services, Compliance, Extracurricular...)
--

Campus: District-wide or multi-campus assignment _____ High School _____ Middle School _____ Elementary _____
--


Years of Service <u>Completed</u> in the Leander Independent School District: 8 or more years _____ 3-7 years _____ 0-2 year(s) _____

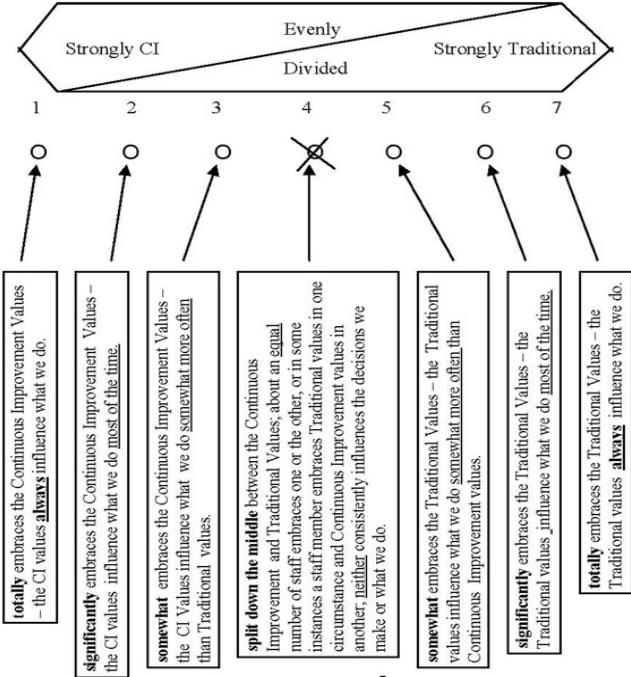
Comments:

Response Keys to Survey

“Continuous Improvement” Values

The Continuous Improvement values are displayed in a box or frame on the **left** side of the survey. Between the Continuous Improvement (CI) Values in the box on the left and Traditional Values in a box on the right, is a scale which reflects varying degrees to which your department or campus may actually **practice** the values.

My campus or Department... (choose one of the seven descriptors)




“Traditional” Values

The Traditional values are displayed in a box or frame on the **right** side of the survey. Between the Traditional Values in the box on the right and the Continuous Improvement (CI) Values in a box on the left, is a scale which reflects varying degrees to which your department or campus may actually **practice** the values.

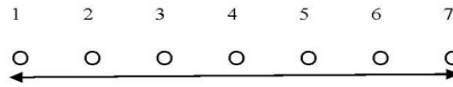
Please keep this survey packet stapled! A separate response key sheet is provided for your convenience in responding to the survey items.

“Continuous Improvement” Values

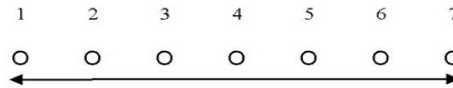
Improving education requires a long-term commitment and alignment of improvement goals throughout the school system. Schools should be driven by long-term stable improvement goals. Short-term sacrifices – especially in effort and time – may be necessary.

Schools should strive to make continuous changes to improve education. Teachers and support staff in the school should devote time and energy to make things better. This is a never-ending process. People should be willing to take risks associated with making change.

3. Long and Short-term Commitments



4. Managing Change



“Traditional” Values

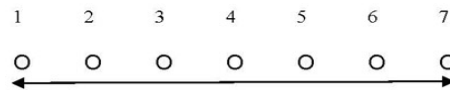
Present pressures – the students in a school and the immediate external demands – are most important. When improvement is needed, anything we can do to get results quickly is worthwhile. Localized short-term goals and objectives may lead to quicker results because they are more likely to accommodate the immediate needs of specific teachers/employees and students.

Schools should be cautious about making changes. It is better to stick with what we know than risk failure, given the significant consequences of schooling for individual children. Change does not always mean improvement.

“Continuous Improvement” Values

Teachers and support staff should be active in improving the overall school operation. Employee judgment about system processes is valuable and needed to improve quality. Decisions should be decentralized to involve teachers and employees in key school decisions.

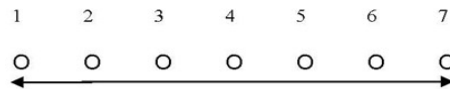
5. Decision-making Involvement



“Traditional” Values

Overall school operations should be left to administrators and department leaders. Shared decision making is too slow and inconsistent. Teachers/staff should rarely be taken out of the classroom/department for team meetings, committee work, or administrative tasks. Administrators are responsible for and paid to make school-wide decisions.

6. Collaboration and Autonomy

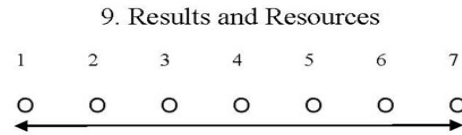


Collaboration is necessary for an effective school. The entire organization must work together for a quality education to occur. Teachers and staff should not be left to do their own work. Collaboration leads to better decisions, higher quality, and more satisfied employees.

Professional and individual autonomy is the key to greater school effectiveness. For instance, teachers are most effective when left to make classroom decisions by themselves. Working alone is usually more productive than working in teams and attending endless, unfruitful committee meetings.

“Continuous Improvement” Values

Quality can be improved with existing resources. By improving processes, schools can improve the quality of education with little or no additional resources. This requires doing things in a different way and fixing some of the processes and methods which waste resources.



“Traditional” Values

We are doing the best we can with existing resources. There is little waste or inefficiency in our system. We cannot improve the results of this school or department without more money or resources.

Distribution Number _____

Adapted from work by: [Detert, James R., Louis, Karen Seashore, Schroeder, Roger G. (2001). A culture framework for education: Defining quality values and their impact in U.S. high schools. *School effectiveness and school improvement*. 12(2). 183-212.]

APPENDIX A4

Interview Questions
For the Study Entitled:
Continuous Improvement in the Leander ISD:
A Quantitative and Qualitative Assessment of Culture and Core Values

Set 1:

1. Can you share with me your understanding of the District's vision? Compare the influences of "shared" versus "personal" visioning and goal setting in your department and on your campus.
2. From your perspective, who determines student needs in the Leander ISD? Do all stakeholders (including students, parents, community, suppliers, etc.) have input in determining educational needs, or are the needs determined mostly by the professional educators in the District?
3. What kind of commitments do you believe are necessary for continuous improvement? To what extent do long term improvement goals influence what is done in your department and on your campus as compared to immediate pressures and needs?
4. How does your campus or department view and respond to change?
5. What role do you have in changing the way things are done in the District? Do you have a role in making important (educational – for instructional staff) decisions?
6. How do you view collaboration efforts in the District and are these efforts necessary and effective for the kinds of results you seek in your job? To what extent, if any, is personal autonomy and freedom sacrificed through these collaboration efforts?
7. On what basis are decisions made in your department, your campus, and the District? To what extent do facts and data influence decisions as compared to personal and professional experience?
8. Explain whether the District's efforts in problem solving focus on processes or people.

9. Are existing processes, procedures, and methods optimized and further improvement possible only with additional resources and/or funding? Please explain.

Set 2:

1. What are some of the memorable experiences you've had in the District?
2. What do you enjoy the most about your job?
3. How has the philosophy of Continuous Improvement in the District affected you professionally and personally?
4. How much autonomy is there in your job?
5. To what extent are the results of your work likely to significantly affect the lives or well-being of other people?
6. To what extent do administrators or co-workers let you know how well you are doing on the job?
7. To what extent does your job require you to work closely with others?
8. To what extent do you have the opportunity to share your work experiences with others?

Set 3:

1. How do you feel about your own personal teaching or work philosophy and how it relates to the "quality" culture of the District?
2. To what extent do you believe Process Improvement Teams transmit the values of quality improvement in the District?
3. What role do processes play in communicating District values?
4. How do you feel about the manner in which curriculum content is prioritized to the District's four main goals? (for instructional staff)
5. How do you feel about the manner in which curriculum content is prioritized to the TAKS objectives? (for instructional staff)
6. How are your beliefs reflected in campus/department planning?
7. Has continuous improvement forced you to reevaluate your role in the District and how you prioritize what is important in your profession? Please explain.

APPENDIX B1

Why Are We Here?

In Leander ISD, everything we do and every learning activity is focused upon meeting our district vision, and upon guiding our students toward acquiring the skills and competencies listed in Leander ISD's Graduate Profile. This is the singular purpose of our existence.

LISD Vision

Every student is encouraged, supported, and challenged to achieve the highest levels of knowledge, skills, and character.

GRADUATE PROFILE

Every LISD graduate is prepared with the knowledge, academic foundation, and life skills to be a productive learner, an effective communicator, and a responsible citizen, in order to be successful in an ever-changing world.

To be academically prepared, each LISD graduate:

- has the knowledge in mathematics, science, and social studies necessary for problem solving, communicating, and reasoning.
- participates in the literary, visual, and performing arts to enrich his/her daily life.

To be a productive learner, each LISD graduate:

- demonstrates self-discipline, sets goals, uses time wisely, and always tries to improve.
- demonstrates logic, critical-thinking skills, creativity, and the ability to solve problems.
- manages information by acquiring and evaluating data, organizing and maintaining records, and using technology to find and process information.
- demonstrates skill in managing systems and resources, such as money, materials, space and people.

To be an effective communicator, each LISD graduate:

- reads proficiently from a variety of sources for knowledge and enjoyment.
- listens attentively and critically, and responds to speakers appropriately.
- writes and speaks correctly, effectively and fluently, adapting to different audiences and purposes.

To be a responsible citizen, each LISD graduate:

- understands the value and rewards of work.
- understands the nature of economics and consumer finance as it applies to everyday living.
- contributes to community or school service organizations.
- makes and evaluates decisions based on ethical principles and respect for the law.
- understands and appreciates the benefits of democratic government and free enterprise.
- understands world issues and current events, identifies the rights and obligations of citizens, and participates in the democratic process.

Each LISD graduate:

- makes wise career decisions based on self-knowledge, educational and occupational exploration, and career planning.
- fosters personal health habits and self-worth.
- demonstrates interpersonal skills needed to work effectively in teams, manage conflict, lead in community and business, and be an effective parent.
- reads and learns for enjoyment, fulfillment and breadth of knowledge.
- demonstrates ethical behavior - honesty, integrity, promise-keeping, loyalty, concern for others, law-abidance/civic duty, respect for others, fairness, pursuit of excellence, accountability.

Leander Independent School District
Tom Clavin, Superintendent

Board of Trustees
Debra Farris, President; Grace Barber Jordan, Vice President
Patricia Waggoner, Secretary
Don Hilde, Don McGee
Mick McHugh, Jim Schaeffer



APPENDIX B2

❖ **Honesty**

telling the truth

❖ **Integrity**

doing the right thing

❖ **Promise-keeping**

doing what you say you are going to do

❖ **Loyalty**

supporting someone or something

❖ **Concern for Others**

caring for and helping others

❖ **Law-abidance / Civic Duty**

obeying rules and laws/making the world a better place

❖ **Respect for Others**

being polite and kind to everyone and everything

❖ **Fairness**

treating everyone equally

❖ **Pursuit of Excellence**

doing everything the best you can; looking for ways to improve

❖ **Accountability**

admitting to what you do wrong, and taking pride in what you do right

Leander ISD's 10 Ethical Principles



Leander Independent School District
Tom Clark, Superintendent

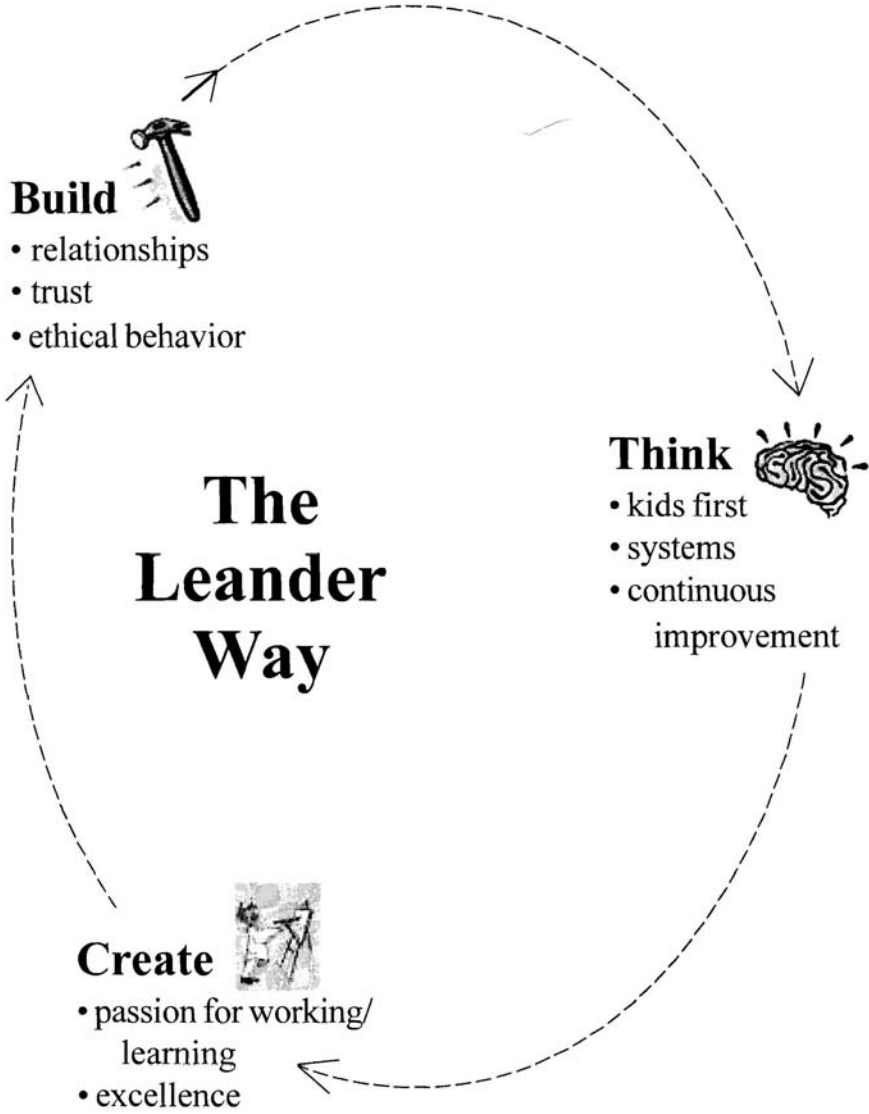
Board of Trustees
Tom Soering, President; Mark McChargue, Vice President
Paul Hise, Secretary
Debra Kates, Alisa Hill
Ozge Barber Jordan, Pamela Waggoner

APPENDIX B3

The Four Challenges

- 1 Eliminate the link between economic disadvantage and low achievement, while improving overall student performance**
- 2 Ensure that all students read at or above grade level**
- 3 Increase the percentage of students enrolling in and successfully completing our most challenging courses**
- 4 Accomplish the above while maintaining our district's culture of respect, trust, continuous improvement and learning**

APPENDIX B4



APPENDIX B5

Screening Instrument

LEANDER INDEPENDENT SCHOOL DISTRICT TEACHER INTERVIEW FORM

End of Student Teaching _____ _____ Job Fair
 Graduation Date _____ _____ Campus Interview
 Content Test _____ _____ Central Office Interview
 PPR _____ TOPT _____

Applicant _____ Position _____

Interviewed by _____

Date of Interview _____

CHARACTERISTICS	RATINGS	EE	ME	BE
Classroom Instruction				
Classroom Management				
Teamwork				
Preparation/Experience				

Comments:

APPENDIX B6

Screening Instrument

Currently? Teaching _____ Student Teaching _____

ACP Program _____ Other _____

Why have/are you chosen/choosing teaching as a profession?

Always wanted to be teacher Bad school experience Enjoy seeing students learn Great experience(s) in school

Grew up in education Love children/students Make a difference Passion of mine

Played school as child Prepare students/future Substitute Teacher who inspired me

How do you create a learning environment that inspires students to partner with you?

Build relationships Use student interests Enthusiastic, energetic Everyone Involved/Successful

Exciting lessons/fun Give positive feedback Mutual respect Positive, safe, inviting climate

How do you incorporate positive reinforcement in the classroom?

Notes on papers Pat on back Positive calls/notes to parents

Verbal praise/verbal recognition of positive choices

How do you differentiate instruction in order to meet the needs of individual learners?

Alternative Assessments Hands-On Learning Styles Multiple Intelligences

One-on-One times Projects Small groups Students Interests

Tutoring Opportunities Use real-world applications

What techniques/methods do you utilize to foster development of critical thinking?

Ask Why? How? Brainstorming Open discussions Open-ended ?s

Project work and presentations Questioning at higher levels

What system/strategies/techniques do you use to manage your classroom?

Behavior contracts Capturing Kids' Hearts Clear expectations Consistent

Fair No down-time Proactive,not reactive Routines/procedures

Rules/Consequences Structure Students help make rules

What approaches do you use to involve parents so they partner with you?

Ask for their input Conference with them Emails Letters/newsletters home

Open door Positive calls Provide support Special activities/involve them

How would others who work with you rate you as a team member? Why?

What, in teaching, presents the greatest challenge to you? Why?

What are your strengths as a teacher? Area(s) for growth?

APPENDIX B7

Interview Questions

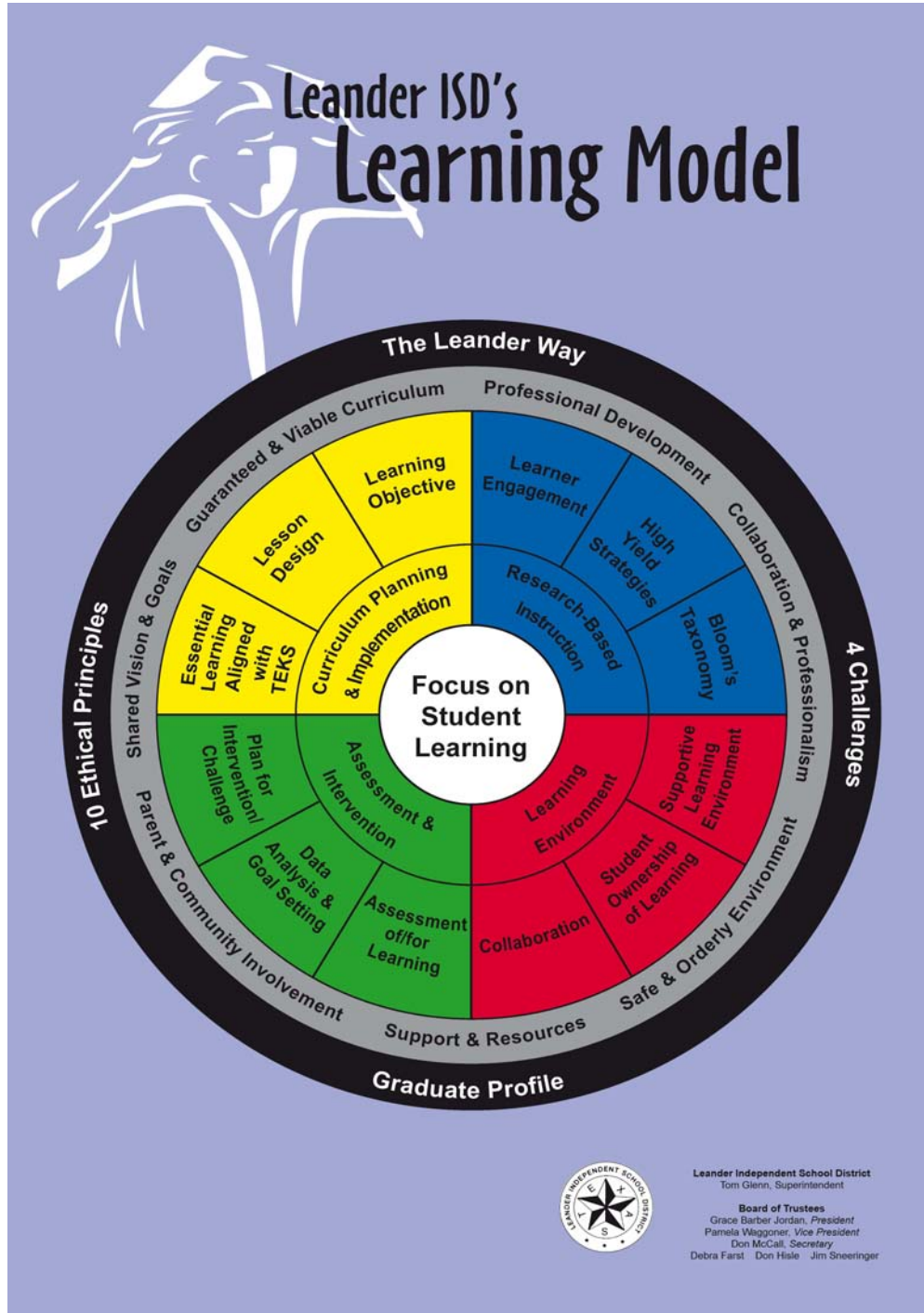
Teacher Interview Questions

1. What is your vision of an elementary school?
2. What are the most important characteristics an elementary teacher needs to possess? Why?
3. What skills and characteristics do you have to bring to this position?
4. Tell me about your experience with technology. How do you envision using technology in education?
5. What are your measures of success in your job?
6. How do you resolve conflict with a fellow employee?
7. What is good teaching?
8. What does the term customer focus mean to you? Who are the elementary teacher's customers and why?
9. What are the most important things for children to learn?
10. How do you motivate students?
11. What instructional strategies do you use?

- ✓ 12. A parent contacts you and is furious about their child's grade. What would you do?
- ✓ 13. What aspects of teaching do you like and dislike most?
- ✓ 14. Tell me about a difficult situation you encountered in education and how you dealt with it.
- ✓ 15. What makes a good team and what qualities do you have to contribute to a team?
16. Describe your student management system.
17. How do you evaluate the academic progress of students?
- ✓ 18. How do you provide for students with special needs (can't read, high needs, etc.)
- ✓ 19. How would others describe you?
20. How do you communicate with and involve parents in your classroom?
- ✓ 21. Why should we hire you over other qualified applicants for this position?

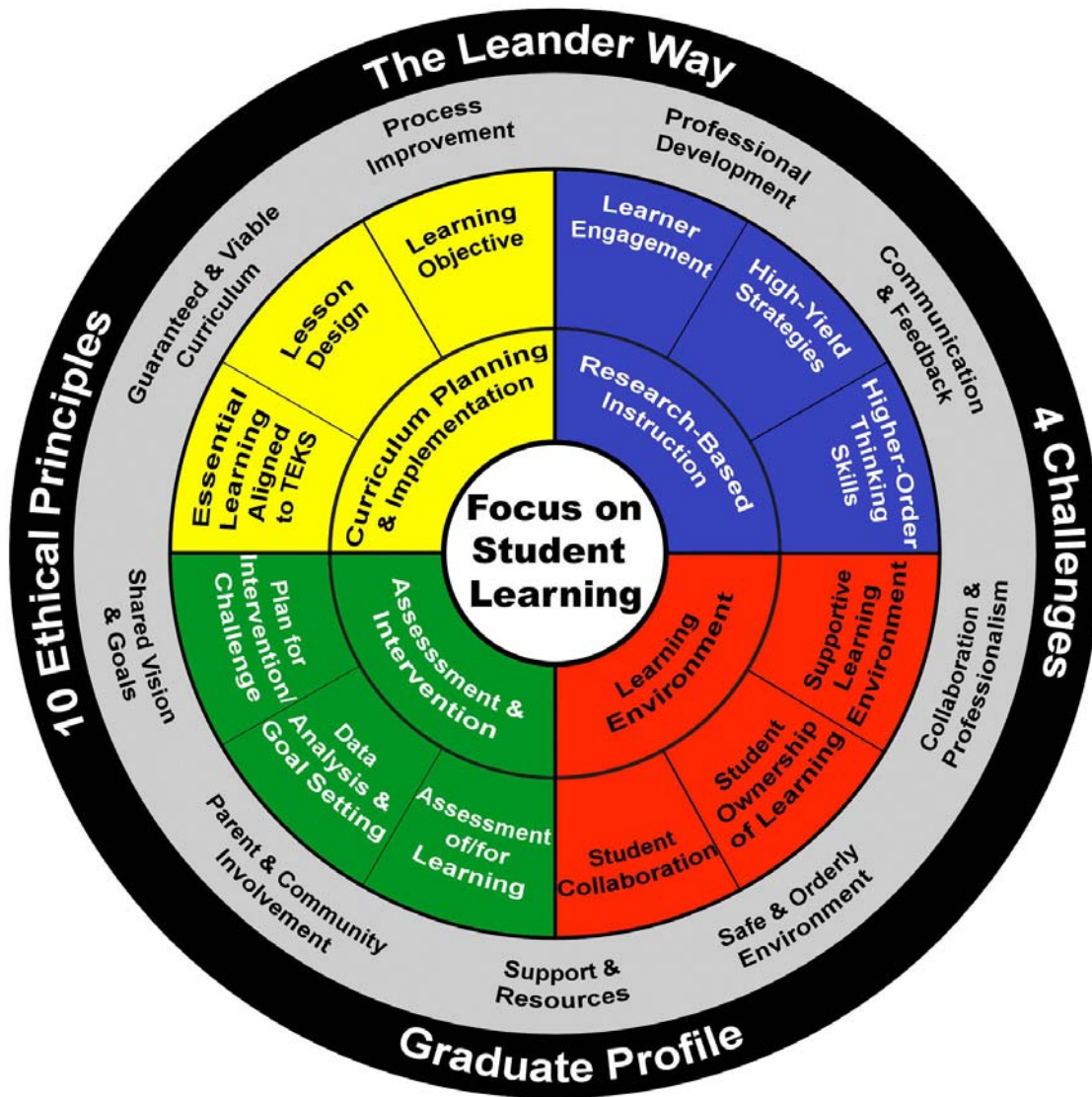
APPENDIX B8

Learning Model: 2007/2008 School Year



APPENDIX B9

Learning Model: 2008/2009 School Year



APPENDIX B10

**LISD Elementary Student Survey
2003-2004**

MARKING INSTRUCTIONS

USE NO. 2 PENCIL

- Mark only one bubble for each question.
- Fill in the answer bubble completely.
- Please, do not write anything else on this paper.

CORRECT: ● INCORRECT: ☒ ☓ ☉ ☊

Grade

Kinder
 1st
 2nd
 3rd
 4th
 5th

School

<input type="radio"/> WSE	<input type="radio"/> Steiner
<input type="radio"/> Faubion	<input type="radio"/> Naumann
<input type="radio"/> BHC	<input type="radio"/> Bagdad
<input type="radio"/> Cypress	<input type="radio"/> Cox
<input type="radio"/> Mason	<input type="radio"/> Bush
<input type="radio"/> Giddens	<input type="radio"/> Knowles


Please fill in the bubble under the answer you agree with.

- | | Yes | No |
|--|-----------------------|-----------------------|
| 1. My teacher has a good sense of humor. | <input type="radio"/> | <input type="radio"/> |
| 2. My teacher listens to me. | <input type="radio"/> | <input type="radio"/> |
| 3. It's okay to ask questions in class. | <input type="radio"/> | <input type="radio"/> |
| 4. My teacher respects me. | <input type="radio"/> | <input type="radio"/> |
| 5. I can get help from other students. | <input type="radio"/> | <input type="radio"/> |
| 6. My teacher helps me learn from my mistakes. | <input type="radio"/> | <input type="radio"/> |
| 7. I get to learn from hands-on activities in my classroom. | <input type="radio"/> | <input type="radio"/> |
| 8. I get to do challenging things in my classroom. | <input type="radio"/> | <input type="radio"/> |
| 9. My teacher has us do many different things to help us learn. | <input type="radio"/> | <input type="radio"/> |
| 10. I am proud of my school. | <input type="radio"/> | <input type="radio"/> |

APPENDIX B11

LISD Secondary Student Survey 2003-2004

MARKING INSTRUCTIONS



USE NO. 2 PENCIL

- Make solid marks that fill the response completely.
- Make no stray marks on this form.

CORRECT: ● INCORRECT: ☒ ☓ ☐ ☑

Grade

● 6th
● 7th
● 8th
● 9th
● 10th
● 11th
● 12th

Campus

● LHS
● CPHS
● VRHS
● LMS
● CPMS
● RBMS
● HMS

Mark the answer that best reflects your opinion of the following statements. Please mark only one answer per question.

- | | | | | |
|--|-----------------------|-----------------------|-----------------|--------------------------|
| | <i>Strongly Agree</i> | <i>Somewhat Agree</i> | <i>Disagree</i> | <i>Strongly Disagree</i> |
| 1. My teachers listen to me. | ● | ● | ● | ● |
| 2. My teachers make me feel valued. | ● | ● | ● | ● |
| 3. My teachers connect what I have learned to real life, when possible. | ● | ● | ● | ● |
| 4. Different materials are used to meet individual learning needs. | ● | ● | ● | ● |
| 5. My teachers enjoy teaching. | ● | ● | ● | ● |
| 6. My work is not too easy. | ● | ● | ● | ● |
| 7. My teachers are not boring. | ● | ● | ● | ● |
| 8. My teachers are enthusiastic. | ● | ● | ● | ● |
| 9. My teachers enforce rules consistently and fairly in the classroom. | ● | ● | ● | ● |
| 10. My school is preparing me for life outside of high school. | ● | ● | ● | ● |

APPENDIX B12

LISD Teacher Survey 03-04

MARKING INSTRUCTIONS

USE NO. 2 PENCIL

- Make solid marks that fill the response completely.
- Make no stray marks on this form.

CORRECT: ● **INCORRECT:** ☒ ☓ ☉ ☪

Campus	
●	LHS
●	CPHS
●	VRHS
●	LMS
●	CPMS
●	RBMS
●	HMS
●	WSE
●	Faubion
●	BHC
●	Cypress
●	Mason
●	Giddens
●	Steiner
●	Naumann
●	Bagdad
●	Cox
●	Bush
●	Knowles
●	NHHS
●	LEO

Mark the answer that best reflects your opinion of the following statements. Please mark only one answer per question.

- | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| 1. I know what's expected of me at work. | | | | | | | | | |
| 2. I have the materials and equipment I need to do my work right. | | | | | | | | | |
| 3. At work, I have the opportunity to do what I do best everyday. | | | | | | | | | |
| 4. In the last seven days, I have received recognition or praise for doing good work. ... | | | | | | | | | |
| 5. My principal seems to care about me as a person. | | | | | | | | | |
| 6. Someone at work encourages my development and growth. | | | | | | | | | |
| 7. At work, my opinions seem to count. | | | | | | | | | |
| 8. The vision/purpose of my school makes me feel my job is important. | | | | | | | | | |
| 9. My coworkers are committed to doing quality work. | | | | | | | | | |
| 10. I have friends at work who sincerely care about me. | | | | | | | | | |
| 11. This last year, I have had opportunities at work to learn and grow. | | | | | | | | | |
| 12. When there is a need for a student to be disciplined, I feel listened to and supported by campus administrators. | | | | | | | | | |
| 13. I receive the feedback that I need on my classroom instruction. | | | | | | | | | |

STRONGLY DISAGREE
DISAGREE
AGREE
STRONGLY AGREE

Thank you for completing this survey!

APPENDIX B13

Continuous Improvement Institute Session II – October 28, 2002

I. Reflect on the learning

(4:30-5:00)

- A. At your table, share examples of and discuss what you learned about purpose setting. Pick one to share with the whole group.
- B. Create a learning chart on the excerpt from Improving Student Learning. Be prepared to "teach" what made the biggest impact(s) on your group.

II. Team Building

(5:00-5:10)

- A. 100 Facts of CI

(5:10-5:20)

III. Filling in the blanks

(5:20-5:30)

- A. Interview response *(plus other packet contents: KWL, Tools, parking lot)*
- B. Purpose for CII-02/03
 1. Consensogram
 - a. Teach the tool
 - b. Apply the tool to purpose
 2. Code of Cooperation
 - a. Teach the tool
 - b. Develop CII Code of Cooperation
- C. From Business to Education *- Started w/ business → education
concepts/principles → a lot die
- New Paradigm → took whole*
- D. Doing to, for, with *ERIC ←*
 - different paradigms
 - resistance
 - interval charts from Bus and TAAS (use to improve)

IV. Why are we here?

(5:30-6:10)

- Anita* A. W. Edwards Deming: **14 Points** of Continuous Improvement
(give out cards) (have them check to see if any points came up in discussion)

Concentrate on: #1-create constancy of purpose; #2-adopt a new philosophy; #5-Improve the system constantly; #8-Drive out fear; #12-Remove barriers to pride/joy in workmanship; #13/14-institute program for learning so everybody is working to accomplish the transformation

- Anita* 1. Focus: #8 Drive out Fear
(show Deming's, Langford's, Jenkins')
- Anita* 2. Learning Tools: Why do we want to drive out fear?
Use tool: **Force Field** (packet has more info)

Eric Use tool: **NGT the barriers**
(Do at tables, then group)

Use tool: **Interrelationship** of main barriers (packet)
may need to hold for Dec....

V. Cohort Groups w/ Facilitators

(6:10-7:15)

- A. EAT and brainstorm ways to use the above tools. Each person choose one barrier to driving out fear to work on this month.

B. Debrief with whole group.
(7:15-7:20...1 minute per 5 groups)

VI. Learning Opportunity for October 29-December 6

(7:20)

A. Learning Opportunity:

1. Choose one barrier to driving out fear. Using a tool(s), look for ways to break down that barrier this month.
2. Read handout, "The Status Quo"
3. Read article on "downshifting" ...what fear does to learning
4. Complete the "Learning Opportunity" form

VII. How do we know?

(7:30)

- A. Complete Session II Reflection and Feedback
- B. Place dots on all areas of "Why Are We Here?" list that you feel were addressed in tonight's session.

See you next time...Monday, December 9

APPENDIX B14

Book Studies

Books	Author(s)	Genre of Study	Central Focus	Most Involved Audience(s)
The 7 habits of highly effective people: Powerful lessons in personal change	Stephen R. Covey	Personal and Social Psychology, Psychology & Counseling	Personal and Social Psychology	All employees
Principle centered leadership	Stephen R. Covey	Management, and Leadership - security, guidance, wisdom, power - personal and organizational transformation	Management Theory & Leadership Development	Administrators
Heroz: Empower yourself, your coworkers, your company	William C. Byham, Jeff Cox	Personal Empowerment, Occupational Psychology	Teacher and Student Empowerment in the classroom	Teachers, Instructional Staff, and Administrators
Zapp! The lightning of empowerment	William C. Byham	Personal Empowerment, Occupational Psychology	Teacher and Student Empowerment in the classroom	Teachers, Instructional Staff, and Administrators
Improving student learning: Applying Deming's quality principles in classrooms	Lee Jenkins	Management, TQM, Continuous Improvement, Applications in the classroom	TQM in the Classroom	Teachers, Instructional Staff, and Administrators
The new economics	W. Edwards Deming	Management Theory, TQM, Continuous Improvement	Management Theory & TQM Philosophy	Administrators and Board
Out of the crisis	W. Edwards Deming	Management Theory, TQM, Continuous Improvement	Management Theory & TQM Philosophy	Administrators and Board
Making connections: Teaching and the human brain	Renate Nummela Caine, Geoffrey Caine	Brain Research & Research, Neuroscience	Brain Research and Learning	Teachers, Instructional Staff, and Administrators

Books	Author(s)	Genre of Study	Central Focus	Most Involved Audience(s)
Mindshifts: A brain-compatible process for professional development and the renewal of education	Renate Nummela Caine, Geoffrey Caine, Sam Crowell	Brain Theory & Research, Neuroscience, How teachers can use this new research, Creating a safe and non-threatening environment for students	Brain Research and Learning	Teachers, Instructional Staff, and Administrators
Education on the edge of possibility	Renate Nummela Caine, Geoffrey Caine	Brain Based Learning, building future sustainable communities	Brain Research and Learning	Teachers, Instructional Staff, and Administrators
Kidgets: And other insightful stories about quality in education	Maury Cotter, Daniel Seymour	Process Improvement	TQM in the Classroom (ASQ)	Teachers, Instructional Staff, and Administrators
Total quality education	Michael J. Schmoker & Richard B. Wilson	Applying the principles of TQM to education	TQM in the Classroom	Administrators, Instructional Staff, and Teachers
The path of least resistance for managers	Robert Fritz	Organizational Learning, achievement, and barriers	Organizational Theory & Development	Administrators
The 5th discipline	Peter M. Senge	Learning Organizations and Systems Thinking	Organizational Theory & Development	Administrators and Board
Incredibly American: Releasing the heart of quality	Marilyn R. Zuckerman, Lewis J. Hatala	Quality Improvement - Americans, ill-prepared try, fail, embarrassed, with coaching and lessons learned try again, exceeding expectations - it's ok to make mistakes-teaming-Quality Improvement Teams-team members coaching and teaching each other.	Leadership & Management	Administrators
Education In a new era	Ronald S. Brandt	Where we are headed in education, taking in account experimental research on instruction, what is known from cognitive psychology about the nature of	Leadership, Management, and Instruction (ASCD)	Administrators

Books	Author(s)	Genre of Study	Central Focus	Most Involved Audience(s)
		learning, and what can be gleaned from brain research		
4th generation management	Brian L. Joiner	Joiner Triangle - putting together what we know from (1) focusing on quality as defined by the customer, (2) applying a scientific data-based approach to management, and (3) creation of long-term team-spirited relationships	Leadership & Management, Total Quality Management	Administrators
Built to last: Successful habits of visionary companies	Jim Collins, Jerry I. Porras	Visionary Companies - Devotion to a core ideology or identity, and active indoctrination of employees into an "ideological commitment" to the company - leaders tend to be remarkably self-effacing	Leadership & Management	Administration and Board
Good to great: Why some companies make the leap...and others don't	Jim Collins	Companies that produced great sustained results - getting the right people "on the bus and in the right seats" - Hedgehog concept - companies that found and promoted disciplined people that thought and performed in a disciplined manner - the most effective leaders are humble and strong-willed rather than outgoing.	Leadership & Management Strategy	Administrators and Board
Managers as mentors: Building partnerships for learning	Chip R. Bell	What mentoring is and is not - coaching and teaching - how to give advice and ask questions	Human Relations and Personnel Management - Education & Training - Motivation	Administrators

Books	Author(s)	Genre of Study	Central Focus	Most Involved Audience(s)
Encouraging the heart: A leader's guide to rewarding and recognizing others	James M. Kouzes, Barry Z. Posner	Mastering the soft-management skill of encouragement - not about back-slapping or glad-handing - but about linking rewards and appreciation to standards of excellence	Management Philosophy	Teachers, Instructional Staff, and Administrators
Leadership and the new science: Learning about organization from an orderly universe	Margaret J. Wheatley	Information defines who we are - being open to all information allows us to adjust, evolve and grow...command and control is history - empower all individuals with both information and the authority to act on that information...disorder is an opportunity - to be open, share, and seek pro-active peaceful responses...we don't exist as individuals, we exist as relationships	Management Philosophy	Administrators
Schools of quality	John J. Bonstingl	Quality in schools is about the processes of working in teams, self-improvement, improvement of systems, and having students actively engaged in learning (from Schools of Quality)	Quality Management Philosophy	Administrators, Instructional Staff, and Teachers
Understanding variation: The key to managing chaos	Donald J. Wheeler	Describes SPC and the Deming management philosophy	Quality Management Philosophy	Administrators
Punished by rewards: The trouble with gold stars, incentive plans, A's, praise and other bribes	Alfie Kohn	Attacks the belief that competition is healthy and documents why it is not...examines the effect of rewards and alternatives to them	Social Psychology	Teachers, Instructional Staff, and Administrators

Books	Author(s)	Genre of Study	Central Focus	Most Involved Audience(s)
<p>Classroom instruction that works: Research-based strategies for increasing student achievement</p>	<p>Robert J. Marzano, Debra J. Pickering, and Jane E. Pollock</p>	<p>Nine categories of instructional strategies—Identifying Similarities and Differences; Summarizing and Note Taking; Reinforcing Effort and Providing Recognition; Homework and Practice; Nonlinguistic Representations; Cooperative Learning; Setting Objectives and Providing Feedback; Generating and Testing Hypotheses; and Cues, Questions, and Advance Organizers—that maximize student learning are introduced, along with the pertinent information to understand and synthesize each. For teachers, administrators, and academic advisors and counselors.</p>	<p>Classroom Strategies</p>	<p>Teachers, Instructional Staff, and Administrators</p>

APPENDIX B15

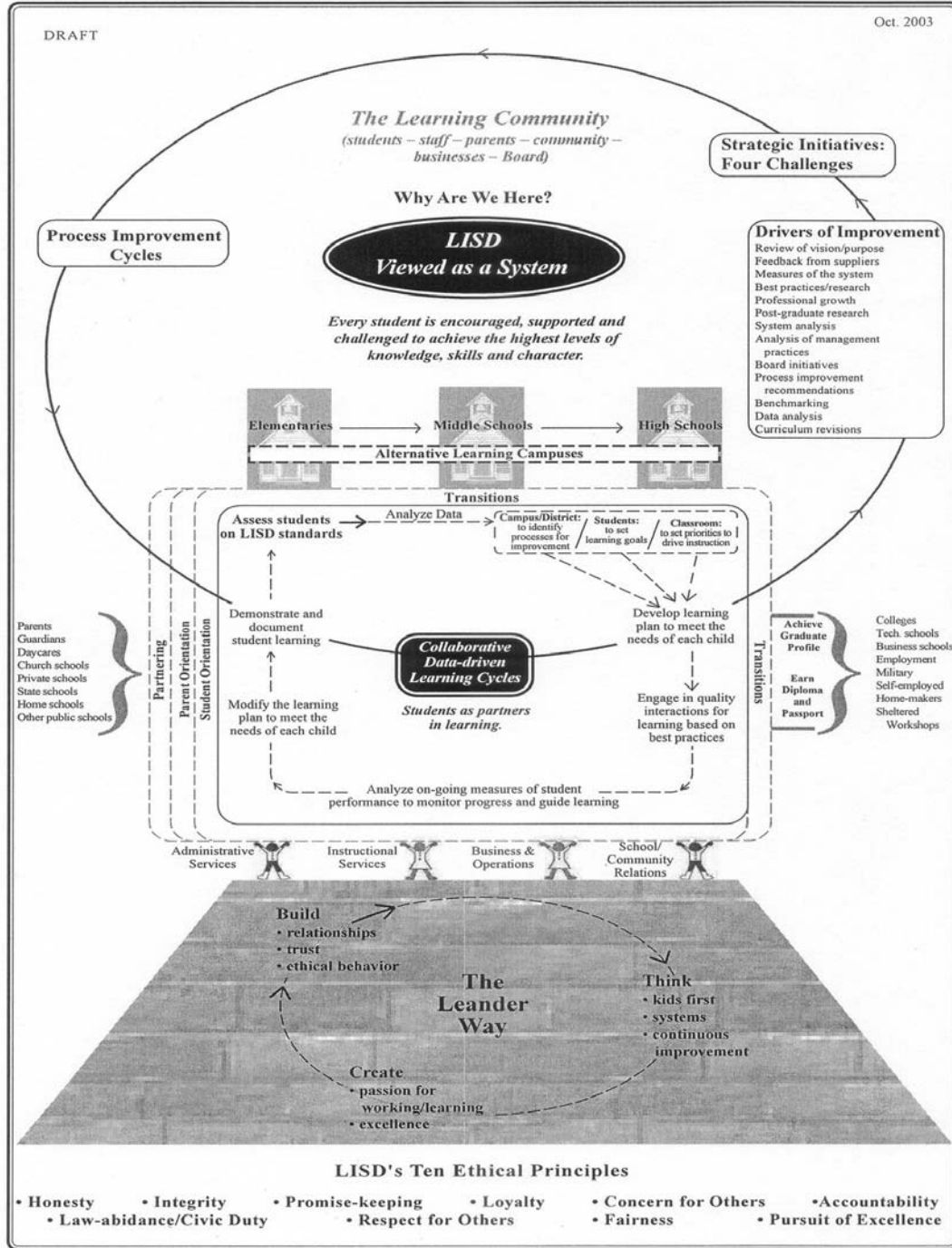
Snapshot of Training and Professional Development Leander ISD

Workshop/Seminar or Retreat	Venue	Participant Demography	Duration	Topics
Orientation Session 'Culture Day'	Usually at one of the High Schools	New Administrators and Teachers – Led by Supt. Associate Supt., and other key Central office Administrators	One day	Continuous Improvement Philosophy with an emphasis on the Leander Way
Summer Workshops	Various Campuses	Mostly Teachers - Led by teachers, District administrators, and outside consultants	Varies, depending on individual teacher needs and continuing education requirements	Wide-range, CI application in the classroom to specific skills, content area development, and effective teaching strategies
Continuous Improvement Conference	Leander High School.	Everyone Invited, mostly attended by Instructional Administrators, support staff, and the Teacher Corps - Presenters include District Administrators, teachers, support staff, and outside consultants	2.5 Days	Wide-range, CI applications in the classroom, within and between departments and campuses, specific skills or content area development, teaching, learning, and brain theory, and relationship building, strategies, collaboration, and teaming strategies
Learning Academy	Central Office Training Center	Mostly High School teachers – Led by Central Office Administrators	Two days in the summer with up to six three hour follow-up sessions spread throughout the school year	Continuous Improvement, teaching and learning strategies, teaming strategies, content area management and organization
Leadership Academy Retreat	John Newcomb's Ranch	Teachers from one or more campuses – Led by Central Office Administration, usually a Central Office Executive Director	3.5 days	Continuous Improvement theory and application, relationship and team building strategies and activities, ROPES courses

Workshop/Seminar or Retreat	Venue	Participant Demography	Duration	Topics
Administrator's Retreat	John Newcomb's Ranch, or Salado Creek	Administrators from all levels, Central Office, and Campuses – Led by Superintendent and Assistant Superintendents and Instructional Services Executive Directors	2.5 days	Continuous Improvement, relationship building, management and organizational theory and application, teaching, learning, and brain theory, examination of the latest Research and possible implications, Review of federal and state mandates, guidelines that may create "probletunities" as needed, and usually a Book Study
Principal-led or initiated Campus Workshops and Staff Development	Campuses	Teachers and instructional staff – Led by Principal and/or Central Office Administration or Staff, or Directors, or in rare instances, by outside consultants	Varies but usually intermittent or abbreviated sessions usually held immediately after the school day or during part of scheduled Staff Development days	Data and Student Achievement Analyses, Fine-tuning instructional delivery, team and department-level strategies assessment
Continuous Improvement Institute	Central Office Training Center	Teachers and administrators - Led by Central Office Executive Director(s)	Six 3-hour sessions	Philosophy of Continuous Improvement, Team-building, CI Tools
Leadership Academy	Central Office Training Center	Teachers who aspire to be administrators -Led by Central Office Director(s)	Six 3-hour sessions	Philosophy of Continuous Improvement, Team-building, CI Tools
Campus Administrators Leadership Academy	Central Office Training Center	For current campus administrators -Led by Central Office Director(s)	Five or Six 3-hour sessions	Philosophy of Continuous Improvement, Team-building, CI Tools
ROPES Course	John Newcombe Ranch, New Braunfels, TX	Teachers and Instructional staff, led by Director and/or certified staff	3½ Days	Low-ROPES and High-ROPES Challenge Courses, Trust-building activities

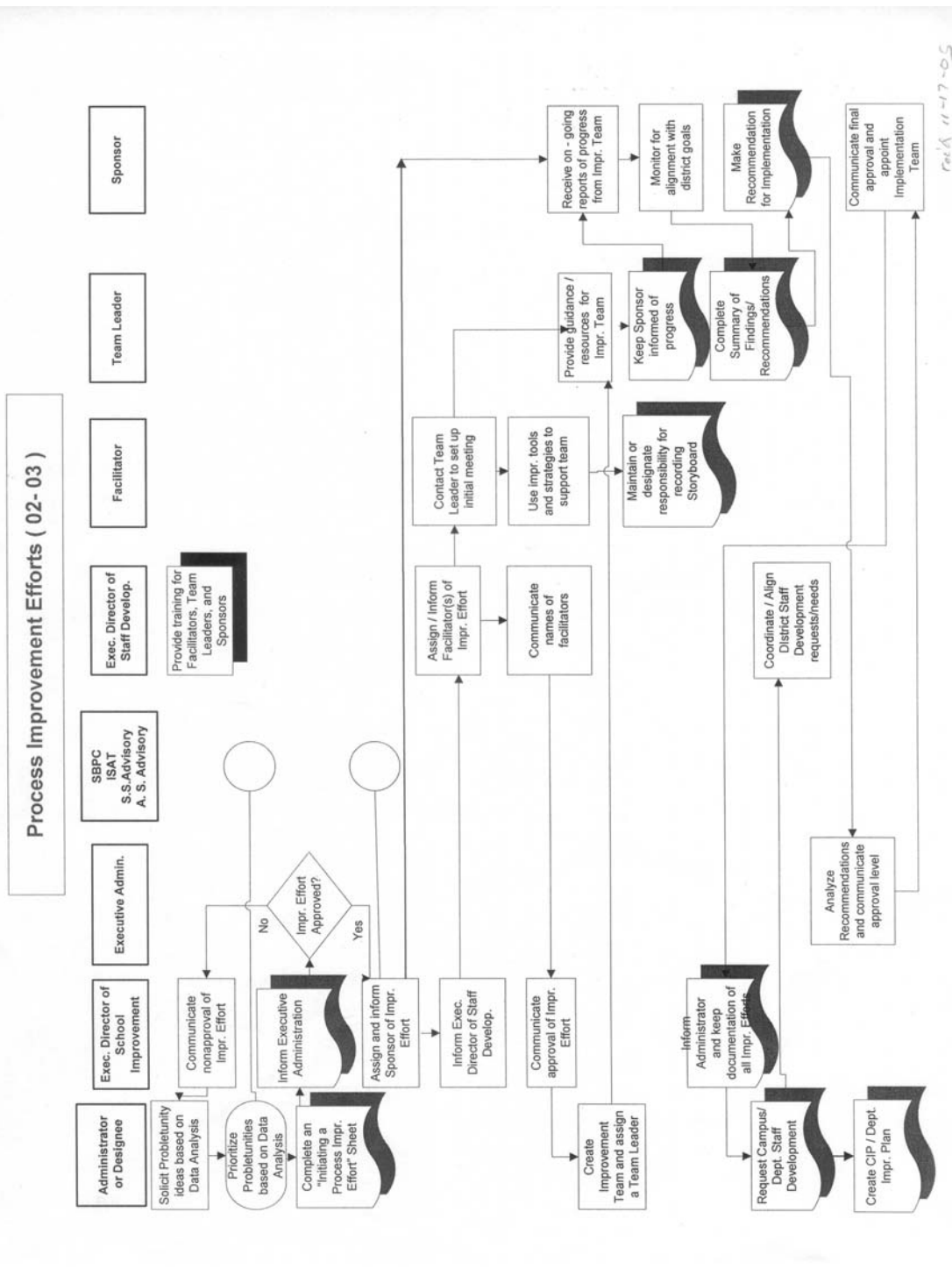
APPENDIX B16

Systems Diagram Model: Leander ISD



APPENDIX B17

2/13/03



APPENDIX B18

Learning Matrix Planning for New Instructional Staff								
Keys to Continuous Improvement		District Culture w/TG, MJA, AC (1 day)	Curriculum: Elementary BOY	Curriculum : MS/HS BOY	Campus: BOY	Campus: During year	District: During year	Resource for Learning
Knowledge Driven Instruction	1. Students using data					x	x	
	•Student Led Conference	video	x	video				
	•Graphing, charting, goalsetting		x	x		x		
	2. Teachers using data		x	x		x	x	
	•Flexible grouping		x	x				
	•Use of time/resources		x	x		x		
	3. Learning from mistakes							
	•Fail forward							
	4. Curriculum		x	x				x
	5. Instructional Strategies		x	x				x
•Multiple Intelligences			x					
•Reading Strategies			x					
•Differentiation			x					
Self-Assessment	1. Quality standards			x		x		
	2. Prevent poor quality work			x		x		
	3. Portfolios - students	x		video		x	x	
	4. Teacher/Student Conferencing			video		x		
	5. Professional Portfolios	x-d				x	x	d: brief intro
Student Involvement	1. Student Led Conference	video	x	video		x		
	2. Students participate in managing their own learning		x			x		
	3. Student involvement in improving their learning	x	x	x		x		
	•Video: Little Life Lessons	x						
	•Video: Whole New World	x						
4. Passports/COOL Week					x			
Learning Tools	1. Affinity Diagram			x				
	2. Five Why's							
	3. Flow Tree	x						
	4. Force Field Analysis							
	5. Interrelationship Diagram							
	7. Learning (control) Charts							
	6. Matrices	x	x	x				
	9. Nominal Group Technique			x				
	10. Pareto Chart							
	11. Plus/Delta	x	x					

APPENDIX B19

Learning Matrix for New Professional Staff							
Keys to Effective Practice and Continuous Improvement in LISD		Unaware at this time	Limited Knowledge	Can Explain	Can Apply	Can Teach	Notes
Understand district purpose and philosophy	1. Understand Deming's 14 points						
	2. Understand Graduate Profile						
	3. Create a shared vision and purpose						
	4. Understand need for change						
	5. Follow the Ten Ethical Principles						
	6. Learn and apply systems thinking						
	7. Fail forward						
	8. Involve customers and stakeholders						
	9. Build relationships based on trust						
	10. Address the 4 district challenges						
Involve students in the learning process	1. Set quality standards						
	2. Promote student self-assessment						
	3. Lead students in creating portfolios						
	4. Lead students in graphing, charting, goal setting						
	5. Support student-led conferences						
Build life-long Learners	1. Understand motivation						
	2. Understand the relationship between motivation and brain theory						
Collect, analyze and use data to drive instruction and decision making	1. Formulate questions						
	2. Determine sources for data						
	3. Analyze and interpret data						
	4. Understand variation						
	5. Use data to make decisions						
Engage in continuous professional growth	1. Engage in self-assessment						
	2. Select a focus/goal for improvement						
	3. Implement a plan						
	4. Share learning						
	5. Utilize promising practices in the field						
Use Learning Tools	1. Affinity Diagram						
	2. Bar Chart						
	3. Fishbone Diagram						
	4. Five Whys						
	5. Force Field Analysis						
	6. Interrelationship Diagram						
	7. Learning Matrix						
	8. Multi-voting						
	9. Nominal Group Technique						
	10. PDSA						
	11. Plus/Delta						
	12. Run Chart						
Communicate effectively	1. Seek first to understand-then to be understood						

APPENDIX B20

The Seven Constructs of Education for the 21st Century The Floresville ISD Model

CONSTRUCT # 1

Don't blame people. If you have a problem, change the system. The problem is in the system, the solution is in the people.

CONSTRUCT # 2

It is more difficult to change the system if extreme variance exists among stakeholders as to what the primary mission and goals are.

CONSTRUCT # 3

Identify through consensus-building among all relevant stakeholders, the fundamental knowledge and skills that we expect all students to acquire.

CONSTRUCT # 4

Identify and work through all system "bottlenecks". For the Floresville ISD, "bottlenecks" are defined as those system processes that inhibit or prevent students from reaching their maximum potential and acquiring the knowledge and skills to become responsible and productive citizens.

CONSTRUCT # 5

We don't exist as individuals. We exist as relationships. Therefore, we will encourage positive, caring, relationships and build trust between administrators, teachers, auxiliary staff and students and parents. We can achieve our goals only through the relationship principle.

CONSTRUCT # 6

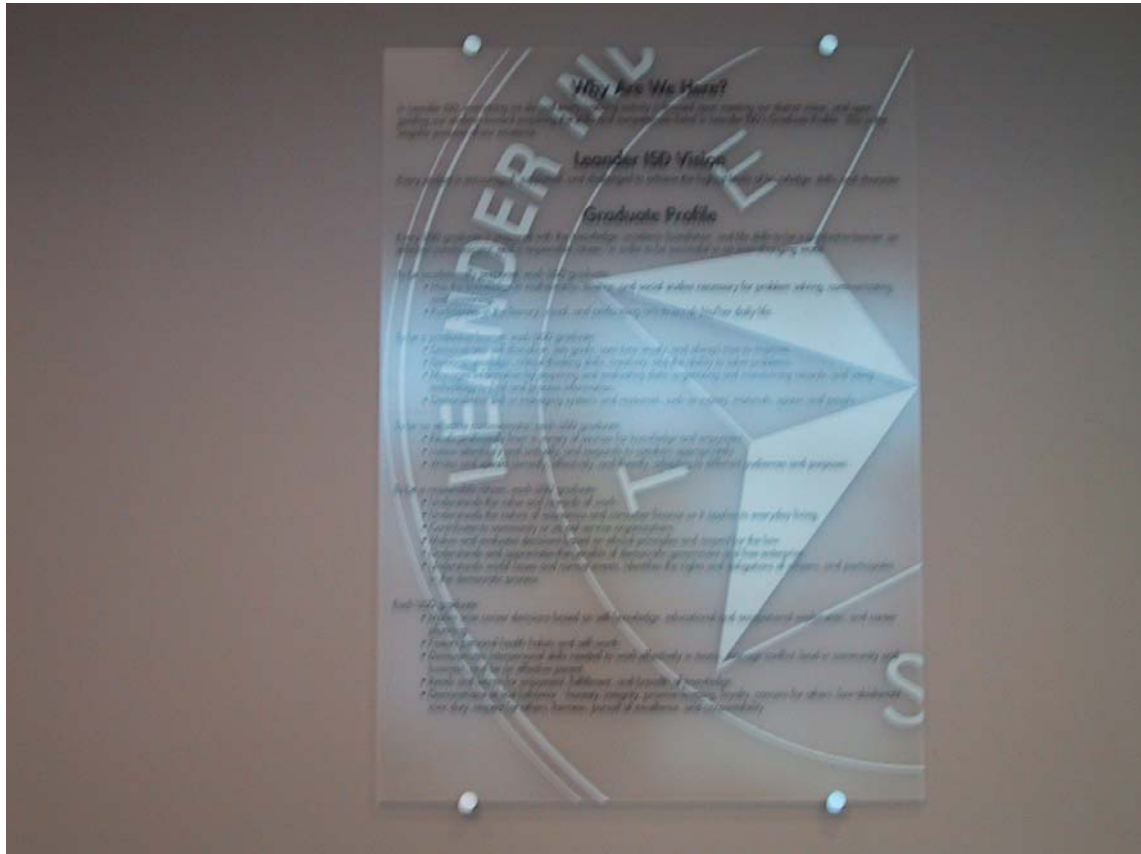
We are professionals and our focus should be on making a positive difference in the lives of children and parents. We will strive to provide students with higher quality learning experiences and opportunities than they or their parents expect to receive.

CONSTRUCT # 7

We will not concentrate on following rigid timelines. Instead of following time formulas for learning, we will follow pathway formulas. Education is not a race to be won but a pathway to enlightenment.

APPENDIX C1

Graduate Profile Display: District Central Office



APPENDIX C2

Ten Ethical Principles Display: District Central Office



APPENDIX C3

Graduate Profile and Ten Ethical Principles Classroom Display



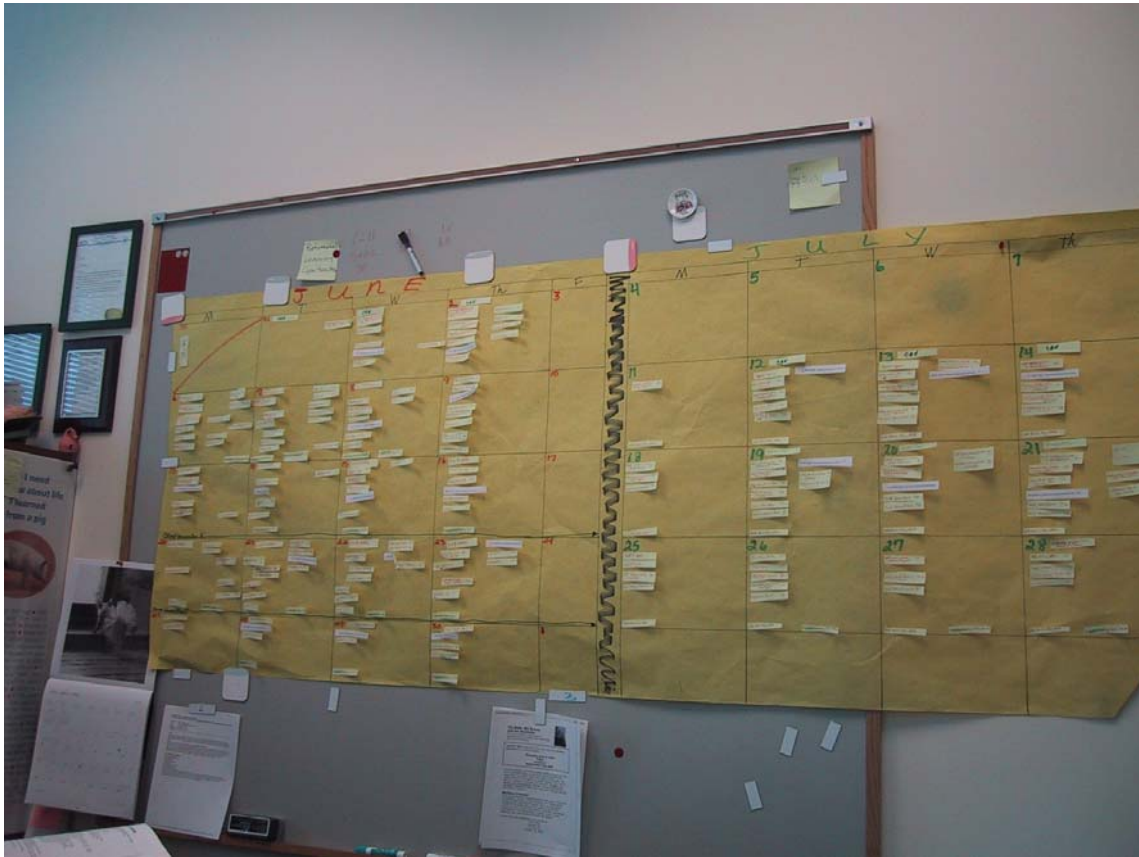
APPENDIX C4

Central Office Administrator Book Case



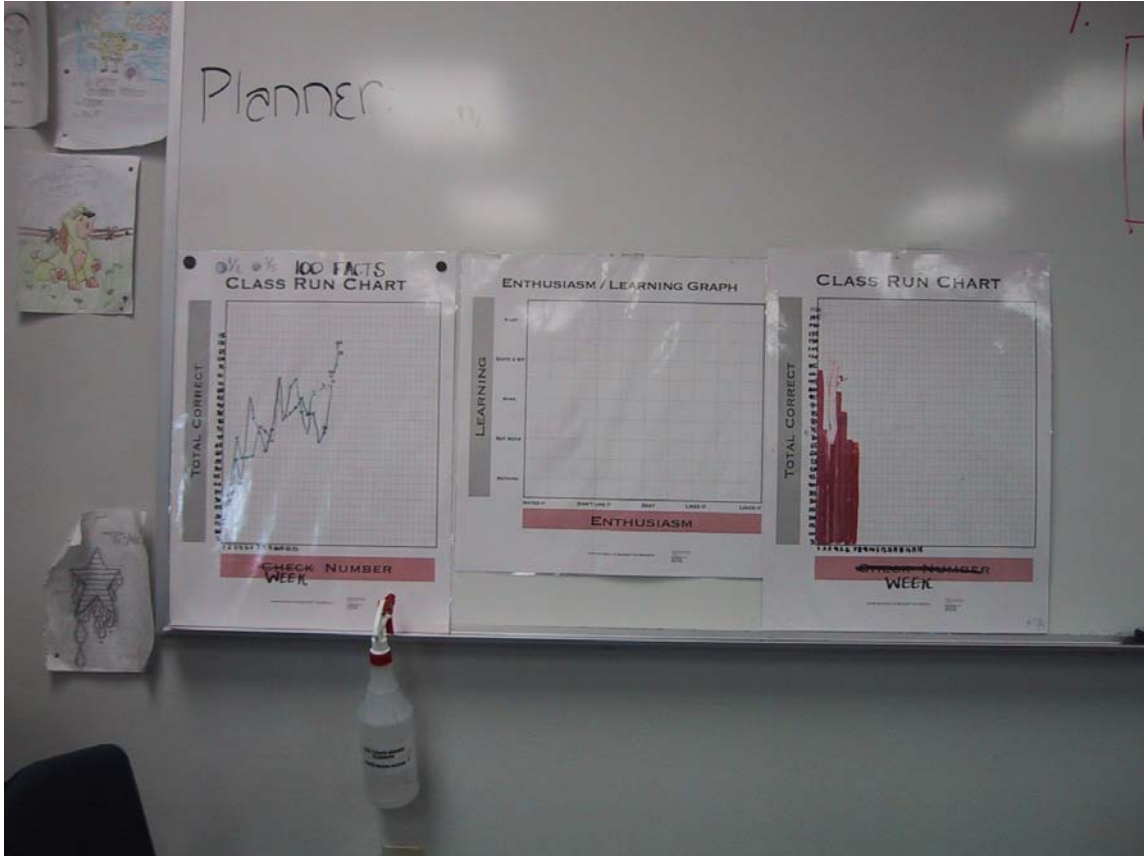
APPENDIX C6

Central Office Planning Board for Teacher Summer In-service



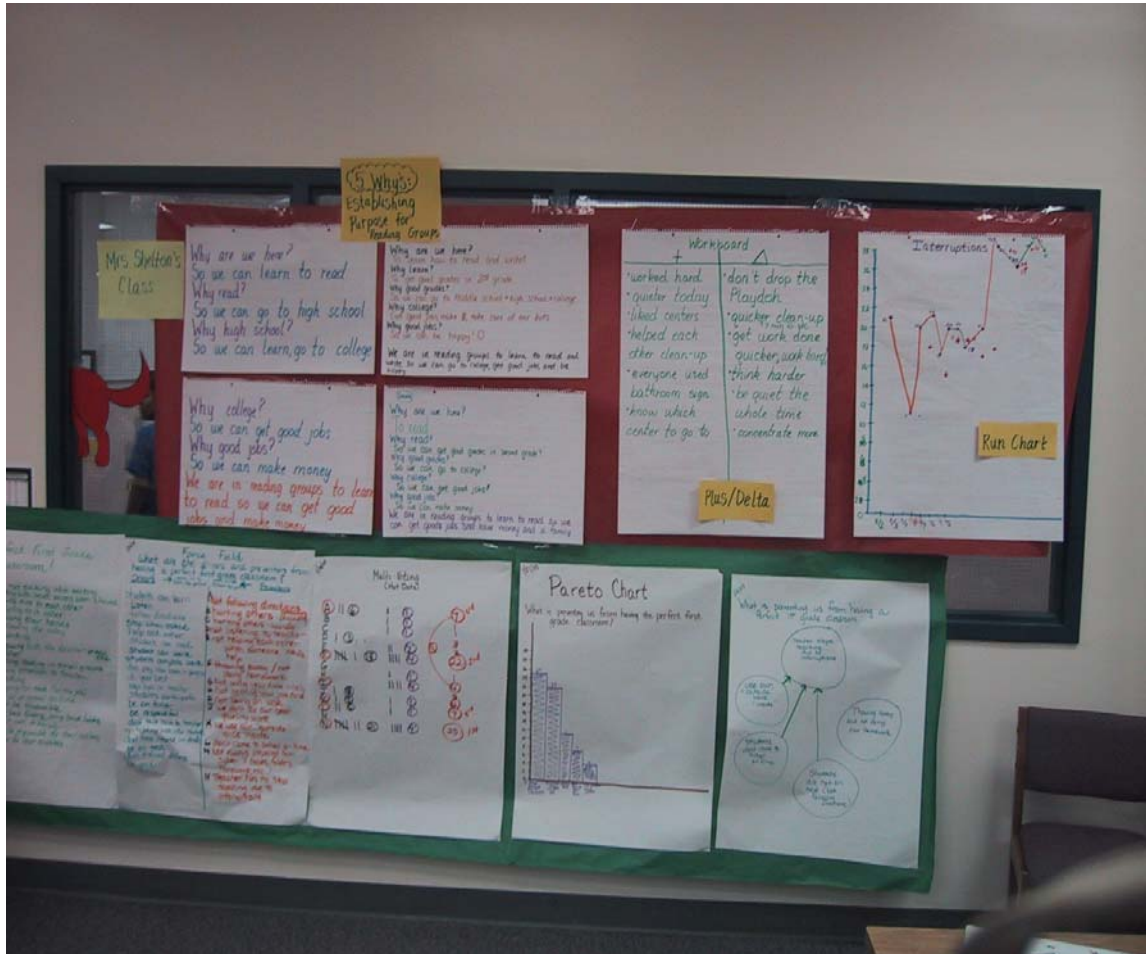
APPENDIX C7

Classroom Run Charts



APPENDIX C8

Student-made Story Boards presented at Teacher Portfolio Party



VITA

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