

**DIMENSIONS OF SERVICE QUALITY OF THE UNIVERSITY OF ARIZONA  
SPONSORED PROJECTS SERVICES OFFICE INTERNAL CUSTOMERS**

A Dissertation

by

DAVID RAY BACA

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

December 2006

Major Subject: Educational Administration

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December 2006

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## ABSTRACT

Dimensions of Service Quality of the University of Arizona Sponsored Projects Services

Office Internal Customers. (December 2006)

David Ray Baca, B.S., Texas A&M University;

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Chair of Advisory Committee: Dr. Bryan Cole

When a service transaction occurs between a service provider and a customer there are dimensions of that transaction that are essential to making the customer feel satisfied with the transaction. Zeithaml, Parasuraman and Berry measured those dimensions for transactions that occur between the service provider and an external customer with a survey tool named SERVQUAL. It is theorized that for the external customer to be satisfied with the service transaction, the employees of the service provider must also be satisfied with transactions between the employees, or internal service quality. Those dimensions of internal service quality, or the satisfaction employees feel with each other, have not been described in a higher education setting. The purpose of this study was to determine the goodness of fit between the original SERVQUAL external service quality dimensions and those internal service dimensions identified by the University of Arizona Sponsored Projects Services Office (UASPSO). Through the identification of these dimensions a model of the culture of service quality of the UASPSO was also developed. Sixteen of the 25 Sponsored Projects Services Office employees were interviewed in 2005 to collect data concerning the validity of the original SERVQUAL dimensions and any new dimensions that might be identified with respect to

internal service quality. Interviews were conducted using qualitative and constant comparison methods.

Of the original ten SERVQUAL service quality dimensions described by Zeithaml, Parasuraman and Berry, Access, Communication, Competence, Reliability, Responsiveness and Understanding the Customer were found to apply to the construct of internal service quality in the Sponsored Projects Office. Reliability, Responsiveness and Understanding the Customer were subsumed under the new dimension of Mutualism. Credibility, Courtesy and Security were found not to apply, while Tangibles applied only as it supported Access and Communication. Tangibles, Access and Communication were subsumed under the new dimension of Approachability. All eight dimensions are found in the task-oriented realm of the processes and procedures of the Office. An additional five dimensions were also described as applying to internal service quality. Flexibility, Decision-making and Accountability are evident as task-oriented dimensions. Professionalism and Collegiality are evident as non-task-oriented dimensions. The study also described the impact of the culture of the organization on internal service quality. The managerial implications of this study were also suggested.

**DEDICATION**

To my wife

Priscilla

Without whom this life would not be possible. I love you.

To

Jay Martin Poole

For putting me on this path

To

My Parents and Family

For making the sacrifices to educate your son

## ACKNOWLEDGEMENTS

It is difficult to write a simple thanks to my Committee, as its membership has changed over the too many years it has taken me to accomplish this feat. To Stan Carpenter, former Chair, thanks for your frank conversations and your help seeing me through this degree. To Fred Heath, former Member, thank you for being a great boss and mentor and giving me the opportunities to expand my experience and learning. You are a true innovator and I still have much to learn from you. To current member Colleen Cook, thank you for stepping in and for giving me the opportunity to learn how assessment is meant to be performed. To Yvonna Lincoln, current Member, thanks for the foundation for this dissertation. Sitting in your class, I never would have expected that your teachings would guide not only my degree but a large part of my professional life. And to Bryan Cole, thank you for your patience, your flexibility and for hanging in there with me. I applaud the inspiration, integrity and professionalism of you all.

None of this would have been possible without the sacrifices of my parents and family. As only the second person to graduate from a University in our small family, it was never questioned that I would go on to a higher level of learning. Your vision certainly didn't include this Doctorate (who woulda thought?) but I hope that I have fulfilled your dreams for me.

To Priscilla, I never feel that I am worthy of the pride you have for me. I can only say that none of this, or anything I will do from now on, would have been accomplished without you. You are my hero and I love you with all my heart.

And to the memory of Jay Martin Poole, mentor, confidant and dear friend. When I walked into your office and you announced that you had registered me in the MLIS program at the University of Texas I was dumbstruck by your nerve and foresight. I still am. You will live in my thoughts and heart forever.

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## CHAPTER I

### INTRODUCTION

#### Overview

Administration of funding from external sponsoring organizations at colleges and universities is, in the life of higher education, a relatively recent phenomenon.

Administrative offices go by many names: research administration, sponsored programs administration, grants management or sponsored projects offices. They have in common the management of increasing amounts of federal funding, funding that was born of the Cold War and space race that began with the launch of Sputnik. This federal funding has had a profound impact on the nature of colleges and universities (Norris & Youngers, 2002). It has become vitally important that the administration of these funds by colleges and universities adhere to high standards in the administration, accounting and servicing of the funds. Colleges and universities, intent on administering these funds to those high standards, have installed non-academic departments, Sponsored Projects Offices [SPOs], which oversee the acquisition and distribution of these funds. Quality of service in SPOs is essential to meeting the needs of customers and the various stakeholders, including the federal government, of the institution. Studies suggest that an internal service quality focus is the best approach in order to establish a service orientation as an organizational imperative, develop and maintain a service culture, and introduce new products and new marketing activities. The ultimate goal is to satisfy employees in order to increase

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The style and format of this dissertation follows that of the *Journal of Educational Research*.

customers' perceptions of service quality and satisfaction (Kang, James & Alexandris, 2002).

While the measurement of service quality in administrative and academic departments of higher education is on the rise, few attempts, if any, have been made to measure any qualitative aspects of SPOs. This may be because, while SPOs are vital components of most research universities and large colleges, they produce few tangible goods and are primarily service-oriented departments. Nevertheless, numbers relating to administration of grant funding by SPOs are impressive: research and development expenditures by universities and colleges for the year 2000 topped \$32 billion, growing from \$255 million in 1953 (National Science Foundation, 2003); SPOs administer 1.31 proposals per faculty FTE; SPOs administer an average of \$86,638 per faculty FTE; and these numbers have grown by 9.5% each year since 1990 (Kirby & Waugaman, 2001).

Current assessments of Sponsored Projects Offices, such as the Kirby and Waugaman study, rely heavily on output metrics relative to external constituents, including number of proposals managed, funding rates and dollar amounts managed (Davis & Lowry, 1995; Kirby & Waugaman, 2001;). At the University of Arizona the service arm of the SPO that administers Pre- and Post-Award proposals is the University of Arizona Sponsored Projects Services Office [UASPSO]. It is the quality of services offered by the UASPSO, specifically relating to the dimensions of internal customer service quality, that this study will address.

### **Service Quality in Higher Education**

The impetus to measure service quality in SPOs comes at a time when higher education is under pressure to justify its existence and become more self-sustaining.

Because SPOs are the service department of research universities that manage millions of dollars of university funding in the form of grants and external research contracts, it is imperative that SPOs provide high service quality not only to meet the needs of the external faculty customer and stakeholder, but the internal customer, or employee. As quality in higher education becomes ever more important, quality in research management by SPOs must keep pace. Failure to provide quality service may result in lost funding for vital research projects.

The roots of service quality were born of the post-World War II emphasis on manufacturing quality. Total Quality Management [TQM] in manufacturing emphasizes the business customer (Deming, 1986). That focus has slowly wended its way through the private service company sector on to institutions of higher education. Despite criticisms of the use of TQM in not-for-profit institutions and higher education (Birnbaum & Deshotels, 1999; Schied, Carter, Preston & Howell, 1998; Vazzana, Elfrink & Bachmann, 2000) higher education has adopted some of the tenets of TQM as a number of adverse factors, including decreased state funding, increased program demands, an increase in competition from other institutions of higher education and from outside academe and a changing student body demographic (Anthun, 1999; Barnard, 1999; Gilliland, 1997; Lovett, 2002) have affected institutions. The successful implementation of TQM involves a systems approach that encompasses every interaction of the organization, from suppliers of inputs into the process, through to the interaction with the final customer (Singh & Deshmukh, 1999). The notion of quality service and the external customer is well established, but the notion of an internal

customer is still being explored (Brooks, Lings & Botschen, 1999; Cannon, 2002; Broady-Preston & Steel, 2002a, 2002b; Comm & Mathaisel, 2000; Kang, James & Alexandris, 2002; Li, Tan & Xie, 2002; Lings, 2004;). Gummesson (1987) suggests that:

Everybody should see himself as a customer of colleagues, receiving products, documents, messages, etc. from them, and he should see himself as a supplier to other internal customers. Only when the customer is satisfied – it is the satisfied customer that counts irrespective of whether he is external or internal – has a job been properly executed. (p.11)

Kanji and Asher (1993) call for the role of employee to be expanded to the role of internal customer and that it is necessary to achieve successful internal working relations in order to be able to satisfy external customers (Cannon, 2002). Thus, the relationships between employees within an organization are essential for the successful interactions with external customers. The delivery of quality internal services is critical to employee satisfaction since improvements in internal service quality are expected to produce improved external service quality (Hart, 1995; Heskett & Schlesinger, 1994). Schneider (1986) also suggests that to create a quality service experience for consumers, organizations must create a quality service experience for their employees.

The measurement of the quality of service to the external customer has proliferated over the past decade (Barnard, 1999; Drexler & Kleinsorge, 2000; Fehr, 1999; Hernon & Nitecki, 2001; Miller & Shih, 1999; Sousa, 2003). Much of the customer satisfaction research still uses some variant of the disconfirmation paradigm to measure the antecedents of satisfaction. Disconfirmation holds that satisfaction is related to the size and direction of the disconfirmation experience, where disconfirmation is related to the person's initial expectations. An individual's expectations are (1)



confirmed when a product performs as expected, (2) negatively disconfirmed when the product performs more poorly than expected, and (3) positively disconfirmed when the product performs better than expected (Churchill & Suprenant, 1982). SERVQUAL, a disconfirmation service quality assessment survey developed for the retail industry, has seen widespread use in different sectors of higher education (Cook & Heath, 2001; Hiller, 2001; Li & Kaye, 1999; Mafi, 2000; Nitecki, 1996; Wright, 2000). Research by these, and other, authors indicates that improved service quality can result in decreased costs, improved productivity, satisfied customers and a strengthened competitive position for higher education institutions (Varki & Colgate, 2001). The SERVQUAL assessment survey is predicated on the identification of the dimensions of service quality. These dimensions, applicable to the retail sectors studied, were developed by Parasuraman, Zeithaml and Berry (1985).

### **Statement of the Problem**

While there is an established body of service quality literature in the business sector and a growing body of literature for quantitative assessment of SPOs (Baker & Wohlpert, 1999; Davis, 1991; Kirby & Waugaman, 2001; Lowry & Walker, 1991; Monahan & Fortune, 1995) and service quality in higher education settings, no studies exist defining SPOs as service organizations. As such, no studies exist that develop, or specify, the dimensions of service quality of Sponsored Projects Offices, either externally or internally. Evidence in the higher education literature suggests that the SERVQUAL instrument, adapted and modified from the private retail sector instrument, is effective in measuring service quality in the higher education environment and is

especially useful in providing guidance for the correction of service shortcomings (Cook & Heath, 2001; Fogarty, Catts & Forlin, 2000; Hiller, 2001; Li & Kaye, 1999; Mafi, 2000; Nitecki, 1996; Soutar & McNeil, 1996; Wright, 2000). But, are the original dimensions of the SERVQUAL instrument, in describing service quality to external customers in retail sectors, useful in describing the service quality of internal customers of the University of Arizona Sponsored Projects Services Office? Are there new dimensions that better encompass service quality of internal customers of the University of Arizona Sponsored Projects Services Office? Cultural questions centered on service quality are also important: What are the service and customer relationships of the employees of the University of Arizona Sponsored Projects Services Office? How do the internal customers of the University of Arizona Sponsored Projects Services Office view their relationship to the external customers of the Office?

### **Purpose of the Study**

The purpose of this study is to determine the goodness of fit between the original SERVQUAL service quality dimensions and those internal service dimensions identified by the UASPSO. Through the identification of these dimensions a model of the culture of service quality of the UASPSO will also be developed.

### **Research Questions**

1. Are the original SERVQUAL service quality dimensions valid with respect to internal UASPSO services?
2. What additional dimensions, if any, are important to internal customers in judging satisfaction with internal UASPSO services?

3. What is the culture of service quality at the UASPSO?

### **Operational Definitions**

*Sponsored Projects Offices (SPOs)*: The non-academic service department that administers sponsored funding from federal, state and other external agencies for research universities and large colleges. SPOs often provide assistance with proposals and the identification of funding opportunities, as well as administering contracts and complying with regulations.

*University of Arizona Sponsored Projects Services Office (UASPSO)*: The nomenclature used at University of Arizona for the SPO that assists with Pre- and Post-Award proposals and funding.

*TQM*: Total Quality Management - A management approach developed in the manufacturing sector based primarily on the work of W. Edwards Deming, but now also used in service organizations and higher education. Elements include a focus on the customer and the use of data and analysis to improve processes and services (Seymour, 1992).

*Internal Customer*: Employee of the University of Arizona Sponsored Projects Services Office. The notion of the employee as an internal customer was developed by Berry (1981) and Gronroos (1983).

*Customer Service*: Understanding the needs and expectations of the customer and responding to those needs and expectations with activities, products and services designed to satisfy those needs and expectations (Kotler, Hayes & Bloom, 2002).

*Pre-Award:* The department of the University of Arizona Sponsored Projects Office that handles the ingest of proposals and works with faculty and researchers to submit those proposals to the funding agencies.

*Post-Award:* The department of the University of Arizona Sponsored Projects Office that accounts for funds expended and tracks equipment used on funded projects.

*Service Quality:* Citing the developers of the SERVQUAL instrument, service quality as defined by Parasuraman, Zeithaml and Berry (1988), involves perceived quality, or the “user’s judgment about an entity’s overall excellence or superiority” (p.15).

*SERVQUAL:* A disconfirmation survey instrument developed by Parasuraman, Zeithaml and Berry (1988) and refined by Parasuraman, Berry and Zeithaml (1991a) for measuring service quality in the retail sector. The instrument is based on the Gap Model and computes difference scores for operationalizing service quality in terms of customers’ perceptions of quality versus their expectations.

### **Limitations**

1. Findings from this study may not be generalizable to any other group than the employees in this study.
2. This study is limited to the employees of the University of Arizona Sponsored Projects Services Office.
3. I am limited in my observation and interpretation of what is shared with me.

## **Methodology**

### ***Population***

The population studied consists of all of the employees of the University of Arizona Sponsored Projects Services Office. The UASPSO is staffed by 25 employees, consisting of a Director, an Assistant Director and staff spread over the functional departments of Pre-Award, Post-Award, Cash Management, Property and Management Analysis.

### ***Methodology***

A preponderance of the SERVQUAL studies, particularly those researching the use of the instrument outside of the retail sector (Anderson & Zwellling, 1996; Babakus & Mangold, 1992; Bennington & Cummane, 1998; Boulding, Kalra, Staeling, & Zeithaml, 1993; Brady, Cronin & Brand, 2002; Carman, 1990; Caruana, Ewing & Rameseshan, 2000; Cook & Heath, 2001; Engelland, Workman & Singh, 2000; Finn & Lamb, 1991; Ford, Joseph & Joseph, 1993; Hiller, 2001; McDougall & Levesque, 1994; Nitecki & Herson, 2000;), found that the original SERVQUAL instrument and dimensions were not universally useful or valid for use in the non-retail sector studied. Modifications to the instrument included changing the number of survey items, lengthening and shortening the Likert scale, development of new dimensions and various applications of analysis. More recent, and extensive, studies employing SERVQUAL by Cook, Heath, and Thompson (Cook & Heath, 2001; Cook, Heath, & Thompson, 2001; Cook & Thompson, 2001; Cook & Thompson, 2000a; Cook & Thompson, 2000b; Thompson, Cook & Heath, 2001; Thompson, Cook & Heath, 2000) in a higher

education setting suggests grounding the instrument's questions in the sector studied through identification of the dimensions of service quality applicable to that sector. While a quantitative survey instrument was developed in that study, to identify the applicable dimensions this study followed the constructivist paradigm using qualitative methods to collect data as described by Lincoln and Guba (1985). To determine the dimensions of service quality of the internal customers of the UASPSO interviews were conducted in the natural setting of the UASPSO offices. The interviews were semi-structured and centered, initially, on the ten service quality dimensions developed by Parasuraman, Berry and Zeithaml (1991a). To support initial conversations and interviews, additional data was collected in the form of organizational documents, including organization charts, prior organizational evaluations, strategic plans, etc. In addition, background knowledge and information gleaned from the researcher's participation on the University of Arizona Service Functions Review Committee was utilized. This Committee was charged with determining service effectiveness of several support units, including the UASPSO, with respect to customers external to the unit. Participation on the Committee provided a vehicle for gaining entrée into the workings and culture of the UASPSO.

### **Procedures**

This study will determine whether the original SERVQUAL dimensions hold for the internal customers of the UASPSO as well as identification of any new service quality dimensions using methodology described by Lincoln and Guba (1985). While a research "plan" is "impossible to specify in advance" (Lincoln & Guba, 1985, p. 224)

procedures generally follow, in a nonlinear fashion and building on collected data, the methodology below:

- Data collection from nonhuman sources
- Determination of supplier-customer chain using Next Operation As Customer (Bhote, 1991).
- Interviews were audiotaped and an audit trail of raw data, data reduction and analysis products, data reconstruction and synthesis products, process notes, materials relating to intentions and information relative to instrument development was created and maintained. The audiotapes were transcribed and copied into text analysis software.
- Continuous coding and categorization of transcripts of interviews and inference of constructions of service dimensions
- Development of service dimensions from coding and continuing to build a construct of service quality
- Open-ended data analysis
- Report results as case study to UASPSO

### **Significance of the Problem**

For academic service departments such as the UASPSO, providing high quality service is recognized as a meaningful factor distinguishing successful service organizations from others. Organizations that are not perceived as providing quality services can and do suffer a loss of support, with resulting consequences for funding. The UASPSO processed over \$526 million in research funds in 2003 (University of Arizona, 2004). While the UASPSO, like many academic support departments, is somewhat shielded from extra-university competition, there are alternatives for the University of Arizona faculty. The faculty, to some extent, may choose to bypass the UASPSO altogether and refuse to place their proposals in the UASPSO process. Or, the faculty may choose to affect the future budgets for the UASPSO if they view services as

not having value. For quality service to occur for the external customer, the internal customer, namely the UASPSO employees, must also experience service quality.

This study provides a blueprint for continuing studies on the use of SERVQUAL in an academic setting and treads new ground in service quality assessment of Sponsored Projects Offices and the use of the SERVQUAL dimensions to measure internal service quality in higher education organizations. To summarize, the study is significant for the following reasons:

1. No evidence has been found that the dimensions of service quality in the SERVQUAL instrument have been utilized to assess the service gaps of Sponsored Projects Offices.
2. No evidence has been found that determines the dimensions of service quality for internal customers in an academic setting.
3. This study will contribute to the future understanding of research on Sponsored Projects Offices as service organizations.

### **Organization of the Study**

The study consists of five chapters followed by References and Appendices.

Chapter I consists of the following:

- Service Quality in Higher Education
- Statement of the problem
- Purpose of the study
- Research Questions
- Operational definitions
- Limitations
- Methodology
- Procedures
- Significance of the problem
- Organization of the Study



Chapter II, review of the literature is outlined as follows:

- A brief history of Total Quality Management
- Quality in the service sector
- The employee as customer
- Quality in higher education
- Defining quality
- Quality service and satisfaction
- SERVQUAL: an instrument for measuring service quality
- The importance of the internal customer in providing external service quality
- Summary

The research methodology is presented in Chapter III and consists of the following:

- Population Description and Organizational Structure of the UASPSO
- Research Design
- Perspectives of the Researcher
- Data Collection
- Pre-interview data
- Interviews
- Reflexive Notes
- Data and Analysis Methods

The study findings are reported in Chapter IV and consist of the following:

- A Note on the Respondent Reference Codes
- Introduction to the University of Arizona Sponsored Projects Services Office
- External Service Quality
- Workflow
- Research Question: What is the culture of service quality of the UASPSO?
- Subcultures of the UASPSO
- Research Question: Are the original SERVQUAL service quality dimensions valid with respect to internal UASPSO services?
- Summary of Original Dimensions Findings
- Research Question: What additional dimensions, if any, are important to internal customers in judging satisfaction with internal UASPSO services?
- Summary of Additional Dimensions Findings

In Chapter V the research findings are presented as follows:

- Purpose of the Study
- Research Questions
- Methodology
- Summary of the Findings
- Conclusions
- Recommendations for Practice
- Recommendations for Further Study
- Summary

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

#### **A Brief History of Total Quality Management**

American industry was facing a crisis in the late 1970's and early 1980's and was reeling from “back-to-back recessions; deregulation; a growing trade deficit; low productivity; downsizing; and an increase in consumer awareness and sophistication” (Schlenker, 1998, p.1). Companies such as Ford Motor Company and Xerox were experiencing losses and sharp drops in market share and saw an attention to quality as a way to combat the competition. Ford had operating losses of 3.3 billion between 1980 and 1982. Xerox, which had pioneered the paper copier, saw its U.S. market share drop from 93% in 1971 to 40% in 1981 (Schlenker, 1998). American industry, through the later part of the nineteenth century through the mid-twentieth century, had followed Frederick Taylor’s system of scientific management. Taylor’s goals were to take productivity out of the hands of the skilled craftsmen and put it in the hands of engineers and corporate administration. While the basis for a remarkable rise in productivity, the system had negative consequences on human relations and quality. To counter these consequences, managers created central inspection departments to keep defective products from reaching customers (Juran, 1995). The mass manufacturing push that was required during World War II put strains on this type of inspection system. Rather than build in systems to stop defects, materials and effort were being wasted in sending back defects. This model carried over after World War II when there were massive shortages of goods driven by a 5-year pent-up demand. Manufacturers focused on quantity and the

quality of products declined precipitously. As consumerism grew, complaints concerning the quality of products grew. As confidence in homemade products waned, Americans looked to other countries to supply their goods.

The Japanese, while possessing an uncanny ability to copy, also ranked poorly in the production of goods following the war. Japanese corporations, trying to stay competitive, turned to an American, W. Edwards Deming, to help rebuild their economy. Deming, a statistician with Bell Laboratories, was a devotee of Statistical Quality Control (SQC) and used the concepts of SQC to aid the Japanese in improving manufacturing quality. Deming had first visited Japan in 1947, summoned there by the occupation government to help Japan with its census. He was invited back in 1950 by the Union of Japanese Scientists and Engineers to teach quality control (Schultz, 1994). Deming's philosophy of building quality into a manufacturing system rather than performing quality assurance at the end of the manufacturing process, as was the accepted practice at the time, was the extension of other practitioners in the management field (Rosander, 1991). Walter Shewhart, an engineer at Bell Laboratories, preached in his *Economic Control of Quality of Manufactured Products* (1931) that manufacturing could be improved by identifying and correcting problems during the manufacture of the product. Shewhart identified ways of monitoring and evaluating manufacturing processes that ran counter to existing quality programs that winnowed out defects at the end of the process. Shewhart identified variations in processes as the source of most errors in quality and promoted statistics as the way to understand this variation (Deming, 1986). Shewhart also devised the famous Plan, Do, Study Act cycle that Deming was to

use in subsequent teachings. Deming was employed at the same laboratory and taught statistical control to engineers and inspectors. Deming formed his ideas about quality based on Shewhart's concepts but went on to add improvements. Deming claimed that customers were the driving force behind the definition of quality and that benchmarking other quality companies and processes would lead to even greater quality improvements. Deming pointed out what he saw as flaws in the traditional model of management by objectives [MBO], which emphasized a chain of command in which objectives are translated into work standards or quotas. Deming cautioned that with MBO the performance of employees is guided and evaluated according to numerical goals. As a result, workers, managers and supervisors get caught up in protecting themselves. Looking good overshadows a concern for the customer or the organization's long-term success. Employees, desperate to meet quotas, lose sight of the larger purpose of work. After the war Deming tried to promote his ideas about improving quality to American industry but found little response. There was, however, a strong response from the Japanese. Deming guided Japanese industry through a period of strong growth and retooling, and developed core concepts of quality management that focused on the customer, touted the benefits of teamwork and above all, espoused a commitment to quality (Rosander, 1991). "Deming predicted the Japanese adoption of these methods would put their products in demand throughout the world in five years. He was wrong; within four years the Japanese had gained large shares of some markets" (Schlenker, 1998, p. 1).

Upon returning to America from Japan, Deming began formulating his 14 points of quality management, outlined in his 1982 book *Quality, Productivity and Competitive Position* and revised and updated in his subsequent 1986 publication *Out of the Crisis*. *Out of the Crisis* provided a map for American industry to follow to build quality into products and services. Deming's 14 points outlined in *Out of the Crisis* (p.23-24) and shown in Table 1, exhorted American industry to:

**TABLE 1. Deming's 14 Points. From *Out of the Crisis* (p.23-24), by W.E. Deming (1986).**

Point 1	Create a constancy of purpose for improvement of product and service
Point 2	Adopt the new philosophy. Management must awaken to the challenge, must learn their responsibilities, and take on leadership for change
Point 3	Cease dependence on inspection to achieve quality
Point 4	End the practice of awarding business on the basis of price tag
Point 5	Improve constantly and forever the system of production and service
Point 6	Institute training on the job
Point 7	Institute leadership
Point 8	Drive out fear, so that everyone may work effectively
Point 9	Break down barriers between departments
Point 10	Eliminate slogans, exhortations, and targets for the work force
Point 11	Eliminate work standards that prescribe numerical quotas
Point 12	Eliminate barriers to pride in workmanship
Point 13	Institute a vigorous program of education and retraining
Point 14	Put everyone to work bringing about this transformation

In the years following Deming's 1986 book, American industry saw a resurgence in the levels of product quality and the regaining of lost market shares, although many sectors, especially the service sector, have been slower to adopt the needed measures (Martin, 1993). Saylor (1992, p.14) summed up the changes facing the world in the early 1990's (see Table 2) and reflected those principles that Deming was espousing.

Following Deming's and Shewhart's principles, American industry produced numerous success stories. Florida Power & Light reduced customer complaints by 60% and improved reliability of electric services to customers by 40% in 1983. In 1987, the firm was rated by 156 utilities' CEO's as the best managed utility in the nation (Schlenker, 1998). Lucent Technologies reduced new product cycle time by 45% while improving on-time new product availability from 91% to 95%. The 3M Dental Products Division doubled global sales and market share, and from 1961 to 1996 doubled its rate of profit. In addition, products introduced between 1993-1997 accounted for 45% of total annual sales, up from 12% in 1992 (National Institute of Standards and Technology, 2001). One of the indicators of success was the winning of the Malcolm Baldrige National Quality Award. Recognizing that U.S. productivity was declining, President Ronald Reagan signed legislation mandating a national conference on productivity in October of 1982. The conference produced a mandate to establish a national quality award, which was signed into law in 1987. The criteria of the award were designed to encourage companies to enhance their competitiveness through the delivery of ever-improving value to customers and the improvement of overall company performance and capabilities (Evans & Dean, 2000).

**TABLE 2. Comparison of Yesterday's and Today's World**

<b>Yesterday's World</b>	<b>Today's World</b>
U.S., the top economic power	U.S. one of the players
Make it, it sells	Intense competition
Quality and reliability not important	Quality and reliability demanded
Historically reasonable cost	Lowest possible cost
Many organizational layers	Few organizational layers
Rigid structures	Flexible structures
Large budgets	Shrinking budgets
New systems	Improvement of old systems
If not broke, do not fix it	Continuous improvement
Large breakthroughs	Little innovations
Development	Innovation
Sequential design	Concurrent design
Inspection	Prevention of defects
Certainty	Uncertainty
Stable technology	Rapidly changing technology
Waste: many resources	Conservation: limited resources
Compete	Cooperate
Individual	Groups
People specialized/eliminated	People primary value
Strong management	Strong leadership
Leadership only at the top	Leadership at all levels

The evaluation process for the award was rigorous and competition among manufacturing companies was intense. The criteria centers on seven categories of



excellence: leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management and business results (Evans, 1999). Winning the award not only meant recognition for excellence in quality, but could result in larger contracts, increased market share and an increase in stock price. Through the first ten years of the award large corporations such as Motorola, Xerox, Cadillac and Boeing were successful in achieving recognition. Turned down for the award in 1989, IBM demanded change from its employees and was awarded the Baldrige in 1990. An index of publicly traded companies that have received the Baldrige Award was developed. The Baldrige Index companies outperformed the S&P 500 by more than 2.7 to 1 (Ross, 1999).

### **Quality in the Service Sector**

While the initial concern for quality following World War II was on industries that produced goods, it was logical that service industries should also adopt quality tenets. After all, a major assumption in the quality literature is that TQM will fail without a focus on customer service (Ciampa, 1992). Companies had viewed service as secondary in importance to manufacturing, but quickly realized that service quality was the greatest key to success and a primary source of competitive advantage. Peters and Waterman (1982) recognized in the early 1980's the importance of service and wrote that companies should share an obsession with improving service. A 1985 Gallup poll on the quality of American products and services found that consumers believed that quality was determined by employee behavior, attitudes and competence. They also believed that poor quality was due to the same factors (Evans & Dean, 2000). Deming (1986)

recognized that his 14 points could be applied to service organizations. Deming understood that “quality of any product or service has many scales” (Deming, 1986, p. 169). The American Management Association (1991) found in a survey of over 3000 respondents that 78 percent identified improving quality and service to customers as the key to competitive success.

America in the 1980’s and 1990’s was becoming a service economy and 90 percent of new jobs were in the services sector, accounting for more than 70 percent of the Gross National Product (Berry & Parasuraman, 1993). Recently, only 21 percent of total employment in the United States was in industries that produce goods and up to half of the employment in manufacturing was in staff or white-collar jobs (Ross, 1999). Successes in the manufacturing use of TQM led to a growing interest within the public sector. Increasing amounts of literature, public sector initiatives (Carr & Littman, 1990) and national awards such as the Baldrige indicated a growing interest in the management of quality within the service sector (Crosby, 1984; Feigenbaum, 1991; Peters, 1987; Schonberger, 1992; Singh, 1990). This need for quality in the service sector was motivated by the slide of power from the producers of goods and services to the consumer or customer. As with the manufacturing industries, consumers were becoming more demanding, as increased competition and product commoditization gave them more choices. Consumers were becoming smarter as more and more sources of information were available about companies and their practices (Hammer, 2000).

As with the manufacturing sector, success came to many of those companies that embraced a “customer first” attitude. Perhaps one of the most successful has been

Southwest Airlines, which grew from a three-plane, \$2.1 million start-up in 1971 to a \$3.8 billion national player that posted its twenty-fifth consecutive year of profitability in 1997. Southwest has received superb marks for customer service from its inception and has relied on its employees for its success (Wiersma, 1998). Another innovator relying heavily on superior customer service is Land's End, the mail-order catalog business. In fiscal 1998 the company sent out 230 million catalogs, up 9 percent from the previous year; grew sales by 13 percent, to \$1.3 billion; and increased net income 26 percent, to \$64 million. Land's End is a model of success and is successful due to "its commitment to product quality and customer service" (Rasmusson, 1998, p. 138).

Before proceeding further, it is useful at this point to define the word customer and/or customer service (the process). In general terms the word customer is typically used to describe someone who purchases a product from a business but the breadth and complexity of customer/business transactions makes it difficult to define more specifically. The general definition treats consumer behavior as consisting of only a discrete transaction. What is lacking in this perspective is how that discrete transaction relates to other purchases that comprise the individual's consumption behavior. Gabbott and Hogg (1998) feel that in this sense the term customer is unsatisfactory and should reflect the authorizing role, influencing role and the user. Their definition is more encompassing and includes "consumer behaviour...a wide range of activities and behaviours, the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences" (p.10). Lehtinen (1991) defines the process simply as "synonymous with interactive quality, which relates to the interaction

between the customer and the contact person” (p. 135). Weston (1999) defines a customer as “an entity that interacts with the company” (p. 137). Deming characterizes the customer as “the most important part of the production line. Quality should be aimed at the needs of the consumer, present and future” (Deming, 1986, p. 5).

While service organizations attempt to use the same methods to achieve service quality as goods manufacturers, services and service quality are differentiated from goods in several ways and a variety of definitions of services have emerged over the years. Most of these definitions attempt to capture one or another characteristic without encompassing all aspects of services. One of the most comprehensive is expressed by Gronroos:

A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and/or systems of the service provider, which are provided as solutions to customer problems.  
(Gronroos, 1983, p. 27)

Bitner and Hubbert (1994) define service quality as the “consumer’s overall impression of the relative inferiority/superiority of the organization and its services” (p.77). White and Abels (1995) note that services are different from goods in that goods are tangible objects, have great consistency and are produced to meet certain standards. Services are dependent on the interaction between client and service provider. Zeithaml, Parasuraman and Berry (1990) and Herson and Altman (1996) have adopted the user-centered approach to defining service. “The only criteria that count in evaluating service quality are defined by customers. Only customers judge quality; all other judgments are essentially irrelevant” (Zeithaml, Parasuraman & Berry, 1990, p.16). These same authors

(1990) also define service quality as “the extent of discrepancy between customers’ expectations or desires and their perceptions” (p.19). Zeithaml, Parasuraman and Berry also identify several key factors that shape customers’ expectations: word of mouth communications, personal needs, past experience and external communications from service providers (1990). In a later statement Zeithaml, Berry and Parasuraman (1996) maintain that delivering service quality is an essential strategy for success, and improving service quality can increase favorable behavior intentions and decrease unfavorable intentions. Deming (1986) defined service as a product and went on to list differences between service and manufacturing, including captive markets, generation of new material, direct transactions with masses of people, a large volume of transactions and many transactions with small amounts of money. Bowen & Cummings (1990) define services as:

1. Services are more or less intangible
2. Services are activities or a series of activities rather than things
3. Services are heterogeneous – service to one customer is not exactly the same as the “same” service to the next customer
4. Services are, at least to some extent, produced and consumed simultaneously
5. The customer participates in the production process, at least to some extent.

In most cases, researchers maintain that services have characteristics that distinguish them from the manufacturing products, or goods, that total quality management was originally designed to improve. One property of services is their intangibility. Services are performances rather than objects. In the sense of improving services, it is more difficult for an organization to count, measure, inventory or verify services in advance of consumption (Parasuraman, Berry & Zeithaml, 1991b). A second characteristic of

services is their heterogeneity. Services are difficult to standardize and can vary between service organizations as personnel and procedures change. In the production process, customers often can influence the production process and their relationship with the producer. The third critical characteristic of services is the inseparability of production and consumption of services. This means that the customer is most often present when the good is produced and consumed (Martin, 1993). A fourth characteristic of services is their perishability. Unlike goods, which often have a measurable shelf life, services cannot be saved or inventoried (Garvin, 1988). If a service is not used it is lost. These characteristics underscore the need to understand and improve customer service and address quality issues. Other studies have found that between 24 and 99 activities constitute customer service activities (Nayvar, 1995), although a review by Donaldson (1995) of studies investigating the key dimensions of customer service revealed 17 dimensions. Some researchers argue that there is one underlying dimension and others, such as Parasuraman, Zeithaml and Berry (1988), argue that there are five major dimensions. Knowing exactly how customers might be affected by different aspects of a service is also important, particularly if those things that cause dissatisfaction are not the opposites of those that cause satisfaction. Bennington and Cummane (1998) have categorized these factors into the following:

- Hygiene factors--those things expected by the customer and causing dissatisfaction when not delivered.
- Enhancing factors -- those things which may lead to customer satisfaction but when not delivered do not necessarily cause dissatisfaction.
- Dual threshold factors -- those things which when delivered above a certain level of adequacy lead to satisfaction but when delivered at a performance level perceived to be below that threshold cause dissatisfaction.

Although the most popular definition of quality relates to meeting/exceeding expectations, there is neither an accepted nor a best definition of quality for every situation (Reeves & Bednar, 1994). Definitions focusing on excellence, conformance to specifications, fitness for use and loss avoidance have all been severely criticized in the service quality literature (Reeves & Bednar, 1994). Corporations have tried several different approaches to measuring service quality. FedEx developed 12 Service Quality Indicators (SQI) to determine the level of customer satisfaction. George and Weimerskirch (1998, p.17) show how the company tracks these indicators (see Table 3) daily and weights each according to the impact on customer satisfaction. Enterprise Car Rental developed a customer survey that reflected that major concerns of its customers. The company monitored scores and, with several improvements in service driven by customer feedback, finally saw its rating rise (Taylor, 2002). Other service companies, like manufacturing concerns, have adopted the Malcolm Baldrige National Quality Award criteria as guidance to achieve a quality service organization.

### **The Employee as Customer**

The notion of service quality as a transaction between the customer and employee is well explored and established. The notion of the importance of an internal customer is still being explored however (Broady-Preston & Steel, 2002a, 2002b; Brooks, Lings & Botschen, 1999; Cannon, 2002; Comm & Mathaisel, 2000; Li, Tan & Xie, 2002; Lings, 2004;).

**TABLE 3. FedEx Service Quality Indicators**

Indicator	Weight
Damaged Packages	10
Lost Packages	10
Missed Pickups	10
Complaints Reopened	5
Overgoods	5
Wrong-day late deliveries	5
Abandoned calls	1
International	1
Invoice adjustments requested	1
Missing proofs of delivery	1
Right-day late deliveries	1
Traces	1

Gummeson (1987) suggests that

Everybody should see himself as a customer of colleagues, receiving products, documents, messages, etc from them, and he should see himself as a supplier to other internal customers. Only when the customer is satisfied – it is the satisfied customer that counts irrespective of whether he is external or internal – has a job been properly executed. (p.11)



Kanji and Asher (1993) call for the role of employee to be expanded to the role of internal customer and that it is necessary to achieve successful internal working relations in order to be able to satisfy external customers (Cannon, 2002). The relationships between employees within an organization are essential for the successful interactions with external customers. The delivery of quality internal services is critical to employee satisfaction since improvements in internal service quality are expected to produce improved external service quality (Hart, 1995; Heskett & Schlesinger, 1994). Schneider (1986) suggests that to create a quality service experience for consumers, organizations must create a quality service experience for their employees. Lings (2004) reports that there exists a services marketing triangle, which represents marketing relationships where companies should focus their attention. There exists a relationship between the company and the customer (external marketing), a relationship between the customer and employees (interactive marketing) and the relationship between the company and the employees (internal marketing).

Bialowas and Tabaszewska (2001) also support this relationship. They argue that a company develops in two dimensions, an internal one by engaging the work force and improving processes and an external one, which is the market. These two aspects of the company activity, the authors believe, are interrelated and are a cause and effect process. Peter Drucker (1999) goes further and views employees as partners in the quality service equation. Rosenblunth and Peters (1992) suggest that the needs of the customers should actually come second to those of the employees. They argue that customer needs can only be met successfully after those of the employees have been met to satisfaction.

Organizationally, Farner, Luthans and Sommer (2001) relate that the basic principal of internal customer service posits “that every department in an organization exists to serve someone, whether that be the external customer or another department. The organization consists of an interdependent chain of individuals and functional units, each taking inputs from one another and turning them out into external customer service” (p.350).

This echoes Bhote’s (1991) Next Operation as Customer or NOAC. Bhote attributes the concept to Ishikawa and believes that it will revitalize all service operations. Others have built on Ishikawa’s work including Denton (1990); Lee and Billington (1992); Barrett (1994); and Lukas and Maignan (1996). The six principles, as set out by Bhote (1991) of NOAC are:

- The internal customer as prince
- Process, Process Owner, Customer, Supplier
- Measurements and Feedback
- Consequences
- Continuous Never-ending Improvement
- Employees as partners

These six principles have, at their base, the principles of TQM developed by Deming.

Bhote suggests that while the customer is king, the internal customer is at least a prince.

Each process of the organization receives inputs from an internal supplier and that the

best measure of quality derives from the internal customers’ evaluation. When the

internal process user performs, or fails to perform to the internal customer’s

requirements there must be consequences, or rewards and punishments. As with

Deming’s cycle of improvement, so is it with internal customers. There must be a never-

ending process of improvement. Finally, employees must be made full partners with management or improvements can only be marginal.

From a managerial perspective, increases in internal service quality result from internal marketing, a term that was first introduced in the early 1980s by Berry (1981) and Gronroos (1981). Internal marketing uses the same concepts of externally marketed service quality to service management. This concept approaches all members of the organization as service quality providers and motivates them to examine their roles in providing external service quality (Cowell, 1984). The goal is to identify and satisfy employees' needs as part of the chain of service providers (Varey, 1995). Internal marketing should be viewed as a management philosophy for both motivation and support so that employees are treated as customers by each other (George, 1990). Marshall, Baker and Finn (1998) do make a distinction, however, between internal marketing and internal customer service. They posit that internal customer service focuses on how employees serve other employees, while internal marketing is how the company serves employees. The internal customer service process is "viewed as a two-way exchange process between individuals in different functional departments of a firm in which the provider is charged with responding to the needs of his/her internal customer, resulting in a satisfied internal exchange partner" (p. 382).

To build this customer-oriented service minded workforce, Zeithaml and Bitner (2000) suggest organizing human resource strategies around four basic themes – 1) attract the right people 2) develop people 3) provide relevant support systems and 4) retain the best people. This workforce is also ordered around two internal relationships,

that of workflow relationships and service relationships. Workflow relationships involve activities that lend themselves to a process-oriented sequence, with activities that must be performed by different people in a somewhat fixed sequence. A service relationship is characterized by multiple commitments to other groups in the organization that do not necessarily follow a sequenced process (Stauss, 1995). Workflow relationships fit very well with internal customer orientations and problem solutions are often easier to implement as they are part of the Next Operation As Customer schema (Bhote, 1991). Service relationships, on the other hand, are often harder to identify and also harder to manage. A customer-supplier relationship may not explicitly exist, as an internal customer orientation cannot be achieved through a determination of performance and service, may vary in terms of quantity and quality and may not be a continuous connection (Stauss, 1995).

### **Quality in Higher Education**

As institutions that serve state and national constituencies in the education of adults, colleges and universities can certainly be said to be service organizations. Seymour makes the argument that institutions of higher education should, in fact, not exempt themselves from the conventions that generally apply to service industries.

In any college or university we (administrators, staff, and professors) provide a service to other groups (students, employers, society) as well as to each other. This is still difficult for many within the campus walls to accept. And even if we accept the notion that we provide a service, that service is often perceived to be so unique, so special, that none of the standard rules and practices of the service industry apply. We believe ourselves to be apart from other institutions in our society. We need an attitude change. (Seymour, 1992, p.128)

Our colleges and universities are in service for society, and higher education has the same operating characteristics as a bank, airline or small business. A trend over the past decade has been for universities to function more as businesses than as strict academic institutions. Lovett (2002) cites the pressures on higher education: need for capital funds, need for a skilled workforce, rising tuition costs, rising personnel costs, and energy expenses as reasons higher education administrations have turned to corporate practices. Gilliland (1997) cites the accelerating change, complexity and uncertainty requiring universities to function in “an environment of unpredictability” (p.30) as reasons universities must adopt corporate human resources practices. Oblinger and Verville (1998) also express concern that higher education may be out of touch with the future:

It seems as though neither organizations nor people can move fast enough to stay ahead of the changes brought about by globalization and technology. Both business and higher education will be challenged to stay abreast of these changes...the point is not that the past is wrong or that education is facility; the point is that the future will be different. (p.ix)

Lazerson (1997) reasons that it is the governing boards of institutions of higher education that are putting the pressure on university administrators to adopt business practices.

What ultimately equates higher education with other service institutions is the fact that universities have customers. Cuthbert (1996) asserts that higher education is a service because a university education meets the five qualifications that were outlined above: it is both intangible and heterogeneous, it meets the criterion of inseparability by being produced and consumed at the same time, the consumers participate in the delivery process and an education meets the perishability criterion by being impossible

to store. An increasing number of studies exhort education to adopt the tenets of service quality and start paying attention to the customers and stakeholders of the system (Carnevale, Beretska & Morrissey, 1999; Schmidt, 1998; Sureshchandar, Rajendran & Anantharaman 2001; Waks & Moti, 1999).

Having established that higher education is indeed a service, Lewis and Smith (1994) cite five reasons higher education needs to concentrate on service quality: an increasing dissatisfaction with the performance of higher education systems by the public, changing student demographics, increased market forces and competition, technological developments and the reality of long-distance education and limited economic growth in the general economy. Bok (1992) makes the case that the public has higher expectations of universities and colleges and is looking for participation:

With the passage of time, the public is beginning to catch on to our shortcomings. They may not have it quite right – they are often wrong about the facts – but they are right about our priorities, and they do not like what they see. All across the country they hear about the enterprises of every kind facing competitive challenges and having to pay much closer attentions to the quality of everything they do. That is the revolution that is sweeping the country; the public naturally expects us to participate. And a lot of us are not. (p. 13)

Several institutions of higher education have adopted some form of service quality improvement with varying degrees of success, some as early as the 1980's, others in the early 1990's. An article by Grassmuck (1990) called for colleges and universities to make changes that “borrow heavily from the transformations that swept American industry in the 1980's” (p.28). A 1993 *BusinessWeek* survey reported 61% of college presidents had some type of involvement in bringing TQM to their campuses (Ewell, 1993). Brigham (1994) cites numerous colleges and universities that have used

at least some part of the TQM process to implement improvements. Vazzana, Elfrink and Bachmann (2000) found that a large number of higher education institutions were using TQM in some aspect of higher education life including in the curriculum, administratively and as part of measuring learning outcomes. Elmuti, Kathawala and Manippallili (1996) found that of 32 higher education institutions surveyed, administrators and stakeholders believed that their TQM programs were making a great contribution to organizational effectiveness and that the benefits were greater than the costs. TQM and service quality has even made it to the classroom (Drexler & Kleinsorge, 2000; Barnard, 1999; Fehr, 1999; Miller & Shih, 1999; Soetart, 1998).

Perhaps the sector of higher education most involved in improving quality has been the libraries. Hernon and McClure (1990) called for library evaluations to change:

There is increasing pressure on libraries to assess the degree to which their services demonstrate criteria of 'quality.' ...The emphasis on these measures and services provided to library clientele requires librarians...not to equate 'quality' merely with collection size, diversity or comprehensiveness. (p.xv)

Nitecki (1996) recognized that the changing technological environment meant that libraries could not build library collections to meet the demands for information to support local campus teaching and research endeavors. Metrics centered on collections lost meaning. Measures centered on quality and accountability were emphasized. Sirkin (1993) noted that libraries were now using the term "customers" instead of patrons, recognizing the importance of the relationship. Coleman, Xiao, Bair and Chollett (1997) took up the call for change and adapted the marketing-industry's SERVQUAL service quality measurement tool for use in academic libraries. Nitecki and Hernon (2000)

followed up with a modified SERVQUAL study of the Yale University libraries. Most recently, Texas A&M University researchers Cook and Heath (2001) have explored the use of the SERVQUAL instrument as applied to service quality in numerous research libraries.

Recent research on the employee as internal customer in higher education is scarce, and, as with research into the use of SERVQUAL, libraries have produced what little research exists. Broady-Preston and Steel (2002a, 2002b) found, through a study using semi-structured questionnaires and observations of London public library librarians, that a planned program of internal customer service improved the success of public library services. Comm and Mathaisel (2000) assessed employee satisfaction in a small, private institution by surveying approximately 600 employees. They found there were significant gaps in the quality of service provided to external customers and the satisfaction level of the university employees. Galloway and Wearn (1998) found that the concept of quality of service would usually not have arisen in the context of an academic office. The concept would be viewed as a bureaucratic necessity rather than a function of internal customer satisfaction.

Publications on the measurement of quality in Sponsored Projects Offices are even scarcer than that of internal customers. Davis (1991) evaluated the Pre-Award research office of the University of Nebraska-Lincoln using a 10-question survey aimed at the deans of the colleges and the staff of the research office. No analysis was noted. At the time, Davis confirmed that "...little was occurring in the field regarding systematic formal evaluations of research administrations offices by external evaluators" (p. 25).



Davis also notes that many offices use either internal programmatic review or the Context, Input, Process and Product (CIPP) evaluation system developed by Stufflebeam (1973). Davis' call for evaluations of offices of sponsored projects went out to the industry. Lowry and Walker (1991), in an informal telephone survey, reported that 56% of the reporting institutions had never had any sort of evaluation or self-assessment. Morris and Hess (1991) developed a self-evaluation instrument that used, as other studies, quantitative metrics to describe the success of research business offices. Davis and Lowry followed up in 1995 with a survey on the status of evaluation activities in college and university Pre-Award research administration offices. The authors designed a survey instrument to gather data about the status of evaluation of Pre-Award research offices. The survey distinguished between 'formal' and 'ad hoc' evaluations. A formal evaluation was defined as occurring periodically, whereas an ad hoc evaluation did not occur regularly and was not comprehensive. The authors found that formal evaluations were scarce, and evaluation on an ad hoc basis was more prevalent. While the authors saw an emergence of attention on evaluation and self-assessment, as well as quality management and strategic planning, none of the evaluations studied focused on service quality.

Monahan and Fortune (1995) also began a study of offices of sponsored projects offices. The researchers focused on using research office institutional variables to predict success in the sponsored projects offices. They found that the services the offices provided, such as reducing faculty workload on funded projects, provision of graduate assistants, return of indirect costs to sponsoring departments and other resources and

services were small, but significant, predictors of success. Baker and Wohlpert (1998) undertook to survey offices of sponsored research but focused on comparative, quantitative metrics such as levels of funding and funding sources, office activities, facilities and staff resources and other quantifiable information. The researchers found that Offices of Sponsored Projects in large Carnegie Classification Research I institutions were substantially larger than other offices in terms of budgets, staffing and funding. The authors did not measure service quality. Recently, the Society of Research Administrators International (2001) began a benchmarking survey of member offices. The Sponsored Programs Administration Benchmarking Survey seeks to collect expenditure-driven and Full-Time-Employee metrics, such as dollar amounts of grants awarded, from the member offices of SRA and does not directly measure quality of services. While it may be considered a given that the number of grants processed by a Sponsored Projects Office would constitute quality there is no evidence that greater expenditures or numbers of employees implies better service. Kirby and Waugaman (2001) reported on the benchmarking efforts in terms of medians for all participating institutions. While recognizing that “there is a tremendous amount of variation in the way institutions go about sponsored projects administration, and that comparisons are difficult to make because of this” (p.2), the authors wrongly equate quantitative metrics with exemplary performance:

Once you know how well you are performing in metrics which measure activities critical to your institution’s goals and objectives, you can look at your practices and the practices of exemplary performers who are similar or comparable to you. What are they doing differently, and are their practices contributing to their success?

When you know this, you can modify your practices or adopt new ones to achieve your goals and objectives. (p.2)

As to industry standards, the authors measured such factors as number of proposals submitted per total faculty Full-Time-Employee [FTE], percentage of faculty working as active investigators, sponsored projects dollars per total faculty FTE, sponsored projects growth over five years and number of proposals submitted per central sponsored projects administration FTE. In none of these studies mentioned was service quality as determined by the internal customers either defined or studied.

### **Defining Quality**

While the evolution of quality has progressed from the manufacturing sector to the service sector and on to higher education, a definition of quality has not taken such a linear approach. Despite the amount of discussion in both academic and popular publications, the meaning of the term 'quality' remains elusive. The original meaning of the word, as a defining characteristic, carried no meaning of worth, but has evolved to the point where it is used to imply some form of value judgment (Holbrook, 1994). In these cases the quality of a service or product rates it against a standard, whether real or implied. This standard may be defined by the producer, the consumer, or set by other products or standards to which it is compared. Gabbott and Hogg (1998) take two broad approaches to evaluating quality. These approaches are characterized as 'hard', i.e. there exists objective quality, measured against a standard by a third party in some way, and 'soft', i.e. the quality is based on subjective perceptions, operationalized in terms of consumer value. Service quality is most associated with the soft characteristics.

Gronroos (1983) was one of the early researchers in the marketing theory arena to discuss the importance of the customers' perception of service quality in defining quality. Gronroos developed a model in which he proposed that in evaluating service quality, customers compare the service they expected with the services they perceived they received. In further research Gronroos identified factors other than outcomes, including the process itself, as important parts of service quality. Gronroos proposed that managing perceived service quality involved managing the gap between expected and perceived services. Enis and Roering (1981) had argued that consumers do not purchase goods or services but a bundle of benefits that the buyer expects to deliver satisfaction. Therefore, only the buyer can assess the quality of the product or service. Other approaches to quality include the transcendent, product-based, user-based, manufacturing-based and the value-based. Product- and manufacturing –based definitions view quality as a precise and measurable entity and its conformity to pre-set requirements. Value-based quality is dependent on adding worth to a product, or exceeding the product's cost. Transcendent quality is readily recognizable but almost impossible to achieve. Transcendent quality is of the nature "I'll know it when I see it." User-based quality is most distinctive for use in service-based organizations and has been the most widely adapted in service organizations (Martin, 1993). This follows Deming who, as noted previously, defined quality strictly from the viewpoint of the customer.

Defining quality in higher education is also an elusive search. Higher education presents many products and services on which to be rated, not all having the same level

of “manufacture” or strictly adhering to the characteristics of service. Seymour (1992), defining quality in education, also states some of the goals of quality in education:

Most people think of quality as a degree or level of excellence. It is something that results from out of human efforts to reshape raw materials or inputs. In other words, it is an outcome of a series of linear events. The simple formula for quality in education then is to ensure that colleges and universities have: an entering class that is soundly prepared, excellent resources for facilities and salaries, and an intellectually superior faculty. That is quality as a noun. In contrast, quality as a verb does not describe an outcome, it describes a reinforcing circle. To “quality” something is to target a process for continuous improvement. If we pay enough attention to quality as a verb, we will ultimately and necessarily achieve quality as a noun. (p. 31)

### **Quality Service and Satisfaction**

While researchers discuss the implementation of service quality and base definitions of quality, there is discussion over what exactly service quality is. Gabbott and Hogg (1998) suggest that consumers make two evaluative judgments about a service: ‘Is it of good quality?’, and ‘Am I satisfied?’ (p.100). It is the relationship between these two constructs that is the basis of disagreements. While both of these concepts are derived from two different research theories, both use expectations and perception as key antecedent constructs (de Ruyter, Bloemer & Peeters, 1997). Oliver (1993) maintains that customer satisfaction is related to prior expectations and conceptualized as an evaluation that the experience was at least as good as it was supposed to be. This disconfirmation, or a post-evaluation of the experience that either confirms or disconfirms expectations, is framed in terms of expectancy and unites service quality and satisfaction. So, there are three determinants of customer

satisfaction/dissatisfaction: expectation, perceptions and (dis)confirmation. Other antecedents to consider are the halo or reputational effect that may influence customer satisfaction and the value of information. In earlier work, Oliver (1989) identified several types of satisfaction: satisfaction-as-contentment, satisfaction-as-pleasure, satisfaction-as-relief, satisfaction-as-novelty and satisfaction-as-surprise. Satisfaction in the sense of service quality is viewed as post-consumption evaluation. Kondo (2001) cautions that the elimination of customer dissatisfaction (negatively unconfirmed expectations) is necessary but not sufficient in attaining customer satisfaction. Reeves and Bednar (1994) identify four dimensions of service quality:

- Excellence – uncompromising standards and high achievement
- Value – incorporates multiple attributes
- Conformance to specifications –reducing errors
- Meeting or exceeding expectations – evaluate service from the customer perspective

Parasuraman, Zeithaml and Berry (1988) view service quality as an overall evaluation similar to attitude, and satisfaction as a specific service transaction.

Some authors suggest customer satisfaction is an antecedent to service quality, which is the accumulation of satisfying or dissatisfying experiences (Bitner, 1994; Bolton & Drew, 1991; Zeithaml, Parasuraman & Berry, 1988). Other researchers focus on transaction-specific assessments and suggest that high service quality leads to satisfied consumers (Anderson, Fornell & Lehmann, 1994; Anderson & Sullivan, 1993; Brady, Cronin & Brand, 2002; Cronin & Taylor, 1992; Herson, Nitecki & Altman, 1999). Dabholkar (1995) maintains that the relationship is situation specific and depends on the context of the service encounter. Dabholkar suggests that for customers that think

cognitively about the encounter, service quality precedes satisfaction. If the customer approaches the encounter emotionally, satisfaction is the antecedent of service quality.

Many authors approach defining the difference between satisfaction and quality, as did Oliver (1993), from the disconfirmation perspective. DeRuyter, Bloemer and Peeters (1997) described a number of differences between service satisfaction and service quality:

- Satisfaction is directly influenced by the intervening variable of disconfirmation
- In order to achieve satisfaction customers must have experienced a service
- Satisfaction expectations are predictive, service quality expectations are based on an ideal standard
- Satisfaction can result from a large variety of dimensions, service quality dimensions are specific
- Satisfaction is influenced by cognitive and affective processes, service quality is influenced solely by forms of communication

It has been argued that customers, including internal customers, form expectations prior to the purchase of a service or product. These expectations are the standard against which the service performance will be judged. A comparison of expectations and perceptions will result in either confirmation or disconfirmation. The disconfirmation experience can be either negative or positive. When service quality is lower than expectation a negative disconfirmation occurs. Consequently, when a higher than expected service quality transaction is perceived, a positive disconfirmation results. A neutral disconfirmation may occur when expectations are confirmed and perceived service quality is equal to expected service quality (de Ruyter, Bloemer & Peeters, 1997). Tse and Wilton (1988) view satisfaction as “the customer’s response to the evaluation of the perceived discrepancy between prior expectations (or some other norm

of performance) and the actual performance of the product as perceived after its consumption” (p. 68). Again, another way of stating Oliver’s original paradigm.

Researchers V. Zeithaml, A. Parasuraman and L. Berry have been investigating service, under the auspices of the Marketing Science Institute, since 1983 and have broadened and strengthened the concepts and understanding of service quality and the disconfirmation paradigm. In a 1985 study (Parasuraman, Zeithaml & Berry), the authors suggested that the quantity and depth of research into service quality was limited and did not provide a sound conceptual foundation for investigations into service quality. In 1988 (Parasuraman, Zeithaml and Berry), the authors began exploratory research into developing an instrument, SERVQUAL, which would measure service quality in four service categories: retail banking, credit cards, securities brokerage and product repair. In researching potential causes of service quality shortfalls the team identified gaps between the company executive’s perceptions of service quality and the tasks associated with service delivery to customers. In additional research, the authors identified five gaps that were the “major causes of service-quality gaps customers may perceive” (Zeithaml, Parasuraman & Berry, 1990, p.36-37):

- Gap 1 – Customers’ Expectations—Management-Perceptions Gap
- Gap 2 – Management’s Perceptions—Service-Quality Specifications
- Gap 3 – Service-Quality Specifications—Service Delivery Gap
- Gap 4 – Service Delivery—External Communications Gap
- Gap 5 – Customers’ Expectations--Perceived Service

Gap 5, the difference between the customers’ expectations and their perceptions, depends on the size and directions of the other four gaps associated with the delivery of service. Gap theory (Perceived minus Expected) suggests that the difference between



consumers' expectations about the performance of a retail sector and their assessments of the actual performance of a specific firm within that sector drive the perception of service quality. The Gaps model categorizes any discrepancy between expectations of service performance and actual service performance as a gap. The Gaps model is designed to measure quality, diagnose quality problems, derive solutions to problems and promote an understanding of service quality and its determinants. Zeithaml, Parasuraman and Berry found in the course of their study that the key to ensuring good service quality was in meeting or exceeding what consumers expected from the service. In developing the Gaps Model, the researchers conducted 12 focus group interviews, three in each of the four service sectors. From these interviews were developed insights concerning the criteria used by customers in judging service quality. After sifting through questions and responses the researchers identified ten general criteria, or dimensions. These ten dimensions are shown in Table 4. The ten dimensions of service quality, combined with the Gaps Model (Figure 1) yielded a more concise picture of how customers assess service quality.

### **SERVQUAL: An Instrument for Measuring Service Quality**

Building on the conceptual definition of service quality and the ten evaluative dimensions from their research, Zeithaml, Parasuraman and Berry sought to quantify customers' perceptions of service quality by developing a quantitative instrument, named SERVQUAL. SERVQUAL was originally based on a 97-item survey that used statement pairs in which half were positively worded, the other half negatively worded and was a

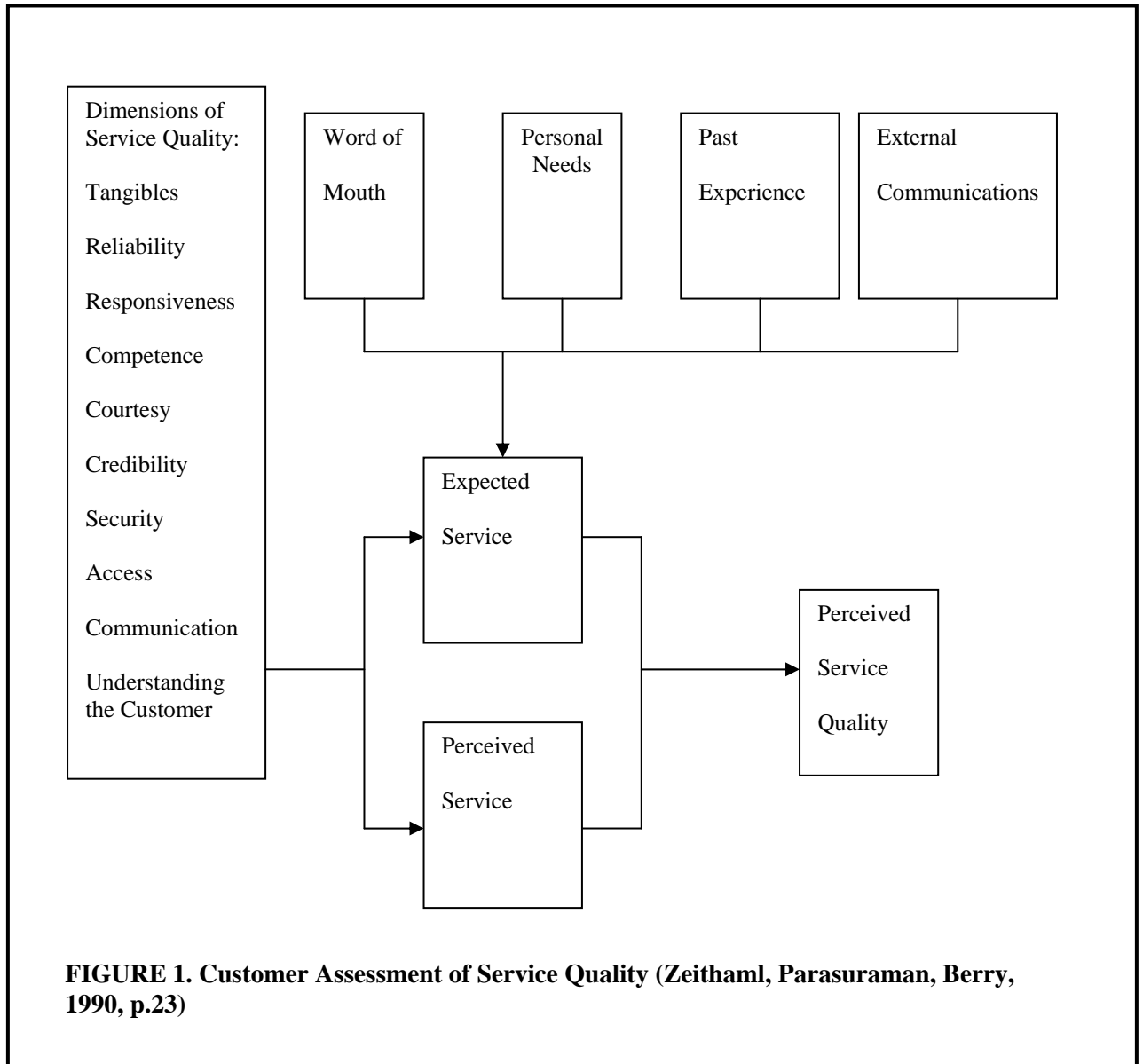
**TABLE 4. – Ten Dimensions of Service Quality.** Adapted from Zeithaml, Parasuraman, & Berry, 1990, p. 21-22.

Dimensions	Definitions
Tangibles	Appearance of physical facilities, equipment, personnel and communication materials
Reliability	Ability to perform the promised service dependably and accurately
Responsiveness	Willingness to help customers and provide prompt service
Competence	Possession of the required skills and knowledge to perform the service
Courtesy	Politeness, respect, consideration, and friendliness of contact personnel
Credibility	Trustworthiness, believability, honesty of the service provider
Security	Freedom from danger, risk or doubt
Access	Approachability and ease of contact
Communication	Keeping customers informed in language they can understand and listening to them
Understanding the Customer	Making the effort to know customers and their needs

Concise multiple-item scale with good reliability and validity that companies can use to better understand the service expectations and perceptions of their customers. We have designed the instrument to be applicable across a broad spectrum of services. As such, it provides a basic skeleton through its expectations/perceptions format...the skeleton, when necessary, can be adapted or supplemented to fit the characteristics or specific research needs of a company. (Zeithaml, Parasuraman & Berry, 1990, p.175)

The authors used a seven-point Likert rating scale with “strongly disagree” and “strongly

agree” as anchors. The instrument was quickly refined to a 44-item scale: a 22-item section to measure customers’ service expectations of a particular, ideal retail sector and a corresponding 22-item section to measure customers’ perceptions of a particular



company. Service is measured on the basis of the difference score by subtracting expectation scores from the corresponding perception scores. The survey was pre-tested through a mail survey of a regional sample of 300 customers (Parasuraman, Berry & Zeithaml, 1991a). Using several statistical analyses, the researchers further refined the scale and eliminated two-thirds of the original scale items and the consolidation of several overlapping quality dimensions. They then retested these new dimensions revealing considerable correlation among items. The last seven dimensions were consolidated into two broader dimensions labeled Assurance and Empathy. The remaining dimensions remained intact throughout the scale development and refinement process (Zeithaml, Parasuraman & Berry, 1990). Table 5 shows the correspondence between the original ten dimensions and the new dimensions. While three of the dimensions remained the same, two others now had new definitions, shown in Table 6.

SERVQUAL quickly became the instrument of choice for measuring service quality in the service sector. “It has become the most widely used instrument for measuring service quality in profit and non-profit organizations. No other instrument has been tested as stringently and comprehensively as SERVQUAL” (White & Abels, 1995, p38).

DeRuyter, Bloemer and Peeters (1997) were joined by many others in asserting that SERVQUAL led the field of service quality assessment: “on an operational level, research in service quality has been dominated by the SERVQUAL instrument, based on

**TABLE 5. Correspondence between SERVQUAL Dimensions and the Original Ten Dimensions. From Zeithaml, Parasuraman, & Berry, 1990, p. 25.**

Original Ten Dimensions	New SERVQUAL Dimensions				
	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Tangibles					
Reliability					
Responsiveness					
Competence					
Courtesy					
Credibility					
Security					
Access					
Communication					
Understanding the Customer					

the so-called gap model” (p.390). However, Babakus and Boller (1992) found problems with the dimensionality of the instrument when applied to electric and gas utilities.

Kettinger and Lee (1995) used SERVQUAL in the information system service industry.

Four of the five dimensions of the SERVQUAL instrument were confirmed using

**TABLE 6. – Five Dimensions of Service Quality. Adapted from Zeithaml, Parasuraman, & Berry, 1990, p. 26.**

Dimensions	Definitions
Tangibles	Appearance of physical facilities, equipment, personnel and communication materials
Reliability	Ability to perform the promised service dependably and accurately
Responsiveness	Willingness to help customers and provide prompt service
Assurance	Knowledge and courtesy of employees and their ability to convey trust and confidence
Empathy	Caring, individualized attention the firm provides its customers

second-order confirmatory factor analysis, with Tangibles being discarded. Upon combining the remaining dimensions with three other dimensions derived from a different instrument, the seven dimensions were then regressed against overall satisfaction. The final regression model retained all three of the derived dimensions as well as Reliability and Empathy from the SERVQUAL instrument. Orwig, Pearson and Cochran (1997) tested SERVQUAL in the public sector, specifically the Air National Guard. They found high internal consistency, verification of the dimensionality of the instrument and found the instrument suitable for use in this particular setting. SERVQUAL has also been tested in a variety of other service sectors (Bebko & Garg, 1995; Clow, Fischer & O'Bryan, 1995; Licata, Mowen & Chakraborty, 1995; Bowers, Swan & Koehler, 1994; O'Connor, Shewchuk & Carney, 1994; Headley & Miller, 1993; Babakus & Mangold, 1992; Lytle & Mokwa, 1992).

SERVQUAL has also been adopted by higher education. Ford, Joseph and Joseph (1993) used a modified SERVQUAL to compare service quality in higher education between the United States and New Zealand. The authors found that while generalizability was limited, the SERVQUAL model could be used in a university setting. McDougall and Levesque (1994) surveyed business students on their use of financial institutions. The authors could discriminate only three variables: Tangibles, Reliability and Responsiveness. Ruby (1998) assessed satisfaction with student services using SERVQUAL. Ruby retained the 22-item survey as well as the five dimensions in his study and found that the survey was successful in measuring student satisfaction with support services. Engelland, Workman and Singh (2000) tested a modified SERVQUAL scale on career service centers. The authors confirmed the dimensions and called for the scale to be used across larger university samples to ensure generalizability. Comm and Mathaisel (2000) assessed employee satisfaction in the workplace using SERVQUAL and found that the instrument retained its dimensions.

As with assessment in higher education, the libraries were early adopters of SERVQUAL to measure service quality and remain the most ardent testers of the instrument and underlying theory. Humphries and Naisawald (1991) used the SERVQUAL dimensions as criteria for an evaluation of online search services. Coleman, Xiao, Bair and Chollett (1997) also used SERVQUAL at Texas A&M University to measure library service quality and began a series of administrations of the instrument that has lead to a nation-wide use of the tool in over 300 academic and

research libraries (Cook & Heath, 2001; Cook, Heath, Thompson & Thompson, 2001; Cook & Thompson, 2001).

The widespread use of SERVQUAL did not mean the instrument was without its critics. Criticisms of the SERVQUAL instrument center on three key areas: the expectations- perceptions construct, the use of gap score measures and the independence, generalizability and stability of the five dimensions. Carman (1990) argued that SERVQUAL needed to be customized to the service in question in spite of the fact that it was originally designed to provide a generic measure that could be applied to any service. Carman also suggested that more dimensions were needed than the five currently found in SERVQUAL, that the item-factor relationships in SERVQUAL are unstable and that the measurement of expectations was problematic.

There have also been studies adapting the SERVQUAL dimensions to the concept of internal service quality. As with the original SERVQUAL instrument that examined external customer dimensions, studies examining the internal customer often do not validate the original dimensions. Appendix 1. Internal Marketing Dimension Comparisons With SERVQUAL, adapted from Kang, James and Alexandris (2002, p.282) shows previous studies, the validation (or lack of) the original dimensions and new dimensions identified. Many of these studies agreed on the transferability of the SERVQUAL instrument to the measure of internal service quality even if many of the studies reported dimensions that were different from the original dimensions.



## **Summary**

Emphasis on service quality has evolved from the historical manufacturing TQM model to the point where it is becoming increasingly important for higher education to focus on how institutions operate. As evidenced in manufacturing-sector literature and, more recently, in higher education-literature, correlations between service quality and satisfaction are strong. Quality service leads to higher satisfaction, which may lead to greater financial and political input by higher education constituents. Several models have been tested to measure satisfaction with quality, with SERVQUAL being used frequently. While SERVQUAL prompted early criticisms, the developers have attempted to revise the original instrument to address concerns. SERVQUAL has been extensively reported in higher education literature but not for Offices of Sponsored Projects and not for internal customers in a higher education setting. Having been developed for the retail sector, the SERVQUAL dimensions are not necessarily valid in all higher education settings.

## **CHAPTER III**

### **METHODOLOGY**

#### **Population Description and Organizational Structure of the UASPSO**

The purposive population studied consisted of 16 of the employees of the University of Arizona Sponsored Projects Services Office. The UASPSO is staffed by 25 employees, predominantly female, consisting of a Director and an Assistant Director with staff spread over two main functional structures: Pre-Award and Post-Award. Many of the staff report directly to the Director, including the Assistant Director, the Quality Manager, Systems Analyst, Management Analyst and the Team Leaders of the Pre-Award and Post-Award departments. The Post-Award Teams are by far the largest of the departments within UASPSO. There are six teams, consisting of two or three persons that service many of the academic and service departments on campus. Each of these teams is headed by a Team Leader and generally includes an Apprentice whose job it is to assist and to learn the processes and procedures of the department. An Organizational Chart is included in Appendix 2.

The work structure of the UASPSO is very firmly based on the functional activities of the UASPSO employees. The workflow of the office revolves around two customer fronts: University of Arizona faculty and business managers and the funding sponsors. The UASPSO acts as a conduit and liaison between the University and outside funders. Faculty researchers generally initiate the process by identifying a granting agency and writing a proposal to fund research. The proposal, along with a budget, is forwarded to the UASPSO and a process of “catch ball” is started. The UASPSO will seek clarification on the proposal

from the faculty researcher and a departmental business manager, if necessary. Information sought includes salaries of principal and co-principal investigators. The request for proposal from the funding agency, duration of the project and other information that will help the UASPSO support and track funds received and disbursed is collected. These activities are handled by the Pre-Award section of the UASPSO. Within the Pre-Award section proposals are logged in by the Office Assistant. The Sponsored Projects Administrator (SPA) for Pre-Awards then reviews the proposal and flags problems or issues with the proposal. SPAs for Proposals then obtain the proposals and work with faculty researchers and departmental business managers to prepare the proposal to be sent to the funding agency. This “catch ball” activity may require extensive discussions with the faculty and managers to resolve problems and issues. Once this activity is completed the proposal is routed for signatures from principal investigators, department heads, deans and the Vice President for Research. This signature activity insures a thorough review of protocol, budget and space implications and monies requested.

Upon submission to the funding agency, the Post-Award section of the UASPSO becomes engaged in the process. If the project is unfunded, the proposal is filed for future submissions. If the project is funded then a complex process of funding receipts, funding disbursement, cash and property management audits and reporting commences. This activity is coordinated by SPAs designated as Team Leaders that have a number of colleges, departments and research centers assigned to them. Support for the Team Leader is provided by an Apprentice. Apprentices are hired for specific positions within the UASPSO and are generally on a two-year contract. At the end of that contract if the person has good performance reviews, and a position is open for promotion, then the Apprentice is retained.

If the person does not receive good performance reviews, or there is no position into which the Apprentice can be promoted, their contract is terminated and a new Apprentice is hired.

This Work Flow, shown in Appendix 3, informed the Next Operation as Customer (Bhote, 1991) schema used to track service quality dimensions between units and individuals. The work process is important to understanding how workflow and interpersonal relationships develop as well as reporting and evaluation relationships. As defined by Stauss (1995) the workflow sequence dominates the UASPSO processes as different activities are performed by different people in a relatively fixed sequence. The UASPSO sequences are such that one stage begins after another ends. While interviews were not always conducted following the order of the workflow, the flowchart, adapted from information gained from the interviews, allowed the researcher to relate information to individuals and teams.

### **Research Design**

As the intent of this study was to validate existing service quality dimensions and to discover the existence of new internal service quality dimensions in a complex environment involving negotiations of professional and social relationships and understandings, a qualitative methodology is the appropriate methodology. This study makes use of the original ten dimensions to provide comparisons on a greater breadth of dimensions than the consolidated five dimensions. As this study is researching service quality dimensions in an internal environment it is appropriate that a study that goes to the beginnings of the SERVQUAL methodology would also compare against the beginning dimensions. If the results of this study warrant, a comparison will also be

made against the consolidated dimensions, but those results will be secondary to the results derived from a comparison to the original ten dimensions.

The original SERVQUAL study ultimately made use of a quantitative survey, but this methodology cannot, by itself, fully explore the emergence of new dimensions.

While it is our contention that the human instrument is perfectly adequate for all phases of a naturalistic inquiry, it may nevertheless be the case that other forms of instrumentation may also play a role. If we have seemingly railed against nonhuman instruments it is not because there is some inherent problem with their form or conception, but because they are typically not grounded. Thus there is no hope that such instruments can expose anything not built into them by the instrument maker, and what he or she puts in cannot reflect the constructions of the respondents, but only of the instrument maker. (Lincoln and Guba, 1985, p. 239)

In addition, given the nature and workflow of the USAPSO and following in the steps of the original SERVQUAL developers and researchers and also in the steps of subsequent researchers into the dimensions of service quality, a constructivist paradigm was the most appropriate methodology for determining the dimensions of service quality for internal customers in the context of this study. Of the more recent studies employing SERVQUAL, research done by Cook, Heath, and Thompson (Cook, 2001; Cook & Heath, 2001; Cook, Heath, & Thompson, 2001; Cook, Heath & Thompson, 2000; Cook & Thompson, 2001; Cook & Thompson, 2000a; Cook & Thompson, 2000b; Thompson, Cook & Heath, 2001; Thompson, Cook & Heath, 2000) stands out for grounding the instrument's questions in the sector studied through constructivist methods, large numerical data sets and rigorous analysis of the quantitative aspects of the instrument. Grounded in marketing theory and practice, SERVQUAL, as mentioned previously, has been modified numerous times to better fit the non-marketing sector being studied.

Cook, et al, re-grounded the instrument to better fit the study of higher education library service quality. As the methodology used by Cook, Heath, Thompson and Thompson is the most recent, and complete, to date, this study utilizes the same qualitative methods.

While part of the focus for this study is on the original SERVQUAL dimensions, a naturalistic design allows more, and different, constructs to be integrated into the study, leading to the development of additional dimensions. In addition, those constructs arise from the multiple realities as manifested in the opinions and feelings of each of the UASPSO employees. So the use of naturalistic inquiry, as described by Lincoln and Guba (1985) allows, by recognition of multiple realities, an emergence of new dimensions of service quality in the UASPSO, as well as possible confirmation of the SERVQUAL dimensions. With such a wide range of personalities, positions and responsibilities in the UASPSO an initial clear picture of service quality dimensions is difficult to ascertain. With the use of naturalistic inquiry methods a holistic view of the organization can be obtained, at least as it relates to service quality.

### **Perspectives of the Researcher**

The path to selecting the topic and methodology for the research has been a long and winding journey and starts in the late 1980's. My position, at the time, was as a classified staff member at the University Library on the campus of Texas A&M University. I had arrived at that position after a short career as a mechanical engineer and I was seeking to move out of that profession. I had experience outside of academe with customer service and realized that it was an important part of how business was done well. I became very involved in the relationships between the classified staff and

library administration and was subsequently placed on a committee that was exploring the operationalization of TQM on the campus. TQM was in the early stages of recognition as a concept that could lead to increased efficiencies on university and college campuses. The Texas A&M University administration, seeking cost-cutting measures during a downturn in the economy, initially embraced the idea of TQM as the answer and provided education and exposure for campus departments wishing to adopt TQM concepts and practices. While the initiative, and the committee, would prove to be short-lived, it was my first real exposure to the theory of service quality. Consequently, I co-authored, with the Associate Dean of the Libraries, two very short articles on service quality in libraries.

Cut to the late 1990's and I am now a faculty member and the Research Services Officer for the University Libraries at Texas A&M University. My duties were to foster and develop funded research projects for the Libraries as well as to educate the Library faculty on opportunities and procedures for grants-funded research projects. A confluence of research and practice also occurred during this period. Several faculty and staff at the Libraries conducted research on library quality assessment using the SERVQUAL instrument. One of the researchers and developers of the SERVQUAL instrument, Len Berry, also happened to be teaching at Texas A&M University at the same time. The collection of baseline service quality data, the ready availability of consultation by a service quality expert, and the addition of two nationally known experts on qualitative and quantitative methodologies provided the impetus for a large scale project seeking to determine the dimensions, and validity of those dimensions, of

service quality across a number of academic and public libraries. This endeavor was named LibQUAL+ and was initially funded by the Fund for the Improvement of Post-Secondary Education. The principal investigators for the research were Dean of the Libraries Fred Heath and Associate Dean for the Libraries Colleen Cook. The project was also investigated by Yvonna Lincoln, a nationally recognized expert in constructivist theory and naturalistic inquiry and Bruce Thompson, also a nationally recognized expert in quantitative analysis and statistics. It happened that both of these experts were also at Texas A&M University. Dr. Lincoln and Dr. Cook are also members of my dissertation committee.

Upon completion of my coursework for a PhD in Educational Administration from Texas A&M University, my search for a dissertation topic naturally flowed towards service quality topics. While libraries were extensively studied by this time, other departments in higher education had not been studied at all. Through my experience as Research Services Officer with the Sponsored Projects Office at Texas A&M University, I realized that this was a chance to expand the knowledge of service quality in higher education and well as to pioneer the use of SERVQUAL dimensions in studying sponsored projects offices. My original intent was to replicate the quantitative SERVQUAL survey. A comment by Dr. Lincoln lead me to realize that external customers of the UASPSO probably were not aware of the inner workings of the UASPSO and thus could not make a judgment on the quality of services. It became clear that a study of the internal service quality was required as a first step to further study.



My move to the University of Arizona in 2003 did not change my ardor for service quality exploration and my project was moved to Arizona.

In the short time I have been with the University of Arizona I have already formed a relationship with the Sponsored Projects Services Office Director through my work with a University-wide committee that was studying the relationships and interactions of the university financial services offices, which included the UASPSO. That study is now concluded and while I have taken pains to keep my efforts on the committee separate from my dissertation research efforts, my tenure on the committee will undoubtedly have an effect on my interaction with the Office as will my knowledge of how other institutions operate their SPOs. My personal relationship with the Director is no longer an issue, however, as the Director has recently retired from the position. The Assistant Director has assumed an interim position. This change in leadership has had a dramatic effect on the attitude of the employees of the UASPSO. I interviewed employees both before and after the leadership change. From this point I will use a designation of Assistant Director/Interim Director when discussing that position.

### **Data Collection**

Through the University of Arizona Vice President for Research, an initial contact was made with the UASPSO Director to receive permission to use the UASPSO as the test bed for my study. The Director assembled the staff for a short presentation, given by me, on the background, purpose and methodology of the study. Attendees were encouraged to ask questions and to get clarification on any aspect of the study. The attendees were assured that they could refuse to participate in the study if they so desired

and that their responses would remain confidential. The protocol for the study was filed with, and approved by, the Institutional Review Board of Texas A&M University.

### **Pre-interview data**

As previously mentioned, I had the privilege of serving on the University of Arizona Support Functions Review Committee, a University-wide committee that examined the practices of those departments that had a reporting function to the Vice President for Research and performed financial functions for the University. This committee was charged to

...evaluate the effectiveness and efficiency of the current operations of those offices providing support to the research, teaching, and service missions of the university, with a special focus on the interfaces among these central offices and between these offices and the departments as well as other units. Specific questions to be addressed included: How well do the offices coordinate and integrate to provide seamless service that completely covers the required spectrum? Does appropriate communication, coordination, and integration of efforts among units occur at the level of their directors? Staff? How responsive are the units to requests for support and suggestions from departments? Overall, how supportive are the units of the education, research, and service missions of the university? What changes are recommended in the units being reviewed, or elsewhere, that would avoid problems and enhance the efficiency and/or effectiveness of these units in the future? (Appendix 4. Report of the Financial Support Functions Review Committee, 2004, p. 3)

As part of the support given to this committee each office examined, including the UASPSO, provided strategic plans, past evaluations and other internal, and external, documents that would facilitate the work of the committee, listed in Appendix 16. From these documents it was possible to discern workflows and the steps taken to perform internal evaluations on processes. The committee found that the UASPSO was part of a general communication problem that existed throughout the University (see Appendix 4. Report of the Financial Support Functions Review Committee) although external

stakeholders generally had a positive opinion of the work performed by the UASPSO. The UASPSO is seen as having too many restrictions on how business is conducted throughout the University, especially with the departmental business managers. The internal machinations of the UASPSO were not closely examined in the Support Functions Committee work, nor were they extensively commented on. In addition to this report, occasional information was gleaned from the UASPSO website. This generally centered on changing information as contained in a blog developed by the Director.

### **Interviews**

One hour appointments for interviews were coordinated by the UASPSO Administrative Assistant to the Director with input on scheduling by the interviewees. The Administrative Assistant chose who the interviewees would be on any given day, with the intention of interviewing all staff who agreed to participate. Interviews were held in a small conference room on the same floor as the UASPSO offices. Interviewees were asked to read and sign the consent form as prescribed by the Texas A&M University Institutional Review Board (see Appendix 5. Consent Form) and then the procedure for the hour was explained. The audio equipment was tested and the interview began.

Following Lincoln and Guba's admonition that "It has always been recognized that building and maintaining trust is an important task for the field inquirer" (1985, p. 256) one of the first orders of business before the interviews began was to build that trust. Many of the employees had been involved in preparing materials for the Support Functions Review Committees inquiry and were also involved in presentations given to

the University community on the Committee processes and findings. The Director of the UASPSO also informed them that I was a member of that Committee. Consequently the employees had reason to be suspicious of my motives. Before the formal interview began I discussed with each employee my role on that Committee and the purpose of the review. I then discussed how my research was different from that of the Committee's and that my focus was not on an evaluation of the UASPSO but an effort to determine service quality.

In following with constructivist methodology, I was the data gathering instrument. The initial questions during the interview phase of data collection were developed based on the original ten dimensions of service quality suggested by Parasuraman, Zeithaml and Berry, as discussed previously, and were also asked in the context of the workflow of the UASPSO. Initial questions are included in Appendix 6. Initial Interview Questions. After a trust-building discussion, I asked each interviewee if they had attended my presentation on the project. If they answered in the affirmative, I directed the interview into the interview questions. If the interviewee had not attended the presentation I took time, off-recorder, to explain the project and explain the Consent Form. As happens using a constructivist methodology, the initial interviews with employees of the UASPSO, along with input from my reflexive journal, led to an emergence of other questions and issues centered on service quality. It was obvious, for instance, that the concept of service quality would have to be explored with the interviewees before shared understanding and an informed discussion could ensue concerning service quality. Whether the interviewee had attended my presentation or

not, I set the tone of the interview by asking the interviewee to relate a recent experience they had that involved a positive or negative extra-University service quality experience. This step was to get the interviewee thinking about what service quality means and how it related to their personal lives. I would then ask the interviewee to characterize what was important about the success, or lack of success, of that transaction. With those characterizations in mind, I then lead the interviewee into the interview questions. This is a part of what Lincoln and Guba (1985) term “grand tour questions” (p. 270).

Upon completion of the interview I reviewed with each interviewee what we had covered in the interview to give the interviewee a chance to “member check” (Lincoln and Guba, 1985, p. 271) their answers and reaffirm my construction of the answers. In addition, I asked each interviewee to talk about the questions they thought I would ask, but hadn’t, or those questions they were surprised by. Upon completion of the interviews the audiotapes were transcribed, removing any identifying information from the transcripts. Table 7 describes the identifier given to each person as well as other descriptive information. The information is in order of Atlas.ti Primary Document assignment as this is the identifier that will be used throughout this report. Note that there is no P5.

After examination of interview notes and those interviews that had been transcribed, I observed a redundancy of responses to my probing questions, particularly those centered on the workflow and job processes. As data collection and processing were done simultaneously this redundancy led to “fleshing out” (Lincoln & Guba, 1985, p. 343) of incident categories. This, in turn, led to several revisions of the interview

questions (see Appendix 7. Interview Question Revisions) in order to better probe for service quality dimensions that were important to the employees and to lead to closure of the data collection process.

**TABLE 7. – Interviewee Identifier Information**

Interview Identifier	Atlas.ti Identifier	Pre-Award	Post-Award	Admin	Class	Male	Female
11-05.13.2	P1		X		Class Staff		X
7-05.06	P2	X			Team Lead		X
10-5.13.1	P3			X	Asst Dir		X
4-4.29.1	P4	X			Class Staff		X
6-5.06	P6	X			Class Staff		X
1-3.23	P7			X	Director		X
5-4.29.2	P8	X			Team Lead		X
9-5.13	P9		X		Team Lead		X
12-9.14.1	P10		X		Team Lead	X	
13-9.14.2	P11		X		Team Lead		X
14-9.14.3	P12		X		Team Lead		X
15-9.14.4	P13		X		Apprentice	X	
16-9.15	P14		X		Team Lead	X	
8-5.13.3	P15		X		Apprentice		X
3-4.25.1	P16	X			Team Lead		X
2-4.25.2	P17	X			Team Lead		X

**Reflexive Notes**

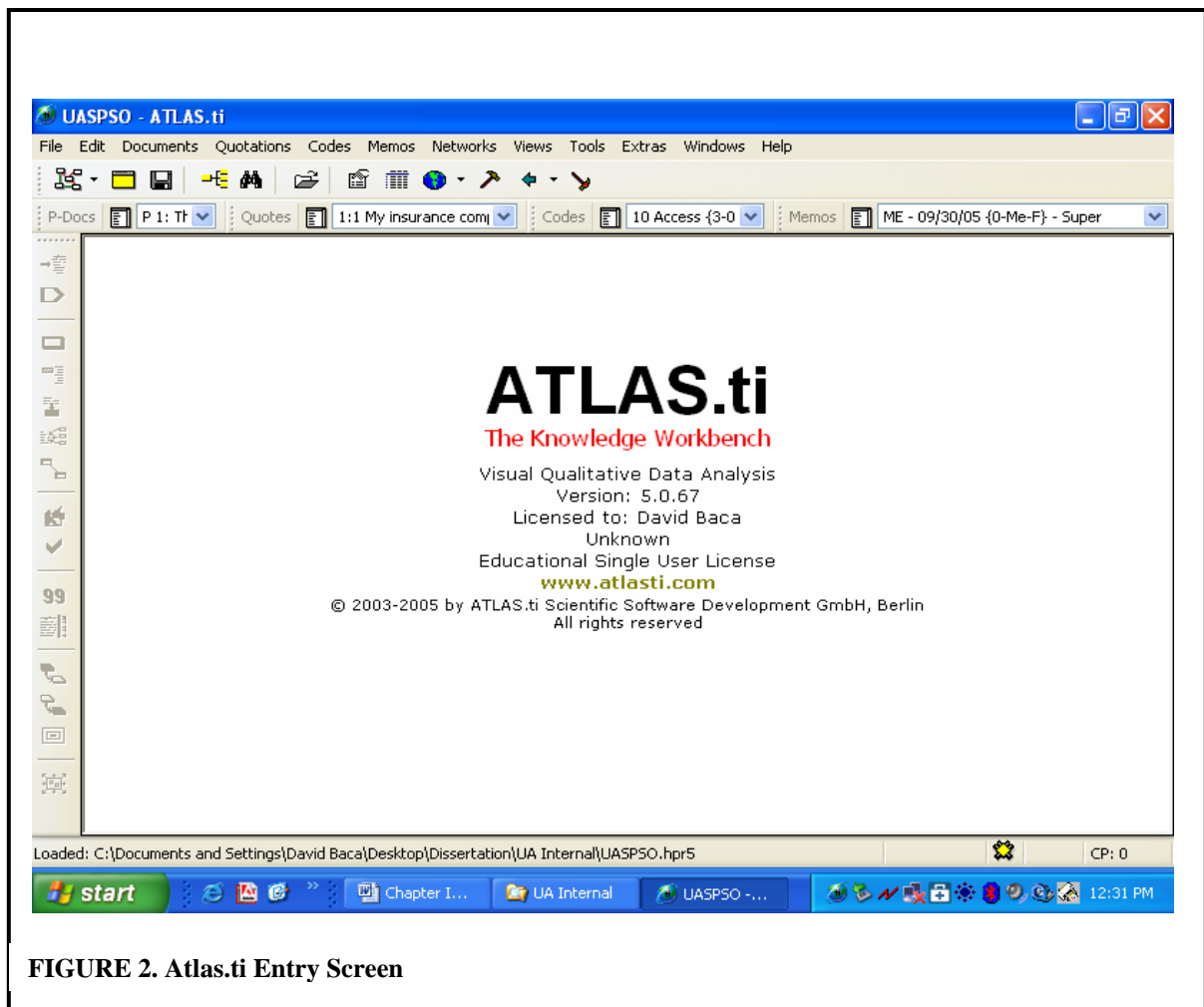
A journal on the journey this research study has taken has been established through the several iterations of the study. Thoughts on research questions and the uses of various methodologies have been logged to provide a rendering of the thought, time and processes encountered. As the current iteration of the study progressed, with initial meetings and through the interview process, these notes have been helpful in understanding the UASPSO and my mental models and pathways. As interviews progressed during the study, notes were taken during, and immediately following, each interview. These notes were uploaded into the Atlas.ti software as they became part of the documentation to be coded and analyzed. These notes, with their history, are in support of establishing what Lincoln and Guba term “trustworthiness” (1985, p. 289). Trustworthiness works to stem the assailing of the methodology and the researcher on issues of sloppiness and trustworthiness of the process and data. This reflexive journal was used to not only understand what was being conveyed during the interviews, but to determine the direction of the next steps of the study.

**Data and Analysis Methods**

Data collected during the course of this study, both through interviews and existing documents, were continuously analyzed, in the constant comparative method as originally designed by Glaser and Strauss (1967) and placed in naturalistic inquiry context by Lincoln and Guba (1985), to best serve the goal of obtaining a picture of the internal service quality dimensions of the UASPSO and the culture of the organization. In this way an emergent construction, as suggested by Lincoln and Guba (1985), of those

dimensions was enabled. In this study, interpretation of the data remained in the hands of the researcher.

Steps to analyze the data followed Lincoln and Guba (1985) as described concerning operational refinements. In place of an index card system, the qualitative analysis software Atlas.ti was used (Figure 2) Atlas.ti allows the researcher to upload the documents of the transcribed interviews and to automate the unitization and categorization phases of the analysis. This is in keeping with computers becoming involved in the “mechanical” phase rather than the interpretive (Lincoln and Guba, 1985, p. 352).

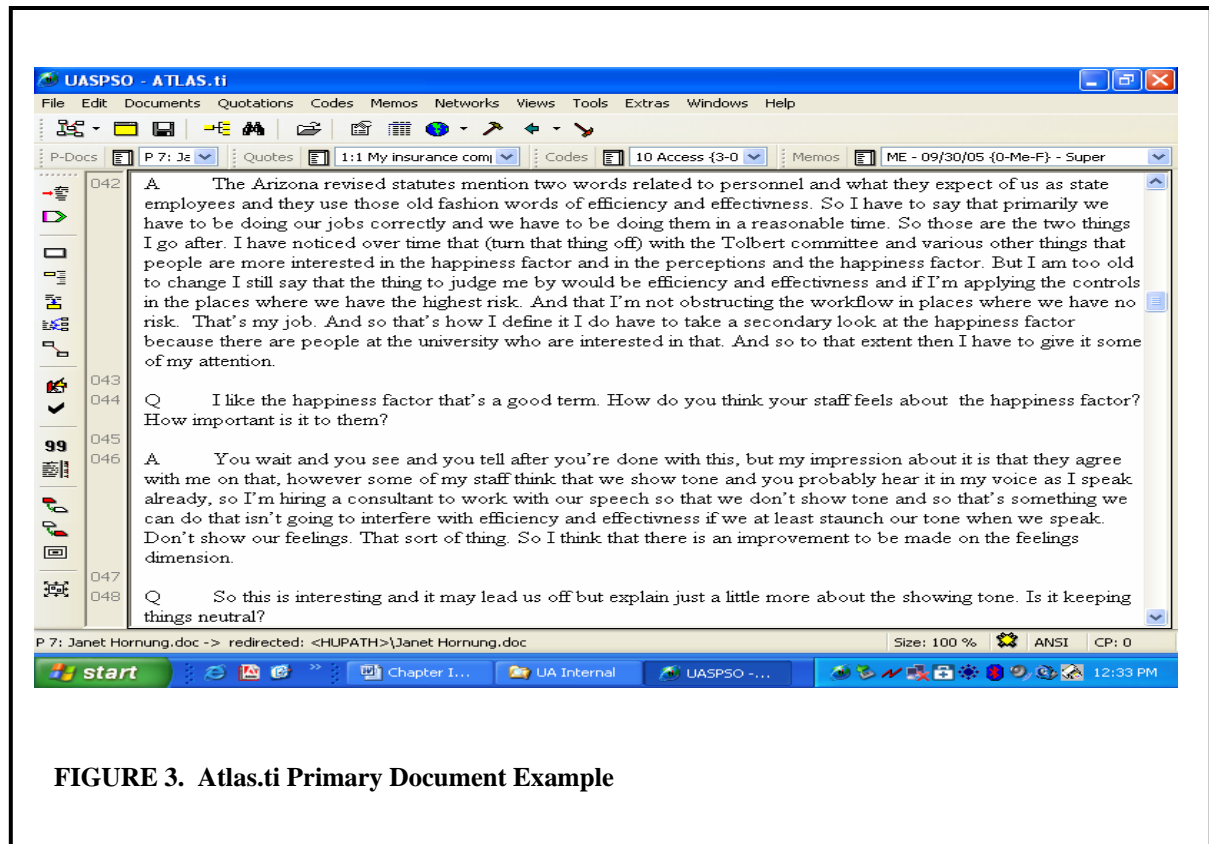


**FIGURE 2. Atlas.ti Entry Screen**



Once the transcribed documents, known as Primary Documents in Atlas.ti, were uploaded into the software (Figure 3) and given individual identifying information, Atlas.ti allowed the highlighting of units, or quotations as termed by Atlas.ti, of information from the document and the attachment of categorization, or coding, information to that unit (Figure 4). Units of information are the “smallest piece of information about something that can stand by itself, that is, must be interpretable in the absence of any additional information other than a broad understanding of the context in which the inquiry is carried out” (Lincoln and Guba, 1985 p. 345). The unitization of the primary document and the coding were performed at the same instant, utilizing the advantages of the software. The categorization starts as referential coding of what is being said, not to a higher order categorization code. While the use of electronic software facilitates ease of coding and categorization, the process of categorization essentially follows that of the index card method Lincoln and Guba (1985) whereby a unit is determined to “‘look-alike’ or ‘feel-alike’” (p. 347) other units. If a new unit does not fit any of the previous categories it is either given a new category or placed into a miscellaneous category.

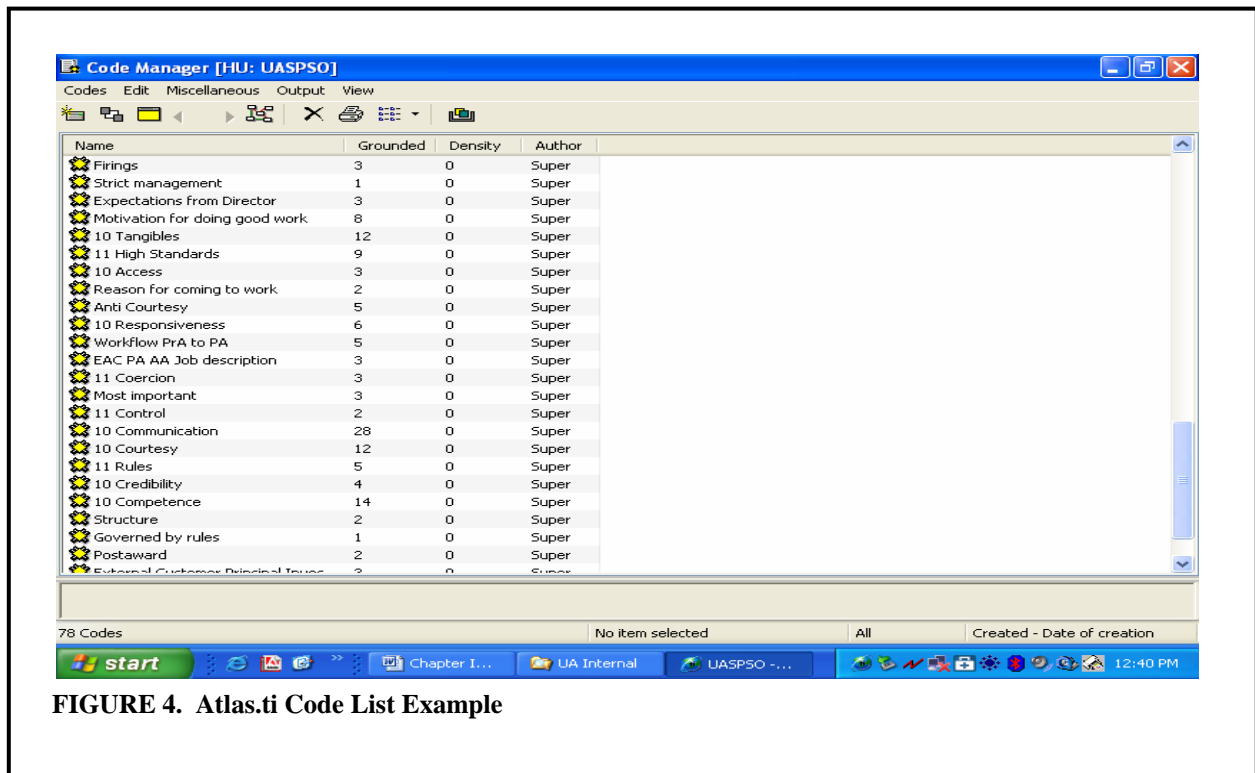
In the case of using the Atlas.ti software, units can be easily attached to several categories if the units lend themselves to such an arrangement, as shown in the figure on p. 74. This is possible, and a slight deviation from the unitization described by Lincoln and Guba, due to the facility of the software in making connections between the units and between categories. Relationships between categories can also be facilitated by the use of the



**FIGURE 3. Atlas.ti Primary Document Example**

Atlas.ti software and are established in what Atlas.ti calls code families. Code families establish relationships between the categories and allow for transportation of codes and units into different themes.

One of the first steps in writing the case study is to develop a provisional outline for the case. The outline is intuitively developed by the writer through the experience of collecting the data. The outline is a structure on which to hang the processed data (categories). Once the categories are cross indexed, or assigned to multiple locations within the outline, the writing of the case study can begin.



**FIGURE 4. Atlas.ti Code List Example**

The constant comparative method allows categories to build up as data collection progresses. These categories arise from the unitization of the interview transcripts as the units are found to be heuristic. Each unit may be coded with multiple provisional categories that relate to the same content, depending on the inquiry. As categories are assigned to each unit the categories will begin to accumulate a substantial number of units and approach a “critical size” (Lincoln & Guba, 1985, p. 348). Once all of the units have been assigned and categories have been examined for overlap and relationships the analysis of the content of the categories can begin and the case study reported. Other documents, such as annual reports, may be included as relevant.

For this study the above steps were performed using the Atlas.ti software and the unitized data was assigned identifying codes, in some cases multiple codes for the same unit of data. An example from the Atlas.ti software of multiple coding is shown in Figure 5. These codes, in random order, are listed in Appendix 9. Not all of the unitized data was assigned to a code that was used in the analysis.

As developing a description of the culture of the organization was one of the research questions, the codes and their contents were examined to determine if they supported that meaning and description. As codes were examined they were coalesced into broader categories or dimensions. In this manner was developed a description of the organizational culture that influenced internal service quality. The codes and their subsequent dimensionization are shown in Appendix 10. This process was repeated for those codes that supported the original ten dimensions. Those codes and their dimensionization are listed in Appendix 11. For the development of new dimensions, all codes were re-examined for grouping into broader dimensions. Appendix 12 provides the codes and assigned dimensions for the development of new service quality dimensions. As stated, the units were assigned to multiple provisional codes as the research progressed. As new ideas and concepts were formed, the units were re-examined for the attachment of additional, new or changed codes. While categories were assigned as developed in the provisional outline, a useful analysis tool was collecting the number of times a unit or category was referenced. The provisional codes, and the number of times those categories were referenced, is included in Appendices 13, 14 and 15. Through this manner, the importance, or weight, of each category as it related to the

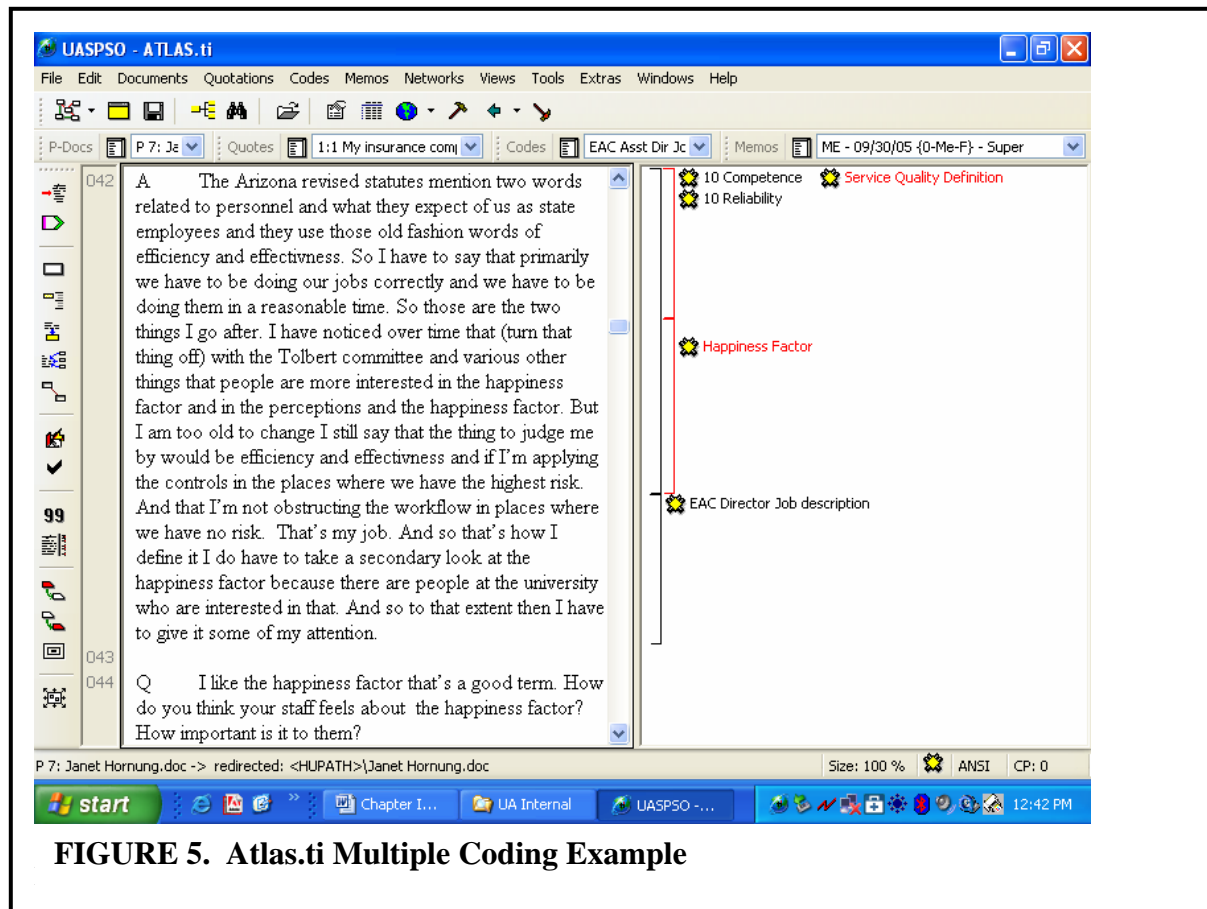
research questions was discerned. While some categories were commented on in the case study that carried little weight in the analysis, the category itself, such as “Happiness Factor” may have been so unique to this organization that it was included in the writing of the study.

The development of the dimensions in the Culture and New Dimensions categories was not a linear process from unitized data to the naming of the dimensions. The new dimensions emerged from the data as important elements of the construct of internal service quality. These new dimensions, coupled with the intact original dimensions, yielded a new model of internal service quality. This theoretical model of service quality in an internal environment will be discussed in detail in Chapter IV.

### **Establishing Trustworthiness and the Audit Trail**

Lincoln and Guba (1985) provide means for demonstrating trustworthiness of the naturalistic inquiry. To operationalize trustworthiness the researcher must establish that trust through techniques that establish credibility, transferability, dependability and confirmability. To establish this trust I have kept all materials relating to this research, including communications with dissertation committee members during the discovery phase of the project, the dissertation proposal, field notes, the original transcripts of the audiotaped interviews (minus any identifying information), Atlas.ti transcripts and data reductions/analysis, a reflexive journal, all documents supplied by the UASPSO, email communications with the Director and the Administrative Assistant and all notes taken during the writing of the report. In addition, Barbara Williams, Associate Librarian at the

University of Arizona has provided a letter, in Appendix 8, attesting to her audit of my research.



**FIGURE 5. Atlas.ti Multiple Coding Example**

## **CHAPTER IV**

### **FINDINGS**

#### **Purpose**

The purpose of this study was to answer three main questions:

1. Are the original SERVQUAL service quality dimensions valid with respect to internal UASPSO services?
2. What additional dimensions, if any, are important to internal customers in judging satisfaction with internal UASPSO services?
3. What is the culture of service quality at the UASPSO?

This chapter will progress from an introduction of the general environment of the UASPSO to a discussion of the workflow. The workflow discussion is essential to understanding the relationship between the employees and the different sections of the UASPSO. From there the chapter will progress to a discussion of the overall culture of the UASPSO to a determination of the importance of the original dimensions to the organization and on to a discussion of new service quality dimensions identified.

To collect the data to answer these research questions 16 of the 25 employees of the University of Arizona Sponsored Projects Services Office participated in interviews. Of those 16 employees, 3 were males and 13 were females. According to the organizational structure of the organization, one respondent was a Director, one an Assistant Director/Interim Director, 9 were Team Leaders, 2 were Apprentices and 3 were Classified staff. Job experience of the employees ranged from 3 months to 15 years. The

average length of employment for all interviewed employees is about 6 years. For levels of Team Leader and above the average length of employment is almost 10 years.

### **A Note on the Respondent Reference Codes**

As part of the audit trail, the transcripts of the audio-taped interviews were initially coded by date and, if more than one interview occurred that day, the sequence of the interview for that day, i.e. 1.10.05-2 is an interview on January 10, 2005 and is the second interview of the day. The use of the Atlas.ti software allows for identification of the variables of the interview, such as date, gender, job position, through the coding process. For instance, an entire transcribed document can be coded as Pre-Award or Female. Reports can then be generated that link a certain quotation with the fact that this was a Pre-Award employee or that she was female. Atlas.ti terms these transcribed documents as Primary Documents with a designation of P. In addition, coded quotes are given numbers within the document by the software. Therefore bracketed reference codes will be in the format of [P, followed by the document number, followed by the quote number]. For instance P1:84 is Primary Document 1, quote 84. In this way an audit of the process can identify individual quotes, much as a manual system using index cards would perform.

### **Introduction to the University of Arizona Sponsored Projects Services Office**

As an academic professional I do not often look behind the curtain to see how the University is run on a daily basis. The functions of such departments as food services, facilities management, and human resources are generally a mystery to most academic faculty unless problems arise that mandate gaining more knowledge of processes and



procedures, often more knowledge than we care to have. That lack of knowledge is what has prompted this study. How do you understand the external service quality without understanding what goes on behind the scenes? Universities can be thought of as small cities, with their own facilities infrastructure, city government and businesses. In my experience I have had no inkling of the workings of a department like the UASPSO, yet I understand that they must surely work well for the University to function as it does. In that sense this study was a glimpse into an extraordinary organization. While this study is mainly focused on the internal service quality dimensions of the UASPSO, it is an understanding of the culture of the UASPSO that is perhaps the most fascinating.

The business of the UASPSO is accounting, accounting for grant proposals submitted, salaries paid, equipment purchased and projects completed. In addition, the UASPSO must also track federal, state and University guidelines concerning the use of funds and equipment, and understand generally accepted accounting principles. Many of the UASPSO employees have accounting or finance degrees and were hired directly following graduation, yet the employees of the UASPSO are not your stereotypical accounting nerds. The job itself is not as dry as one would perceive either. As one Team Leader explained it:

And I think that is something with the position, if someone does not like to be challenged, they're not going to like it if they just want to have that repetitive cookie cutter job. It's definitely not for them, because you're interpreting policy, you're interpreting these regulations and depending on the circumstance or the issue you have at hand, it can change from grant to grant. The regulations are there, don't get me wrong, those are static, but what the situation is, the way you interpret that is different every time.  
[P9:081]

So, this is a very task-focused organization as most of the employees are customer contact employees and do not simply support those employees that are.

There is a predominance of women in the organization, making up 72% of the employee population. It was unclear how this came about, whether by design or inertia. The effect of gender on internal service quality was not explored in this study and information on the effects of the provision of service transactions by females is meager. Attitudinal effects may come into play here and Dodd-McCue and Wright (1996) found that women are generally less committed to the workplace than men. My experience disagrees with the authors. While many of the women, and men, in the UASPSO had an active home and family life, I discerned no differences in the amount of external or internal service quality commitment by either gender. There is one case, the Assistant Director/Interim Director, where the employee works three-quarters time so that she may be home for her children in the afternoon. In any case, many of the employees were reticent to talk about their personal lives outside of the job. There is definitely a line of demarcation between work and home, which will be discussed later in this study.

Much of the external service contacts are supported by individuals and not a team of people. Yet, the Office handles up to a thousand accounts per year. The ability to perform at that level is due to many factors, including the leadership of the Director, the Culture with a capital "C" that is made up of much smaller cultures, and the pervasiveness of a service mindset which focuses on the customer, both internal and external. All of these factors will be explored in detail.

## External Service Quality

A review of the literature concerning internal service quality in Chapter II shows that a strong environment of internal service quality is a necessity for providing external service quality. There is no doubt that the UASPSO has a culture of serving its external customer, whether it be the University or the Sponsor. As the Director put it:

Well we have been under review several times throughout. We had the CORE review under the TQM from Intel, we had the PAIP which was kind of a budget review to see if we were using our budgets efficiently. The Auditor General did a performance review of SPSO many years ago. We also had an external review committee look at all of the VPR's units at one point. [P7:070]

As stated, the UASPSO processes are validated by several evaluations and studies, including the report of the Financial Support Functions Review Committee. While the Review Committee found several problems with the financial support departments that included the UASPSO, it generally had high praise for the work the UASPSO did for its constituents.

Communication, generally, is a strength of the SPSO. The unit uses the RAM-Talk listserv to communicate important issues to departmental business staff and, more recently, Director \_\_\_\_\_ implemented “\_\_\_\_\_ Blog” as a mechanism for disseminating and explaining important compliance and other policies issues to the University community. Communication within the unit is good and staff appear to feel free to express ideas and to explore new territories. Communication and the interface with other financial units at the working-staff levels appear to be smooth and effective. (Appendix 4. Report of the Support Functions Review Committee, 2004, p. 13)

The Support Function Review Committee report, however, did not sit well with the Director. Her reaction:

Well the results in the past up to the [Support Function Review Committee] review are always so stellar that the AG performance review said that we were better than anyone else in the country, our statistics were better according to the external review that our attorneys office did of the VPR units. Everything they said was so outstanding that the [Support Function Review Committee] review is the first one that's come through that's negative. So as a result of changing anything, no we always have felt good. We kind of quote things in our performance reviews. [P7:074]

The most pervasive issue between the UASPSO and its University constituents is one of non-compliance:

While many experienced departmental business officers and long-time faculty feel that the SPSO provides a high level of service, especially compared to that at other universities they know, many others feel that they often are being asked to deal with compliance issues on their own, in spite of, rather than in cooperation with, SPSO. In turn, SPSO often feels that faculty and business officers try to work around compliance issues to get what they want, regardless of the legal and financial ramifications. The problem arises from the fact that the University has not adequately defined the roles and responsibilities of all parties involved in sponsored projects. This has led to unrealistic expectations placed on SPSO by departments and colleges, who have come to expect one-day turnaround on proposal submissions. The expectation is nearly always met, but sometimes at the expense of a thorough review. This is particularly problematic with very large proposals, grants, and contracts, for which inadequate University review can lead to insufficient infrastructure in place to support the grant or contract when it is awarded. (Appendix 4. Report of the Support Functions Review Committee, 2004, p. 12)

The UASPSO has two missions. One is the link in the University administrative chain for processing proposals, awards and post-award transactions and the other involves enforcing compliance with Federal and State laws, funding agency regulations and University policy. As identified by the Support Functions Review Committee, it is this second function that brings the UASPSO into the most conflict with its University customers, specifically the academic departments and the Principal Investigators. This

practice of business officers and faculty working around the UASPSO on compliance issues was mentioned often in interviews with the employees. The departmental staff is often in an awkward position. The chain of regulations starts at the Sponsor end and flow down to the Principal Investigator through the UASPSO and then down to the departmental business manager. Along the way, University regulations and policies are also enforced by the UASPSO and the University Financial Services Office [FSO]. The process is designed so that the Principal Investigator can spend as much time on research as possible, leaving paperwork and tracking of accounts to the departmental business manager and the UASPSO. One of the Post-Award Team Leaders defined the process as:

The business manager to me is more of a liaison between Sponsored Projects and the PI. A lot of times there's, with the exception of Pre-Award, Pre-Award has more interaction directly with the PIs, because some of them are very active in their proposal process. Sometimes we do have to bring in the PI to get involved in certain issues, but for the most part, the business office, which the business manager is responsible for, they are our point of contact for correspondence that needs to be...they are helping us resolve issues on the account if something was incorrectly posted, they're responsible for preparing the paper, like the expense transfer as it were to get that off of the account. They're the direct contact between the PI, who is ultimately responsible for the award and the oversight of that award. [P9:033]

In any case, as explained by the Assistant Director/Interim Director, it's the Sponsor that is calling the shots and many in the USAPSO do not feel that they are adding any unnecessary rules or regulations to the process:

I think we have two external customers. Our departments and our Sponsors. And the two sometimes conflict. Because the Sponsor definitely has to take precedence. So if the Sponsor is sending down new guidelines then we have to enforce them. We are almost like a police officer. If your

house is burning down and the police come in and save your children then you love them and when they stop you for speeding you hate them. So that is kind of the role that we play. Sometimes they love us and sometimes they hate us. It depends on the situation, but it's the role that we have to play. Sometimes we're giving you a speeding ticket and sometimes we're helping you out. The role can be very two sided. With the Sponsor it's very cut and dried. If they need something we give it to them. But with the departments it's a little different. [P3:059]

The amount of conflict between the business manager, the Principal Investigator and the UASPSO seems to be mostly a function of the experience of the business manager in the departments and the integrity of the Principal Investigator. In any case, the job is complicated from an external service quality viewpoint. As one employee put it:

But I think my direct customer, actually we're multi-faceted, because at one time it could be a sponsor, so it's outside the realm, and then other times it's actually internally [to the University], where it's the business manager and the PI and the University as a whole. So I think we have a multi-faceted thing going on. We report to a lot of people; we're responsible for making sure a lot of people are happy with what's going on. Or even if they're not happy, that they're doing their job, we're doing our job and we're making sure we're productive, the grant is going on its way and everybody's getting what they're wanting. [P9:037]

Perhaps one of the most crucial external review processes for the University is centered on the administration and tracking of property purchased with grant funds. This administration also falls to the UASPSO. The tracking of equipment is crucial because it involves the certification of the University to receive federal funds. Much of the review of equipment is performed by the Office of Naval Research [ONR] through the United States Department of Defense. The ONR performs an A-133 audit of all equipment purchased with federal funds. Failure to pass this audit can, at some point, put the University in jeopardy of losing the ability to apply for federal funding. The University

also must report to various other federal agencies, including the Jet Propulsion Laboratory [JPL] for all NASA grants. It is a very involved and detailed process including, in the case of the NASA audit, 14 separate reports on over 60 JPL projects. The administration for the UASPSO end of the audit is done by the UASPSO Property Manager. As a measure of the external success of the Property Manager, past Managers often failed to pass the federal audits. The present Manager has been in the position for 9 years and has passed all audits.

Overall, the product leaving the UASPSO and the customer service given to University and sponsors is of a high quality. According to many in the Office, in recent years there has never been a proposal that was not funded due to errors or mismanagement by the UASPSO. In theory, this high level of service quality and product quality must be supported by a high level of internal service quality as well.

### **Work Flow**

In Chapter II, the concept of Next Operation As Customer (NOAC) was introduced. Research by Barrett (1994), Bhote (1991), Denton (1990) and Lee and Billington (1992) establishes the workflow and the relationships between supplier and provider in an internal environment as the basis for a discussion of internal service quality. The Organizational Chart in Appendix 2 and the Work Flow diagram in Appendix 3 show the framework of the internal environment. Processes for intake of proposals through the administration of the grant are somewhat straightforward but the relationships between UASPSO employees can get complicated. It is within job descriptions that the intricacies of the workflow can be explained.

### ***Director***

The Director is, of course, the leader of the Office and sets the tone for what, and how, the work gets done. The Director is also the liaison to the University Administration and works closely with her boss, the Vice President for Research. In this case, the Director also checks the work of her subordinates (and their subordinates) through informal and formal evaluations and also will sometimes actually perform some of the day-to-day duties, especially when there is high risk of error. In her words:

Now I'm embarrassed to tell you that I think I'm the best typist. So I do the no cost extensions because I can whip them out so fast. So I admit that I do a clerical job. So I do pitch in with those and those are small things I can do that's good filler. I do the indirect cost allocation quarterly myself and that's partly because my turnover is high and I don't want to keep training and its important that its done right and I make enough mistakes on it on my own so I do that one. So there are some things that I do.  
[P7:038]

As the organization is somewhat horizontal, over half of the UASPSO employees report directly to the Director. The Director, in turn, is evaluated by the Vice President for Research and he generally judges the Office on its efficiency, effectiveness and the application of controls in the places where there is the highest financial risk to the University. This risk includes agencies cutting off funding due to poor fiscal management, misuse of equipment and frauds committed by Principal Investigators.

### ***Assistant Director/Interim Director***

The Assistant Director/Interim Director handles much of the reporting and interaction with customers throughout the University, in addition to being a go-between the Director and other UASPSO employees. Liaison work to the University includes



writing financial reports to the FSO, work on special project and requests from the University (such as those requests for data and information made by the Support Function Review Committee), setting up of customer surveys, and generally collecting and disseminating data from the University and data describing the UASPSO. In addition the Assistant Director/Interim Director handles questions and gives guidance to the UASPSO employees. This may include stepping into vacant positions to help a team or answer complaints from departments or Principal Investigators.

***Pre-Award Senior Proposal Administrator***

Pre-Award is the start of all of the processes at the UASPSO. Pre-Award ingests the proposal and budgets and makes the initial contact with the academic business department or the Principal Investigator. The Pre-Award section is supported by two half-time Proposal Administrators and two Office Assistants. While on the organization chart there are several Pre-Award Senior Proposal Administrators listed, there is one SPA that is the supervisor of the Pre-Award department. This Supervisor is, ultimately, the person who signs off on all of the products leaving the Pre-Award department, whether that product is headed to the department, the Principal Investigator, the Sponsor or to the Post-Award department. The Supervisor makes sure that proposals submitted by Principal Investigators are in compliance with Federal, University and UASPSO policy and regulations. The Supervisor also supports the Pre-Award staff in acquiring, logging, checking and forwarding all proposals for the University.

### *Post-Award Team Leader*

Post-Award is the receiver of the funded proposal from Pre-Award but that is often the last formal tie with the proposal, unless a problem arises. Post-Award consists of several Support Staff whose job it is to keep the computers running, do a check of processes and procedures and handle the disbursement of funds to the departments. The rest of the operation is handled by Team Leaders and Apprentices. The position of Post-Award Team Leader is a complex one. Once a proposal has been funded it is passed to a Team Leader who is in charge of overseeing the grants of several assigned academic departments. This workload may consist of dozens of grants that require accounting for salaries, expenditures, equipment purchases and disbursements. This position also requires that the Team Leader keep track of, and understand, the terms and conditions of the Sponsor, federal regulations that apply, the grant history of the Principal Investigator, and the procedures of the academic business managers. This is perhaps the most stressful position in the organization. Duties include:

- Review of daily grant transactions or purchase requisitions
- Requests for budget changes affecting human resource cost accounts
- Submission of invoices to Sponsors for remission of payment for expenses
- Submit financial reports to Sponsors
- Track down and remedy deficit accounts
- Review of closed grants
- Supervision of Apprentices

In other words, the Post-Award Team Leaders take the grant from cradle to grave, from initial funding all the way to the closing out of the grant, which may be over the course of several years.

### ***Post-Award Apprentice***

Apprentices in the UASPSO have traditionally been in an unenviable position. An Apprentice position in the UASPSO has been designed, and functions, as just that: a training internship to learn the work of the UASPSO. Apprentices work under a Post-Award Team Leader and do much of the basic work of the department and support the Team Leader in their job. Many of the duties are the same as the Team Leader, but the Apprentices' work is closely monitored for errors. Traditionally this position has had a two-year contract within which to learn the job and progress. Ironically, the system is not set up to necessarily reward that progress. If there are no positions to be promoted in to, the contract for the Apprentice is usually terminated and they must seek work elsewhere, regardless of knowledge or experience. I say traditionally because the Assistant Director/Interim Director is making plans to eliminate this practice and hire Apprentices as permanent Project Administrators. The culture of the Apprentices will be explored further later.

### ***Post-Award Property Manager***

The UASPSO Property Manager has a very important job that impacts the financial well-being of the entire University. As was discussed earlier, the Property Manager must track all equipment purchased with sponsored funds. This tracking ensures that the equipment is used as intended and is kept in good condition. Sponsors have the option of shutting a University out of future funding if they perceive that their funds are being misused or misspent. As an institution that owes its continued existence to the millions of dollars that are incoming from federal and state coffers the tracking of

equipment and capital expenditures is no light matter. The Property Manger works closely with federal auditors and also, at times, the Principal Investigators to insure that equipment is tracked and reporting on the use of that equipment is timely.

### *Daily Operations*

The Director provides an excellent overview of the operations of the UASPSO:

Well if you think about it in terms of the timeline of a grant, at the beginning there is a proposal that goes to a sponsor to ask for funding to support a project. And we're involved in that process on behalf of the University administration to look for certain things, to see that the budget is in place and that the signatures are in place and various other funding issues and then the proposal is submitted to the sponsor on behalf of the University. The sponsor looks at us as the single point of contact and will contact my office during the awards process to negotiate budgets or any other issues they need more information about and we'll act as that in between the investigator and the sponsor. So moving along the timeline to the award and now this is really very brief overview. The award stage depending on whether or not it's a grant or contract there are various degrees of complexity but my office will accept the award on behalf of the university and we will determine the amount of the award to be recognized in our database start and end dates, various things like that and of course there is a bureaucracy behind all these words I'm saying that is much larger than what it is I'm saying. And so then the project moves to the post award stage where we'll set up the university FRS account and system accounts, with the budget loads and the other attributes that are associated with the account created and then the investigator is free to start spending on the grant for the purpose of the project. During the life of the grant we invoice the sponsor in various different ways. We will comply with the financial reporting requirements. Now we're involved in other processes such as equipment inventory and nagging professors who are late with their technical reports and various other things along the way that happen during the post award stage. At the end of the project we're involved in closing it out financially and with the sponsor and with the university system until the project is eventually archived in our storage unit. [P7:006]

The process begins with a faculty member that has a desire to have research funded. In the best scenario, the faculty member contacts UASPSO and lets them know that he is

considering a proposal to a specified Sponsor. This allows UASPSO to start a file on the faculty member and to learn about the specifics of the Request for Proposal that the funding agency has distributed. This Request for Proposal spells out the focus, scope, equipment requirements and budget requirements that the faculty member must follow. The UASPSO will use this Request for Proposal to ensure that the faculty member meets all requirements and follows the process as outlined by the funding agency. The first step for the faculty member is usually to develop a draft budget that the UASPSO can use to collect information on salaries, equipment needs, space needs and indirect costs, or overhead. At this point in the process one of the Pre-Award Senior Proposal Administrators (SPA) is involved to guide the faculty member while the proposal is being drafted.

Upon completion of the proposal, the faculty member sends it to the UASPSO where it is logged in by the Office Assistant. The Office Assistant date stamps the proposal and collects other information, if any, that the faculty member may already have on file with the UASPSO. The requirements of the Office Assistant are not very stringent, other than ensuring the date stamp is made and that the proposal is attached to the correct faculty member file. The SPA relies on this information being correct to ensure that the SPA can look at past history, if any, to determine the best way to work with the faculty member. The Pre-Award SPAs rotate duties, someone covering all the faxes one day, the telephone the next, or emails the next, depending on the method the faculty member uses to deliver the proposal. An SPA then takes over the complete file on the faculty member and guides the submission process from then. The SPA reviews

the budget and the proposal with the faculty member to ensure that all requirements are being met. This process can be very involved but it usually happens quickly. Often faculty members will give no advance warning of a submission and will often bring a proposal or budget to the UASPSO with only days to spare. In this case the SPA must work quickly to meet all requirements of the Request for Proposal. Rarely, though, does a proposal not get submitted on time.

Weeks may lapse before a proposal is approved or rejected by the funding agency. In that time the SPA continues to monitor progress and works with the faculty member and the funding agency to clarify any questions or to submit additional materials as requested. An SPA may be working on dozens of proposals at any given time, so this process is part of the daily routine. SPAs at this point are largely working by themselves. If the proposal is not funded the SPA will work with the faculty member on a re-submission, if requested, or the proposal is filed by the Office Assistant for reference, or for use at a later date. When a proposal is funded the SPA works closely with the Office Assistant and the appropriate Post-Award Team Leader to set up financial accounts the University accounting system. These accounts will be used by Post-Award employees to receive and disburse funds and to monitor equipment use. The input from the SPA to the Post-Award department is the setting up of the main file and the correct assignment of files and accounts to the faculty member. At this point the faculty member becomes a Principal Investigator, a term that denotes a funded account. The work on this process is spot-checked by the Assistant/Interim Director and by the Supervisor of the Pre-Award department. Once the accounts are verified the funded

proposal moves out of the hands of the Pre-Award department and into the hands of the Post-Award department. The internal customers, then, of an SPA are other SPAs and the Post-Award Team Leader.

The over one thousand accounts that are set up for the funded projects are first checked by the Post-Award Administrative Assistant to ensure that the files are in the correct place in the system and can be accessed by the appropriate employees. This step is important to the Post-Award department as lost or misplaced files can result in inefficiencies in the process. Once the correct files are set up access is turned over to the appropriate Team Leader and their Apprentice. As mentioned, the Team Leader may have several departments under their purview and it is important that the right account be assigned to the correct department and departmental business manager. The Team Leader must have knowledge of the Request for Proposal, the requirements and practices of the funding agency, federal, state and University regulations and generally accepted accounting principles. In addition, they must know intimately the University accounting systems for ingest and disbursement of funds. The work of the Team Leader is input into the jobs of several employees, including the Apprentice, the Cash Manager, the Property Manager and the Systems Analyst. These employees must obtain accurate and timely information from the Team Leader in order to ensure that all accounts are in good standing, that monies are available for expenditure and that equipment is being purchased and used according to the funding agency's guidelines. Inaccurate information has significant consequences for the UASPSO and the Principal Investigator as the funding agency is constantly monitoring the project to ensure that it is proceeding

according to their guidelines and wishes. Any deviance from those guidelines and regulations can result in the cessation of the project and the pulling of funding. The Team Leader must work with the Principal Investigator, or in most cases the departmental business manager, when funds are requested for expenditure and with the funding agency when those expenditures are invoiced. This process is ongoing throughout the life of the project, often several years initially and longer if the project is renewed with a latter proposal.

Inputs into the work of the Apprentice can come from any quarter. The Apprentice often takes on much of the daily work of the accounts as the Team Leader moves on to new projects. The Apprentice will also work with the Cash Manager and the Property Manager much as the Team Leader would. The Apprentice receives feedback from the Team Leader on their work and progress as well as input from other employees they come in contact with. The organization realizes the status of these individuals and works to train them on best practices and processes. The Apprentices are often also assigned the task of making sure the Principal Investigator is following correct procedure in reporting activities to the Sponsor. Reports from the Principal Investigator are important in that it gives the Sponsor valuable information on the progress of the project. If the reports are not forthcoming, or are unsatisfactory, the Apprentice will attempt to contact the Principal Investigator to remedy the situation.

All Team Leaders and Apprentices are trained to a high enough level that they can absorb each other's work if necessary. If there is an absence for some reason or if one area has little activity, the Team Leader in that area can take on the proposals of



other departments. This necessitates a high level of interaction between all Team Leaders and Apprentices and good communications between all parties. They have input, and outputs, into each other's work at every stage of the process.

While the workflow is, on the face of it, somewhat straightforward, it is the basis for all that happens in the UASPSO and is that starting point for the relationships between the employees, the establishment and execution of the rules and procedures and the ultimate feeder of the culture of the organization.

**Research Question: What Is the Culture of Service Quality of the UASPSO?**

Feelings about culture of service quality are pervasive in the UASPSO. To develop a picture of the subculture, the unitized data was analyzed and those categories that best described the culture were brought forward. Appendix 13 shows those categories that were most prevalent in interviews with UASPSO employees. Appendix 13 sets out a summary of the assignment of sub-codes and their relative frequencies for Pre-Award, Post-Award and Administrative respondents. These assignments formed the outline for a discussion of the culture of the UASPSO and provided the starting point for analysis.

While the culture of a financial organization is certainly a driver for service quality, the establishment and nurturing of the overall culture of the organization is a tale of leadership. This discussion will center mostly on the culture created by the Director, but it will be contrasted by the most recent culture being established by the Assistant Director/Interim Director. There are leadership and guidance lessons in that contrast that will be explored in Chapter V. The overall culture of the organization, along with its

subcultures, provides the environment in which a high level of external service quality can exist. There is a balancing act, in this case, between maintaining an organization governed by rules and regulations, and their concomitant details, and an organization that nurtures its human resource capital. Without either, in the case of the UASPSO, the external service quality would be damaged. There seems to be no question of the commitment of the organization to a high level of external service quality. The provision of internal service quality, however, is, as you would expect when working with humans, much more complex. The balance between external and internal is maintained by the push for high standards by the Director, and a subculture environment that supports each employee.

### ***Culture with a Capital C***

As was explained, this is an organization that is governed by rules and regulations that makes the application of accounting and financial skills imperative. While the people here are not your stereotypical accountants, they do have much of the same commitments to detail and perfection that you would expect from the best accounting houses. Overall, the employees tend to be satisfied with their work, as evidenced by the longevity of many of the employees. In addition, many of the employees, especially those in administrative positions, had an idea of what external service quality meant to them, and to the organization. The Director had a very succinct, unemotional view of service quality: “The Arizona revised statutes mention two words related to personnel and what they expect of us as state employees and they use those old fashioned words of efficiency and effectiveness. So I have to say that primarily we have

to be doing our jobs correctly and we have to be doing them in a reasonable time”

[P7:42]. Others internalized what customer service quality should be:

So it’s my perception of service, I’ve been in customer service obviously for years with the positions I’ve had in the past, but is my take on customer service and how I present myself; it’s not necessarily the same with different people and also, something in the back of your head, the morning you had, you know you had bad issues in traffic, I mean you try and put those aside, I mean obviously we’re going to, we’re in customer service you kind of have to be like “Good Morning!” you know? [P9:135]

When asked what motivates individuals in the organization most everyone responded with “a desire to do good work.” “Just kind of like the type-A personality - get it done and get it done right the first time and not have to redo it later” [P8:086]. One employee summed up what most of the other employees said:

I think there’s an internal drive of a person. I think, depending on your work ethic and how you’re really feeling about your job. I think that really is the end result. How you’re feeling about what it is that you’re doing, the service that you’re providing. I feel like I’m contributing in a lot of ways to the world as a whole. And that’s important to me. I know it sounds kind of corny, but everybody has their own thing, but I feel that even the research community, there’s something that we’re contributing world-wide. But also on a smaller level, I’m just one little piece of that, but I think that kind of drives me to want to do the job, not just the work ethic, I always want to do a good job, I’m a perfectionist, so it’s kind of like I have to do that, but I think that a lot of what creates that environment is internally your own drive. It’s something that interests you, or it’s important to you. [P9:061]

Not everyone feels the same about the work they do, and this was mostly reflected in the younger employees, those Apprentices who were just starting out or had enough experience to look for other jobs. For them, the pay was one of the most important aspects of the job but not the only motivator. For those just out of college it

would be expected that pay would be a prime motivator but many of the younger employees also wanted to feel like they were contributing. “I get paid a really good salary for doing that so I’m able to balance my life and my job. And that’s what keeps me coming to work is that balance. If I couldn’t, I would quit and I would be a stay at home mom” [P3:075]. For the experienced employees there are other factors that contribute to their motivation as well. “I think the relationships with the coworkers. If I didn’t respect my coworkers, I would be a lot less happy to stay. Again, hearing stories from other people’s workplaces and thinking ‘Wow, I’m so glad that I don’t have to deal with that,’ is a good portion of it...” [P2:92]. Another said, “I think first that the people that are in there want to be in there. I don’t think there’s really anybody there who’s just like biding their time, so to speak. I think that they enjoy the work, that’s just my impression that I get from that” [P15:109].

### ***Subcultures of the UASPSO***

In regard to motivation and wanting to do a good job, the UASPSO does not seem to be that unique in most higher education institutions. Many departments and offices that deal with students have a commitment to seeing that students receive the best education and service they can get. This holds true, I believe, for the faculty support departments, like the UASPSO, in the University. Each of these departments, whether serving students, faculty, staff or the community, have different ways of operating, while still achieving the same goals of quality service. These operating differences are made up of the cultures with a small “c”, or the subcultures. The UASPSO, like any organization, has dozens of these subcultures that add up to determine the larger culture.

There are a few UASPSO subcultures, however, that stand out in relation to other organizations on campus.

### *Leadership Subculture*

As was stated, outside of the larger professional culture, the tone of the organization is set by the leadership of the UASPSO. This study bridges a leadership change in the organization. The effect of the Director is still felt in the everyday processes and procedures of the organization, as well as the institutionalization of the high standards set by the Director. But with the retirement of the Director and the subsequent installment of the Assistant Director as Interim Director there has been an attitudinal shift in how the employees view the organization. The contrast in leadership styles discussed will make this evident.

### *The Director*

"Rattle me out of bed early, set me going, give me as short a time as you like to bolt my meals in, and keep me at it. Keep me always at it, and I'll keep you always at it, you keep somebody else always at it. There you are with the Whole Duty of Man in a commercial country" (Dickens, 1997, np).

The first word that comes to mind in describing the Director is professional. I believe the Director would describe herself in this way as well. In my conversations with her, I always felt that she was focused on the job and not necessarily the people. That is not to say that the human resources side of the organization was ignored, but the practices, processes and procedures that were set up treated the humans in the organization as part of the system, rather than the drivers of the system. There are a couple of quotes from the Director that are very telling in this respect:

So I have to say that primarily we have to be doing our jobs correctly and we have to be doing them in a reasonable time. So those are the two things I go after. I have noticed over time that with the [Support Functions Review] committee and various other things that people are more interested in the happiness factor and in the perceptions and the happiness factor. But I am too old to change. I still say that the thing to judge me by would be efficiency and effectiveness and if I'm applying the controls in the places where we have the highest risk. And that I'm not obstructing the workflow in places where we have no risk. That's my job. And so that's how I define it. I do have to take a secondary look at the happiness factor because there are people at the University who are interested in that. And so to that extent then I have to give it some of my attention. [P7:042]

Well, when I look at my statistics and I see terminated accounts and I see that we are keeping up with our accounts on time. I look at my numbers and then I know I'm doing a good job. I'm not taking a happiness read of the community and say 'Oh my god I'm not doing a good job and people are unhappy.' Am I getting those accounts set up, are these contracts going through fast enough? And of course I'm never happy, I'm never happy. So that would be a criticism of me. You really can't make me think that it's good enough. But my criteria are different than who you would call my customers. [P7:114]

This attitude was not just a personal philosophy of the Director. It pervaded the institution so that there were even initiatives taken to remove feelings and emotions from contacts with customers. This is evident in what the Director termed "showing tone" to the customers. From the Director:

However some of my staff think that we show tone and you probably hear it in my voice as I speak already, so I'm hiring a consultant to work with our speech so that we don't show tone. And so that's something we can do that isn't going to interfere with efficiency and effectiveness if we at least staunch our tone when we speak. Don't show our feelings. That sort of thing. So I think that there is an improvement to be made on the feelings dimension. [P7:46]

The "Happiness Factor" became a major theme in my questions and analysis of the culture of the UASPSO. I believe it is a factor that permeates the organization and is one

of the major factors at the heart of the internal service quality throughout the UASPSO, as both a driver and an impediment. As evidenced by the frequency of quotations about this subject, when asked about the Happiness Factor, almost everyone knew of the term and had a negative connotation with it. This view was felt from the Classified Staff through to the Team Leaders. From a Classified Staff:

There is not a happiness factor. We used to have potlucks all the time, we don't have them anymore. We just don't do anything. I see other offices doing it and I think to myself they're expected to do their jobs, why can't we be more caring? [P1:79]

From that same person:

I think that it's perfectly acceptable to say to your coworkers to say 'Hi' and then get to a computer and get to work. It can go too far, but if you're at the copier and someone is waiting what's wrong with talking with that person? [P1:87]

From a Team Leader:

You're walking by a cubicle and of course, 'Hi, how are you this morning?' I don't think that there is a lot of excessive socialization that goes on here. You just say 'Hi' and catch up on your daily things. [P9:102]

From another support staff when asked about the Happiness Factor:

A lot of that reflected the Director. The Director discouraged it. No pictures on the wall. She discouraged partying. Fraternization. Not big on Christmas parties. My first 2 years we had two Christmas parties and after that there were none. The Interim is more flexible. The Director was very stoic and strict. No intention of getting involved socially. [P10:33-35]

Despite the absence of the Happiness Factor from the Director, the employees were generally happy and satisfied with their working conditions. They found that they could socialize, even within an environment that discouraged it. From one of the Apprentices:

Like \_\_\_\_\_ is my team leader, so I don't go to lunch with her, things like that. We're not like friends-friends. The other interns, the other apprentices, I go to lunch with them. We go to lunch, we hang out, we talk, things like that. The team leaders, they go to lunch together, they hang out, they talk. We have at different times, special occasions, if someone's leaving, or a baby shower or something like that and we'll all get together. But for the most part it's kind of sort of like a, I don't want to say a 'class' structure, but it's kind of structured parallel that way.  
[P15:97]

While this attitude may not be much different from any other office environment there was an antecedent environment of fear, especially from the younger employees. The notion of a "Fear Factor" came about through my conversations concerning the "Happiness Factor." This "Fear Factor" was especially prevalent in statements made by Apprentices, but the recognition of the Factor was not limited to them. From a Classified Staff member:

I've been here almost two years, but I say 'hello' but there's no relationship, there isn't much there. I don't know, like she's scary to me. I don't know why, she's just not somebody I feel comfortable around. There just seems to be, when there's problems, they blow up at some point and then everyone's like 'Ahh, we're all in trouble' and we have to not talk to each other and we have to do our work and it just makes it a little hostile and uncomfortable when that stuff happens. [P6:111]

From the same person:

I don't know, I just think that if people are happier they're doing their job better, they're looking forward to coming to work, they're not like 'Ohh, I'm going to be sick tomorrow, because she's going to be in a bad mood'. There's a lot of that little stuff going on and I think if everyone was happier, or if it was a happier place, I think we would be able to perform better and concentrate and not be so worried about 'is so and so gonna come out of her office angry and are we going to get in trouble?' [P6:123]



From another Classified Staff member:

I think that some of the [Apprentices] are fearful right now. I think that when they see certain things...we had a row at the office. A couple of people did a few things that were stupid. And they were talked to about it. And they were [Apprentices]. One's leaving today. The other one is still here. The word on the street is that if he's still here he is not going to make senior. So there is a certain amount of fear. [P1:115-117]

When a Team Leader was asked how things had changed under the Interim Director and if the looser environment was being held back under the Director, she responded:

To an extent I know we still get it. We were more reserved. If the Director was out of the office we'd goof off extra. When she was there we'd still do it but quieter. Subdued but there. [P11:69:75]

I don't wish to misstate the effects of these two Factors on the organization. I have shown that the UASPSO operates at a high level of competence and standards as evidenced by external feedback. And while there is an environment that one could characterize as fear, it is not to the extent that the organization is paralyzed by it. But, as will be shown later, it does drive, both positively and negatively, some of the dimensions of internal service quality.

#### *The Assistant Director/Interim Director*

In early 2005 the Vice President for Research announced that he was retiring later that year. Several candidates were identified for the position, including the person that headed the Support Functions Review Committee. The Director related to me, in an informal, non-audiotaped conversation, that she would retire if the Committee head was selected as the new VPR. When that, in fact, did occur the Director quickly announced her retirement, which occurred in the latter part of 2005. Upon the retirement of the Director, the Assistant Director was elevated to the position of Interim Director. There

have been some changes since that time, but it is still too early in her tenure to determine how these changes, and others to come, will affect the internal service quality of the organization. It is unknown at this time whether the Interim Director will be hired in the permanent position, or even if she will apply. The changes that have been implemented, however, have already shown a marked influence on the attitudes of the Office employees. This influence mostly centers on the relaxing of the social prohibitions, an elevation of the Happiness Factor and a lessening of the Fear Factor. Several of the employees remarked on these influences, the first from a Senior Proposal Administrator:

We're all told that if we see something that can be changed or even something that is going fine, it could be something that maybe we could do it this way and it would help even more, or we're all encouraged to share those ideas and take on little special projects of our own, to see if that would really help. [P8:94]

From another Senior Proposal Administrator:

It's more of a thinking of new ways to change or improve SPSO. Before that the Director really didn't want to change or do different things that would maybe improve. She thought it was good as it was. So we put in changes like the routing sheet and it's really helped us with the job. And we changed the arrangement of our office. Our internal web site we've been changing. It's mainly bred more of a sense of innovation. We can think of new ways ourselves rather than only the Director thinking of them. The Interim has allowed us to think of new directions. [P12:45]

I think we still have the high standard, its just more of the responsibility is on ourselves. We want to do a good job and we're not scared. I think the same amount of quality work is going out. But the atmosphere has definitely improved. [P12:49]

In response to being asked what the environment was like with the Interim Director, a

Team Leader responded:

A lot more relaxed. We're all still on our toes and we're all keeping busy but it's, things are not jumping around to make sure

everything is exactly perfect. I can take my time to figure out and make sure I know what I'm doing rather than trying to get things right the first time. [P11:25-27]

And from one of the Support Staff:

I think things seem a little more flexible and open. There seems to be a little flexibility, if you run late in the morning you can make it up on your lunch period. I think I see that people are happier. I hear, I think, more talk between people. [P14:37]

The attitude change in the UASPSO does not only emanate from the environmental changes. The Interim Director also has a different leadership style that puts more of the decision-making responsibility on the individual. From a Team Leader:

[The Director] always knew the answer. She would just tell you right there. The Interim Director wants to think about it so that she can give you the right answer. I think part of it is self confidence. [The Director] was here so long she didn't need to sit down and look at it. The Interim is just making sure she does the right thing. With the Interim she's looking at each question to see if we need to change. The Director had always done things her way and the Interim is looking to see if they way we've always done it is still the right way. With the Director, if I got into an argument with the department I could always turn to the Director and she would back me up. With the Interim it's more like I have to stand on my own. I have to be able to do all my research beforehand because I'm not sure the Interim knows the answer either. It's being a lot more meticulous to back myself up. [P11:19]

The Interim Director's leadership style lends itself more to delegation rather than control. Many of the employees felt that there wasn't as much control from the top, but the competence in that position was still there. I did not get the feeling that the delegation of decision making and problem solving was putting an undue burden on the employees. Many welcomed it and felt that they were competent to handle the problems on their own. One of the recommendations for further study in this instance will be to follow-up with employees when either a new Director is

hired or when the Interim Director takes over permanently to see how the culture of the organization changes.

### *Apprenticeship Subculture*

The UASPSO has, until recently, had some hiring and firing practices that aren't usually encountered in higher education. These practices have a profound effect on the organization and bear examination on their own. The Director set up a system of apprenticeship, with a 2-year full-time contract. Many of the Apprentices are hired right out of college and this is their first full-time position. The apprenticeship program is seen as a training program and the expectation is that the Apprentice will gain knowledge and experience and, at the end of the contract, will either be promoted into a Team Leader position or let go. In the words of one employee:

She's [the Director] got the internship program and that program is a 2 year full time, a long term temporary, and they're supposed to fulfill the 2 year obligation and get the training. At the end of 2 years, if there is a senior position open, they are encouraged to apply. They're also encouraged to apply during the time that they go through their training so [the Director] knows they're interested in doing it. If a position is not available or they've not met her standard that person will not be promoted. They'll be encouraged to find work elsewhere. I've seen her also recommend people and help them find positions . We just didn't have a position for them at the time. There have been people that have left that she's been very upset because they didn't fulfill their two year obligation. But they also felt in their hearts they wouldn't have made senior anyway. So they know to leave. There is an unwritten word that gets out there you're not going to be a senior, start looking around. [P1:059]

While the positions are often temporary the hiring process is usually as stringent as it would be for a person expected to stay longer. The Director, and others in the department, would work the local job fairs looking for University of Arizona Seniors majoring in Accounting and Finance. The initial contact would often result in a

recognition by the graduate when jobs were posted around campus. If the graduate is interested, an interview is arranged with a Team Leader and another with the Assistant Director/Interim Director. If the Team Leader and the Assistant Director/Interim Director have a favorable impression, the applicant is given another interview with the Director. The Director makes the offer if she is impressed as well.

The policy of “up or out” has affected service quality within and without the organization. Morale for the Apprentices is often low and long-term employees are hesitant to get attached to them. This hesitancy for attachment is evident in a comment made by one of the Team Leaders:

You know, people have turned up missing and there’s not...either I’m just not in the good gossip loop, or it really is handled well, but someone will just be gone, and you’ll notice that after a few days that they haven’t come back from that vacation that you assumed they must be on. Someone will say ‘Yeah, they’re not here anymore.’ I haven’t been aware of too many scandals, where everyone knows what happened. [P2:116]

In addition, turnover affects external service quality. “I suppose in a lot of ways it may work, but on the other side of the coin it really doesn’t because what you have is this constant moving around in the office of different people. And you have all these new trainees coming in and that just opens up a whole lot of problems for the departments. They like consistency” [P1:071].

I am aware that recently the Interim Director has put the Apprenticeship program on hold for the immediate future. Apprentices are now on the same evaluation timeline as other employees and they are not made to sign a two-year contract. This change has also been reflected in a position title change to Project Administrator.

### ***Porosity of Job Positions Subculture***

Many organizations tout themselves as a team-based organization. The UASPSO, however, is truly an organization that puts team theory into practice. The UASPSO has the practice of moving people from one job to the next, internally, so that they may garner the experience and knowledge that leads to a “big picture” view of the organization. All of the hiring done, at present, by the UASPSO is into the Post-Award section of the organization. The Apprentices, for instance, all enter the organization through Post-Award. As much of the accounting knowledge is needed in that section it is easier for new hires to grasp the fundamentals of the work, as many have just been hired out of business school with accounting or finance degrees. The Pre-Award section, at present, is staffed entirely with employees that were formerly employed in the Post-Award section. This practice leads to the knowledge and skills needed in both sections being integrated into the experience of all of the employees. This job cross-training is then supplemented by additional training as needed for specific positions, but most of it is hands-on experience. An SPA said:

When we get a brand new person in Pre-Award, training is done by actually doing the work. When we get a fax the new person does the fax and we go over it with them with every single thing until they show enough facility for doing it themselves. At that point they're on their own. Training is not rigid but it is very interactive. We physically sit down and go over every single thing and what it means. They have to have an idea of what can go wrong. [P17:77]

This practice was implemented by the Director as a way to keep her employees interested in their jobs:

For the people that are here they like being trained in something else because it develops their expertise and makes them more marketable. But many of them, of course, have preferences for which seat they would like to work in. So nothing is permanent. So that they know that they are not stuck somewhere and when they ask me I can move them where it is they want to be. But I do like them to move around or else they'll get in a rut and then they forget how to learn and various other reasons for quality control I need to see how they were doing. That's how you learn 'Well see they're not doing it the same way I do it on this other team.' So let's go to the table and see how it's really supposed to be done. And that's how many of the quality control issues surface is when somebody else sits in your desk then they realize that you are doing things a little differently. Are you right or wrong? And its just business, nobody's offended by any of this. [P7:142]

While not everyone is happy with moving around, most of the employees saw this as a benefit of the job. In any case, it serves the level of internal service quality between the sections. As one of the Team Leaders put it:

I don't see how you can work in Pre-Award without Post-Award experience. Just seeing the other side of the situation because we're preparing the proposal with how it's supposed to be and you start with the other end. You have an idea of what the objective is and it makes the transition easier. [P16:81]

This practice also feeds into the practice of external hiring of Apprentices. The Director thought that if a person was up-or-out after two years, they would need some skills in order to obtain a job on the outside. As one of the SPAs observed:

We've had a lot of interns go out into the campus and get jobs there and I think that that probably has a good deal to do with the fact that they get good training here. This is just my guess, but we've had a lot of people leave here and go out into the campus and get jobs, so that would suggest to me that we've got a good reputation of turning out quality people. [P2:128]

A Classified Staff member supports this:

What we see more frequently is people finding jobs out in the University community and transfer out. I think it's in part to [the Director's] training. When they hear that it's a SPSO person, especially if they've had any dealings with SPSO and they've had positive ones with that individual, they'll scoop them up the minute. They put their name out there. [P1:55]

With hiring and mobility practices, the UASPSO is able to maintain an internal consistency with knowledge, experience and job skills that support a level of internal service quality.

### **Culture Summary**

The internal service quality dimensions that are examined in this study provide a picture of what internal customers deem important to providing, and receiving, quality service and products from their colleagues. These dimensions do not provide the entire picture, however. There are aspects of the environment, or culture, of the organization that may not directly relate to service quality dimensions but have enormous influences on them. The external service quality seems to be solid and the fact that it is necessary to achieve successful internal working relationships in order to be able to satisfy external customers is well documented (Bialowas & Tabaszewska, 2001; Cannon, 2002; Drucker, 1999; Hart, 1995; Heskett & Schlesinger, 1994; Luthans & Sommer, 2001; Rosenbluth & Peters, 1992; Schneider, 1986). Hallowell, Schlesinger and Zornitsky (1996) identify several components for the management of internal service quality. The components are tools, policies and procedures, teamwork, management support, goal alignment, effective training, communication and rewards and recognition. While these are closely related to the ten service quality dimensions studied, they are particularly useful in examining the culture of internal service quality of the UASPSO.



This is certainly an organization of policies and procedures. These policies and procedures seem to facilitate serving external customers even though there is dissension when faculty members or departments try to circumvent the rules and regulations. Internally, policies and procedures set up seem to facilitate internal service quality as well. Everyone in the UASPSO has some sort of accounting or financial background so that the rules and regulations are more easily understood and the workflow between sections and individuals is facilitated. Teamwork is another hallmark of this organization and this arrangement is seldom seen on university campuses. Mobility within the organization has also lead to an understanding of the workflow and standards. While not everyone is happy to move around, the practice does build knowledge and experience along with a greater socialization throughout the organization as co-workers get to know each other. Related to this is the availability of effective training, in this case the hands-on approach. The training, since it is so related to the everyday work, is very job-specific and useful and is available in a timely fashion. There also seems to be a strong alignment with the goals of the Director and that of the employees. Everyone is, of course, very externally focused and those goals are met often and well. Internally, the goals of the Director in regards to policies and procedures, training and teamwork are also closely aligned with the employees. Since most of the employees are both internal and external service providers these goals seem to support both internal and external service quality.

It is perhaps in the rewards and recognition where the management of the internal service quality is wanting. At the end of two years, for most Apprentices, the Apprenticeship program does nothing to reward the individual for a job well done. If a

position is open the Apprentice is allowed to be promoted. If not, the Apprentice is removed from the organization. Salaries are also taking a beating at the moment as other departments in the University, and companies without, are offering much higher pay for the same type of work. While not an immediate problem, this discrepancy in salaries will eventually take a large toll on the organization. In addition, the Director does not consider the human side of the success equation as important and removes any avenue for personal expression while ruling some of the employees with fear. Overall, this culture, both good and bad, has direct effects on what the UASPSO employees consider important to internal service quality.

**Research Question: Are the Original SERVQUAL Service Quality Dimensions Valid With Respect to Internal UASPSO Services?**

The extent to which the original external service quality dimensions developed by Zeithaml, Parasuraman and Berry (1990) have, in various studies previously mentioned, been retained differs from study to study. As a reminder, the original ten dimensions are Tangibles, Reliability, Responsiveness, Competence, Courtesy, Credibility, Security, Access, Communication and Understanding the Customer. Each of these will be examined as they relate to determining UASPSO internal service quality.

In an organization where the employees may often work with each other for years, the dimensions of service quality tend to blur into each other and become less distinct. An external service transaction does not necessarily develop these long-term associations and the dimensions are somewhat easier to distinguish. In an internal environment, especially in an organization such as the UASPSO where the culture is one

of constant motion and cross training, the dimensions are all part of a system, where the layers of service quality all may be occurring at the same instant. The Tangibles of the office layout lead to a greater, and faster, form of Communication. This Communication leads to a better Understanding of the Customer and their needs. It is then understood that the work must be Reliable and Responsive to those needs is of utmost importance to support the external service quality. Even as this is presented, it is not a linear, causal process. A high level of internal service quality is a direct result of the culture, of the environment, of the milieu. Zeithaml, Parasuraman and Berry (1990) found that the distinct dimensions often were part of a larger concept, and attempted to collapse the ten into five. In their original research, Parasuraman, Zeithaml and Berry said about the ten dimensions, “the [specific criteria are] not meant to suggest that the 10 determinants are non-overlapping. Because the research was exploratory, measurement of possible overlap across the 10 criteria (as well as determination of whether some can be combined) must await future empirical investigation” (1985, p.46). The following analysis takes the original ten dimensions linearly but a comprehensive description is difficult and the merger, and association, of the distinct dimensions does not necessarily follow those of the SERVQUAL developers nor do the original ten dimensions survive intact. And while most of the original dimensions survived as factors in the UASPSO, the determination of which dimensions were important centered on the task-oriented structure of the UASPSO rather than the more personal. Based on the process of categorizing the unitized Primary Documents, sub-codes were created that were then cross-categorized into the code families, or dimensions. Appendix 14 sets out a summary

of the assignment of sub-codes and their relative frequencies for Pre-Award, Post-Award and Administrative respondents. The process of this categorization informed the process for assigning quotations and sub-codes to original and new dimensions. All units and sub-codes were first compared against the ten original dimensions. Those units and sub-codes that did not cross-categorize were reserved for analysis into new dimensions.

### ***Tangibles/Access/Communication***

These three dimensions are tethered together because they are very much related to the specific situation of the UASPSO and directly impact internal service quality. The UASPSO offices are, except for the Director and Assistant Director/Interim Director, all in one room but divided into individual or group spaces by cubicle dividers. These dividers are approximately four feet high, just high enough to afford a small degree of privacy but short enough for most people to peer over. As such, these dividers do not extend to the ceiling and thus sound and conversations easily escape the confines of the cubicle. Upon entering the UASPSO offices, one is confronted by a person sitting near the door who acts as a receptionist but has other, internal duties as well. Otherwise, the visitor sees nothing but a sea of divider walls. The room, however, is sunny and quiet, considering the physical arrangement. As one employee said “A lot of people have come in and said ‘It’s too quiet in here.’ That’s freaky!” [P2:68]. Many employees have their own cubicle, but several people, mostly Apprentices, are grouped with others in a two-person arrangement. This physical arrangement as a Tangible is not important in and of itself to the employees. They do not feel that the physical environment either adds or

detracts from their work. The tools of the job don't factor in, at least at this moment, due to a schedule of upkeep and maintenance. From the Director:

We moved into this building when it was built 8 years ago. Before that we were in the Sun building. It was very nice there. Our facilities, as far as the equipment, we have enough budget to turn over our computers a third or quarter every year. So we are on a schedule. We wear them out. And we also have a contract with CCIT to do the software upgrades and maintain them and that's working out really well. We don't have any complaints about the budget. But I think its because we care about the efficiency and also we don't have more people working here than we need and so then with that budget were not spending on our salaries we spend it on operations. [P7:134]

So Tangibles is not a dimension of internal service quality itself. The physical environment, and the appearance of employees, was also found to be unimportant in research done by Lings and Brooks (1998) as well as others. What the physical arrangement does facilitate, though, is Access and Communication throughout the organization. As stated by the Director, the UASPSO was in another building several years ago and an SPA sums up the effect of the move:

We used to be over in the Sun Building, which was a much larger area. Each team had its own office and there were three desks in that office plus a student would come in. And if you had a question for another team you had to physically go out of your office, go down some stairs, go this way and that to the other team's office and although obviously there's a lesser degree of privacy with the cube farm, I've not found it to be as offensive as maybe movies make it seem. [P2:64]

The move to the University Services Building and the installation of the cubicles has had great influence on the access of employees to each other. Often communication is made by email, instant messaging or, in rare instances, over the phone. The most common method of communication, though, is face-to-face, with employees often peering over cubicle walls to

carry on conversations or walking over to cubicles to meet. In modern office parlance this is known as “gophering” (Urban Dictionary, 2006). One Support Staff said “It’s easy to talk to my cubicle mates nearby. We just stand up and look over the divider. The farther away we IM each other. It’s a little easier” [P13:43-51]. Others also felt the arrangement facilitated communication. From a Team Leader:

And also, we can all hear each other, so we know what kind of problems are going on and if I’m interested, or I get a question once in a while about this, I’ll just perk up a little bit when I hear them talking about it. [P2:146]

From another Team Leader:

Sometimes if it’s the person sitting next to you we talk over the cubicle. Sometimes we call, we have IM, or we just get up and walk over to the desk. Overall the communication does well. [P11:93]

The arrangement is so facilitating that even the Director used it to communicate instead of having meetings. This type of communication is also advantageous from an external service quality viewpoint:

This is a nice little small office. When you walk through you can kind of feel it. I’m in the center of the L so people will pop their heads in so that’s one form of informal communication. I use the email more when I want to send something to everybody. I don’t use paper memos. When something pops into my head I just get up out of my chair and I go to where it is and then whoever else needs to be involved. So in other words whatever the issue is taken care of as we go. I don’t have to make a federal case out of it to have a meeting. So as you go and as things come up then we talk. The trouble with formal meetings in this department is that our customers complain when we are not available. Every time we do it it’s a problem because it means we have to shut down Pre-Award and not be available for walk through proposal and signatures on things that have to go to sponsors and it’s such a problem for them in the community that I don’t do it. [P7:126]

This physical arrangement has its disadvantages, though, and not everyone is happy. Several employees remarked about hearing the conversations of their neighbor and how that disrupts their work. One of the Classified Staff felt that the previous arrangement better suited her:

I don't like cubicles because they are noisy . You hear everything. You can't refinance your house, have a fight with your spouse, have the hiccoughs, sneeze, whatever. You hear everything. If you wear too much perfume and the person next to you has allergies you're violating their rights. It just doesn't let you be yourself. [P1:101]

An employee describing the plight of her boss:

That makes it hard and I think that for \_\_\_\_\_, I don't know how she can concentrate and get her work done, with everyone talking or even just other people leaving messages on the phone for people, or people being called back and you can hear everything that everybody's saying, even if they're in the copy room. [P6:87]

Overall, though, the contribution to internal service quality is substantial. While Tangibles cannot stand on their own, Access and Communication are certainly a dimension of internal service quality in the UASPSO.

#### *Approachability*

Parasuraman, Zeithaml and Berry (1990) consolidated dimensions after several iterations of their instrument. The consolidation of this grouping of dimensions is difficult. While the physical layout of the office allows Access and Communication, would another physical layout facilitate Access and Communications just as well? Having had experience in working in a cube farm, absent one large room with open desks and no interior walls the modern cube farm, in my opinion, facilitates ease of Access and Communication like no other arrangement. The employees of the UASPSO felt the same. So the physical environment is the driver for these dimensions to be grouped together but it is only the

starting point. The key to describing an overarching concept that encompasses all three dimensions is that the employees of the UASPSO are open to working in such an environment and use it to their advantage. An “officed” environment was actually seen as a detractor to service quality by the UASPSO staff. The term that may best describe the dimensions of Access and Communication in an internal environment is Approachability. Approachability is that trait that allows co-workers to easily interact with each other, exchanging needed information, exchanging ideas and updating each other on daily operations. In the fast-paced environment of the UASPSO Approachability is a necessary dimension for a high level of service quality between staff. Without it, other mechanisms for communication would have to be devised, such as regular meetings. This consolidated dimension is, of course, only pertinent to the UASPSO. In other settings these three dimensions may not be grouped in the same fashion.

### ***Competence***

Aspects of the training of the UASPSO employees were touched upon when discussing the culture of the UASPSO. The competence of the UASPSO employees is a result of several factors that go beyond specific job training, or even cross-training. The hiring practices of the organization bring in a type of person that is self-motivated to do their job well and are attracted to accounting and financial duties. As one employee described it, “I think it can be personal, which a lot of it I think personality-wise in our office we have a lot of people that are like that. Just the kind of like the type-A personality - get it done and get it done right the first time and not have to redo it later” [P8:86]. Another aspect of internal competence has to do with the high standards of the Director and how those standards are communicated. Much of what has to be done in the UASPSO is



determined by the external forces of the Sponsor, but even standards of internal work push the organization in the direction of accuracy. While not everyone stated it in such blunt terms, one of the Classified Staff had this to say:

I think [the Director] holds our feet to the fire. We are expected to be of a higher standard. While every so often we slack, that's when she nails us and gets everybody back on the right path. She has a very high standard and we're expected to live up to it. If we don't, bye. We are required to do accurate work and that is the one thing I think were all just a little retentive so it makes it ok for us all to be held to a higher standard. [P1:45-47]

Those high standards are fostered by an organization that takes the time to make sure employees are aware of when work is not right. In this fashion competence is increased to a point where employees are given sole responsibilities for accounts and external relationships.

### ***Reliability/Responsiveness/Understanding the Customer***

Reliability, as defined by Zeithaml, Parasuraman and Berry (1990), is the ability to perform the promised service dependably and accurately. Responsiveness is a willingness to help your co-worker and perform your services for them in a timely manner. Understanding the Customer is about making an effort to know your co-workers and understand their needs. As stated, in the internal environment of the UASPSO, the dimensions are all highly interrelated. Competence is also part of the three dimensions above. Many researchers using quantitative methods, including Galloway and Wearn (1998), found that the mean scores for the predictor variables of Reliability and Responsiveness were the highest.

In the internal service quality environment of the UASPSO, Reliability is also closely connected with the porosity of the positions in the UASPSO. As one Team Leader put it:

Most days are more about just getting it done. Given the dimensions of our work the biggest ones are reliability and responsiveness. If we are all being consistent and our work is consistently good and we can be counted on to do it that way then we're not only doing our job for the University we're also doing the job for our PIs. Responsiveness from the Pre-Award end and also from our departments and our faculty members. [P17:155-157]

The culture of service quality and the environment of the UASPSO all works to build competence, competence that is essential to external, and internal, reliability. When asked about hiring practices and whether the jobs could be done using temporary workers, the Director responded:

No. A temp could not come in and do the job. What we do is cross train, a lot of cross training and moving people around so that they know every job so that we are not dependent on any one person. So that's how we handle it. Make these people fungible so they can move around and do any one of the jobs here. [P7:138]

The work of the UASPSO is very timeline driven, often with no more than a day or two to develop a proposal, make changes and get it out the door. If the work of the proposal and the budget is not done correctly a Sponsor may decline to fund the project. If this is due to the PI the UASPSO can help them improve the product for the next submission. If the problems are due to the UASPSO then the loss of funding becomes a major issue, not only for the faculty member, but for the University. As stated by one of the SPAs:

...we're responsible not only for getting their contracts through quickly, but making sure that it's a contract that isn't going to come back and bite the university. Again their [the PI] focus is the work and 'can I spend my money as quickly as possible?', but there's a lot of other things that we have to look for. So it's a line between making sure that things move along reasonably quickly, but that we're not dropping the ball as far as the details. And that's the juggle is how much time that we spend is making sure that everything's just so while at the same time knowing that someone's tapping their foot and waiting because they need to be able to spend that money. [P2:88]

This balance of speed and accuracy is well understood by everyone in the UASPSO. It is one of the levels of standards of which the Director constantly reminds the employees. As quoted previously, the Director reiterates this standard:

The Arizona revised statutes mention two words related to personnel and what they expect of us as state employees and they use those old-fashioned words of efficiency and effectiveness. So I have to say that primarily we have to be doing our jobs correctly and we have to be doing them in a reasonable time. So those are the two things I go after. [P7:42]

But I am too old to change. I still say that the thing to judge me by would be efficiency and effectiveness and if I'm applying the controls in the places where we have the highest risk. [P7:42]

That external Reliability and Responsiveness are of course of prime importance, but they have to exist in the internal environment for there to be an acceptable level of service quality in the external environment. In fact, a high level of reliability is built into the systems of the UASPSO. As the previous discussion on workflow shows, there are many checks and balances built into the processes, especially those processes that flow back and forth between Pre-Award and Post-Award. From a Team Leader:

I feel, from my perspective, I think that we're all very consistent. We're all doing our part. Some teams have different deadlines depending on their sponsors, so sometimes they may have more of an influx of work one month, and then it may be our team the next month that has more of an influx, and theirs less, so I think we all are on the same mind, where we've got common goals and I think I work with some really outstanding people. [P9:57]

From an Apprentice:

I have found within the office that I pretty much get top-notch information. We're not really allowed to go, like I can't go and ask another intern a question. It has to be a team leader just for consistency's

sake. So when I go and I talk to another team leader, I come away with the information that I needed, so I think it works out just fine. [P15:129]

Related to reliability, in this organization, is Accountability. The Pre-Award section is the smaller of the two sections and the accountability for preciseness and accuracy is on the shoulders of a very few people. As one of the SPAs stated, “We have to depend on each other. So trust and reliability and interpersonal skills, we have to. Because there’s so few of us we have to work well together” [P2:80].

Responsiveness, getting the work done in a timely fashion, is of utmost importance when proposals may come in only a day or two before a submission deadline and the budget may be written on the back of a napkin. The workflow facilitates some departmentalization of the work, especially in Post-Award. But the responsiveness of an Apprentice to a Team Leader’s needs, or the speed needed to log in the proposal by Pre-Award and get it to Post-Award is a hallmark of the work done by the UASPSO. Internally, Responsiveness relies heavily on communication between all employees and is closely related to Understanding the Customer. There are, as in any office situation where people must work closely together for extended periods of time, several layers to relationships. In the UASPSO, there is an understanding of co-worker’s needs and wants that is at the job level. Apprentices are a large part of the work of the UASPSO, especially in Post-Award, and understanding their needs and responding to those needs, is an important facet to getting work done. According to one Apprentice, this seems to be built into the culture:

Maybe it’s just because of the position I’m in, being an Apprentice, I find that the people there are very open to my questions and they all kind of jump into a training mode when I go to them with a question, because they want us to be able to see how all the little parts work together for the whole. So, just the other day, I had to go up and ask \_\_\_\_\_ about a Pre-

Award question, something about a proposal routing sheet, because of course I don't get down into their part of it too much, and so I had a question about that. And she just explained, and the funny thing is, a lot of times, after they've explained and you're ready to go, they'll say something like 'Well, I know that was more information than you wanted, but I just wanted to make sure.' So, it's really very funny. I get a pretty warm reception actually. [P15:77]

On another level, the employees of the UASPSO are not just automata, focused on nothing but work to the exclusion of all else. The discussion of the culture of the UASPSO demonstrated this but a couple of quotes from employees reiterates the personal side of the organization that goes to Understanding the Customer:

But that's one thing that I guess that I've always tried to treat every situation within myself is 'You don't know what's going on in that person's life and you don't know if the reason they're treating you the way they are is because they had that morning' Maybe someone in their own family passed on, or maybe their dog died; or maybe that girl being really exceptional, maybe her boyfriend just asked her to marry him, or something. She's having an outstanding 5-star day. I think that that is the case with everyone that you interact with, you have to keep that in the back of your mind, even with your co-workers that you don't know where they're at. They could have had some bad experience that morning or a good experience. I think that's a balancing act; it's a constant balancing act with customer service, is that you have to be in tune with humans. Not to where you're like pitying them, or that you're giving them something to run with that you're going to let them get away with murder; that's not where I'm going with that, but you at least have to be sensitive to that you're both human beings and that happens. [P9:98]

Well the people are actually really nice, and \_\_\_\_\_ is a great supervisor, very caring and she always tells you you're doing a good job, and if there's some discrepancy she's not scary, she's really soft about it, she'll explain to you this is why...she doesn't just say 'what are you doing...this is wrong' at least she'll tell you how to find information, where to go on a website to get certain forms and she's very good about that kind of stuff. And just the positive reinforcement from her, makes it a lot better if you're not worked up about doing something wrong, so it makes it a little more peaceful, and you can ask her questions even if she's really busy. [P6:51]

### *Mutualism*

The dimensions of Reliability, Responsibility and Understanding the Customer in this study cry out for consolidation into a single overarching concept. Empathy, one of the original consolidated dimensions, includes Understanding the Customer as a dimension but, in this case, is not exactly the right term. The UASPSO staff work very well together, due to their personalities, training and cross-training, and given the nature of the work. While this study started with an examination of the workflow and inputs/outputs in each position, the environment is more complex than that. The discussion of Reliability, Responsibility and Understanding the Customer as service quality dimensions explains these relationships between, and among, employees. In nature, a beneficial relationship between two or more organisms that is dependent on the existence and continued functioning of each organism to maintain that benefit is known as mutualism (Bronstein, 1994), specifically, in this case, obligate mutualism. Organisms in an obligate mutualism environment cannot exist without each other and populations of mutualists tend to have great stability. Bees and flowers are perhaps the most common example of obligate mutualism.

This term is, of course, very specific to this study and cannot be generalized to other studies. Given that this is the case, this term very much describes the environment and what the three dimensions describe in that environment. It seems clear from the data that individual independence from the organization is neither possible nor desired. Nor can one department become independent from the other. The employees of the UASPSO must work together to foster internal service quality. And, without the service quality dimensions of

Reliability, Responsibility and Understanding the Customer interacting together internal service quality would suffer.

***Credibility/Courtesy/Security***

The theme of this discussion on internal service quality dimensions has been one of interrelatedness. In an internal environment, to the casual observer and to an interviewer, it is often hard to distinguish one service quality dimension from another. The next logical step in the process, and one that will be recommended for further research in Chapter V, is to develop a quantitative measure to check the power and priority of each of the dimensions. In this qualitative phase that power and priority are not always as evident. While the dimensions of Credibility and Courtesy have some part in the overall system of internal service quality they did not rise to the top of any of the discussions as being an important, separate dimension, as evidenced by the data in Appendix 10. Zeithaml, Parasuraman and Berry (1990) folded these two dimensions into the larger concept of Assurance, that the employee is knowledgeable and courteous and has the ability to convey trust and confidence. Each of the employees of the UASPSO has the qualities of the broader concept of Assurance but when speaking of important dimensions did not distinguish the characteristics of Credibility and Courtesy from other dimensions. Courtesy is, I believe, a factor in a larger, new dimension that will be discussed later in this chapter.

The issue of security, which is the freedom from danger or risk, did not factor into any concern from the UASPSO employees. Security, as expanded by Parasuraman, Zeithaml and Berry (1985), involves physical safety, financial security and confidentiality. In none of the interviews with UASPSO employees were these factors in internal service quality, nor

were they even factors to the employees at all. All felt secure in their surroundings and trusted their co-workers.

### ***Comparison to the Consolidated Dimensions***

After repeated testing of the instrument, the SERVQUAL authors eventually consolidated the original ten dimensions into five. Tangibles, Reliability and Responsiveness survived intact but Competence, Courtesy, Credibility and Security were collapsed into the Assurance dimension and Access, Communication and Understanding the Customer were collapsed into the Empathy dimension. There is not a one-to-one correlation between the dimensions retained in this study and those that were consolidated together by Parasuraman, Zeithaml and Berry (1985). Out of the Assurance dimension Competence was retained while Courtesy, Credibility and Security were not found as separate dimensions in this study. Tangibles, Access and Communication were found to be a consolidated dimension in this study but were not grouped similarly in the original study.

### **Summary of Original Dimensions Findings**

My research into internal service quality dimensions found that six out of the original ten dimensions developed by Parasuraman, Zeithaml and Berry (1985) applied to the internal service quality environment of the UASPSO. These were all dimensions that would be considered task-oriented dimensions. The most important single dimension is perhaps Competence, followed by three very interrelated dimensions, Reliability/Responsiveness/Understanding the Customer. Interrelatedness, in this sense, is not the same as the quantitative sense. In the case of the UASPSO, it means that I found the three dimensions so intertwined, it was difficult to separate them into individual dimensions.



An attempt to consolidate those three dimensions into a single, overarching concept resulted in a new dimension of Mutualism.

Analysis of responses in the Tangibles/Access/Communication dimensions found that Tangibles, by itself, was not a strong dimension, but served to support Access and Communication as strong dimensions. The key concept in the case of the physical layout is described not by the tangible aspects of the UASPSO but by the actions of the UASPSO staff. In this case the overarching concept is that of Approachability.

**Research Question: What Additional Dimensions, If Any, Are Important to Internal Customers in Judging Satisfaction With Internal UASPSO Services?**

Improvements to any of the external service quality dimensions may be seen as irrelevant to many of the internal customers. Galloway and Wearn state, “External customers, whose use of the service is less well defined, more casual and short term, judge quality on the basis of readily apparent, but more superficial, indicators such as physical appearance and personal convenience” (1998, p. 46). Whether a male UASPSO employee wears a tie may have an effect on the external perception that the employee is competent and reliable, but may have no effect on the internal provision of service quality to his co-workers. This may be due to the sustained relationship where other factors are deemed more important. As has been shown in the discussion of the ten original service quality dimensions, the UASPSO internal customers are, essentially, more focused on task-oriented dimensions than those that are not task-oriented. Non-task oriented dimensions would include Courtesy and Credibility, both of which failed to register as significant to the UASPSO employees. That is not to say, however, that non-task oriented dimensions do not exist in the equation of internal service quality in the

UASPSO office. Behind, and in support of, the original ten dimensions are several new task- and non-task-oriented dimensions. These dimensions were developed from those categories and units that did not make a strong fit with just the original ten dimensions. Based on the count data in Appendix 15 not all of the concepts of the new dimensions were of a sufficient strength or significance to warrant a separate dimension. The new task-oriented dimensions discussed are Flexibility, Decision-Making and Accountability. The non-task-oriented dimensions include Professionalism and Collegiality.

### *Task-oriented Dimensions*

Appendix 1 shows how research into internal service quality dimensions differs from that of the original external service quality dimensions. We find that many of the differences center on task-oriented dimensions. Chaston found Proactive Decision-making was an important dimension, as did Lings and Brooks, who also added Attention to Detail. Reynoso and Moores found Flexibility and Preparedness were important internal dimensions, while Brooks, et al also found Attention to Detail as a factor.

### *Flexibility*

The UASPSO, while not unique in its approach to a flexible workforce, uses the practice of cross-training and movement throughout the organization to support other important dimensions, such as Competence and Reliability. Flexibility is an internally, rather than externally, focused dimension. From personal experience, I do not consider flexibility on the part of the service provider as a positive. I do not want my service provider to be flexible with any state or federal regulations, the quality of the product, the time it takes for me to get the product or the cost. I want all of those things to be

fairly inflexible, but of a high quality. Flexibility is often something that is asked of me, by the service provider, rather than the opposite. Reynoso and Moores (1995) defined Flexibility as “the willingness of the unit to respond flexibly to unexpected situations” (p.80). The UASPSO does deal with many unexpected situations that often require an immediate decision and course of action. Submissions from Principal Investigators may come in at the last minute or a federal funding agency may need a status report immediately in order to disburse funds. In addition, if one of the staff is taken ill or goes on maternity leave, someone must be able to step in at a moments notice and be able to discern problems and manage the case. Internally, this means that an employee is working on one case and must switch gears to work on a more pressing project. This ability to move from job to job easily is bolstered by cross-training and the robustness of the policies and procedures. As explained in the workforce discussion, changes in the environment are often coming fast and furious and the ability to take on any task at any moment is essential,

Someone would get a call from someone and the problem wouldn't be resolved in that 5 minute phone conversation, someone would have to do research or call back or something; and in the meantime someone else would call. [P2:76]

In the case of the UASPSO, Flexibility goes beyond just unexpected situations, however. As was discussed in describing the culture of the organization, Flexibility is by design and built into the system as employees move from Post-Award to Pre-Award and are cross-trained on a variety of tasks. This means that as a proposal is routed through the system, it is trusted that a variety of people have the capabilities to not only carry out the

needed process, but can step into the process at any time and determine what is needed at that time. The basis of this trust is in the accepted standards, practices, processes and procedures of the organization. As the Assistant Director/Interim Director put it:

We have developed procedures over time for about everything. So having been here for 15 years I've seen when it hasn't worked and I've seen now that it does work. We really have practically a procedure for everything. Something comes in the door and you don't know how to handle it, we have an internal manual that you can go look up. With me going out to be a team leader I'm going to a lot of those things. A lot of those I wrote. I can go straight to the book and see the procedure. We have a lot of procedures. And we've updated them throughout the years. In fact a year ago I took our manual and made everyone take a few sections and review it and update it. So it's stayed updated through the years. We have student manuals so that our student employees know that with everything that comes in their in basket there is a little page telling them what to do with it. [P3:103]

The organization, as a whole, knows that with competent people they should be able to pick up a task and perform it just as the last, or next, person would do. Again, the Assistant Director/Interim Director says, "We try to keep procedures so that were handling things the right way but we don't make it so strict that you feel like you're just a key punch entry person like a machine. So it's a fine line so you can still have job satisfaction and let you put some thought in your work. But if the same piece of paper goes to six different people we should all handle it pretty much the same" [P3:107]. This would look, to an outsider, something like rigidity, or just the opposite of Flexibility. But, in fact, in an internal quality service setting, this ability to pick up any task and do it right promotes internal service quality.

### *Decision-Making*

Lings and Brooks (1998) found that Proactive Decision Making involved the internal service quality supplier having the ability to solve problems by controlling their environment. This dimension related to the management of the operations of the internal supplier so that the needs of the internal customer can be met. In that research, the dimension focused on operational issues affecting the delivery of service. Decision-making for the UASPSO employees is very closely tied to the Flexibility dimension. As was discussed concerning the culture of the organization, the Director had a certain way she wanted the Office to operate and her influence on that culture was considerable. But, as the Director influenced the culture of the organization and implemented process and procedures that enabled Flexibility, enough decision-making was left in the hands of the employees in an effort to provide a high level of external, and internal, service quality.

From the Director:

I can't be locked into some sort of a definition of these people at this rank must be at every meeting to do this. It's always the people who are the affected people or have something to contribute, one or the other. It's an undefined kind of thing, what makes sense for the job. This is a small office, there are only 30 people. [P7:130]

One of the SPAs echoed this process saying, "I think so, [the Director] gives you quite a bit of empowerment in your job to make decisions, so it never hurts to run things by her, but I think she also really enables them to do what needs to be done to get their job done" [P8:98]. Again, with procedures and processes in place, employees know the basics of the job and how to apply rules and regulations. Outside of that, decisions are left to individuals or groups, without interference from administrators. This leads, as the

SPA stated, to a level of empowerment that is essential to internal service quality. This empowerment is apparently being carried forward by the new Assistant Director/Interim Director. This was discussed to some extent in the Culture section of this chapter.

### *Accountability*

As with all of the dimensions discussed, Accountability is very closely related, yet different, from other task-oriented dimensions. It can be best described as an antecedent to the dimensions of Reliability, Responsiveness and Competence. Accountability is the underlying dimension of those three in that it is an external, external to the employee that is, motivator to trigger the other three dimensions. This dimension does exist to some extent in an external service transaction in that the external customer holds the service provider accountable for delivering the service. This is, in some respects, the heart of the Gap and expectations model discussed in Chapter II. The customer requests a service that the service provider is offering. It is expected the service provider will deliver. At the close of the transaction, the customer holds the service provider accountable for delivery of the service. If that service is not delivered the customer has several options, including acceptance of the failed transaction or seeking, through mediation or other means, to remedy the failed delivery. This holds true in an internal service transaction as well. For the UASPSO, failure in the Reliability, Responsiveness or Competence dimensions may lead to a failure for the external customer. This can, as was explained earlier, have dire consequences for the faculty member and the University. Internal controls, processes and procedures can ameliorate this failure to some extent, but ultimately there is a disruption in the internal service

provision that must be remedied. For the UASPSO there are several avenues that were cited for remediation. Often, calling an employee on accountability took the form of peer pressure. With the Apprentices, this avenue was often the threat of the two-year contract. If Apprentices did not produce, it was certain their contract would not be renewed. Before that two-year period the Apprentices were often “forced” out by their peers. The Director discusses bringing Apprentices along in their jobs:

I think that the people that are working here are all really good. The ones that aren't are not working here. It's a black and white thing. The ones that don't fit in, I don't even have to say anything because the people here squeeze them right out and they move on because they're uncomfortable. But it's not often I have to work with someone. [P7:90]

A Team Leader concurred with this assessment:

As you're going through the day you find mistakes and you talk about it. If things continue to be a problem, pulling them aside in a closed room. We had one person that was here that wasn't doing a good job at all and he was convinced to quit because it would be better on him than being fired. [P11:65-67]

Again, these internal service quality dimensions are very interrelated and steps taken to remedy an accountability issue are similar to those steps taken to remedy problems in any of the other three dimensions. An SPA describes a situation that would call into processes designed to promote accountability:

I think there, if you're not doing your job we're not going want to help each other. So I think if you were ever abusing a situation, 'I don't know what to do with this so I'm going to pass it on to this person', it definitely would get noticed. And I think that would come across, if just reciprocating 'you're asking me all these crazy things', they'd either say something to you or it would show up in your evaluation. I know that team leaders are responsible for their interns so they can notice things that may becoming a habit of not doing their job duties or putting off a certain

task they think that's more of a priority. So either it would come through in an evaluation or they would say something immediately to stop that action from happening. [P8:70]

A Team Leader also discusses a certain aspect of her Pre-Award job and the pervasiveness of Accountability in the organization:

Not to say there's some horrible punishment process if you don't pick [up] the faxes that day. Since we work closely together it's not just your supervisor that knows you're not doing your job, it's everybody else. There is no spoken peer pressure but I imagine it's there. If one person doesn't pick up a fax one day they know there are people other than me who are noticing that. It's a function of the fact that we get along well. If we didn't care we wouldn't be motivated. I think the people in the job now have some pride in their own work. It's a function of who they are. [P17:91-93]

It is a hallmark of the UASPSO that failures in one of the task-oriented dimensions kicks in Accountability at an organizational level, so that external, and internal, service quality can be improved. The Director related an example to me that shows this very well:

When I first took this job things were something of a mess and one of my accountants moved from one desk to this desk, but she took some files with her. 'What are you doing? You're taking files. Leave these for the next person. Oh no, I want to do it.' 'LET ME SEE THE FILES!' Then I realized that she had kind of messed things up for a long time and she didn't know how to solve her problem. Ok, so here's what I'm going to do. I am going to do an amnesty. We had money in those days. We have a couple hundred thousand dollars, so everybody look through your files, bring forward your errors, there will be an amnesty. It won't be held against you and we'll pay for it. When the money runs out the money's run out and now you're stuck with it. We saw some errors that surfaced. There were really repeating errors that in the process at the time that we kinda plugged with internal controls. So that we wouldn't repeat those errors. And we haven't had to absorb a big goofup. [P7:66]



### *Non-task-oriented Dimensions*

While non-task-oriented dimensions such as Courtesy and Credibility did not register as a significant influence on internal service quality for the UASPSO, it does not mean that those dimensions do not exist.

### *Professionalism*

“I can’t give them authorization to be anything but professional. Because the rules that we live by in SPSO are all governed by higher authority. “

-The Director

Professionalism in the UASPSO is very high due to many factors. The biggest driver for professionalism is the Director. The Director already expects professionalism in all dealings with the external environment and this carries over into the internal environment. This assertion is founded on many of the positive comments concerning the Director.

I think that there is a degree of professionalism, largely attributable to Janet and her expectations. That is not necessarily the case in sharing stories from the workplace at home with my husband. I can appreciate that. There’s not a lot of, it doesn’t seem we have the problems with cat fighting and personal conflicts that maybe other places do. And I don’t know whether that’s somebody’s skill or whether we are just lucky, but I’m very appreciative of it. [P2:14]

Janet has high expectations. So it affects the quality. She expects quality work. She intimidates a lot of people. She’s so intelligent it can be intimidating. But I think for the most part it’s a positive that she has high expectations. She expects you to get through things. She expects good on time work. She expects people to be here at 8. She sets an example and she follows through. [P3:20]

I think [the Director] holds our feet to the fire. We are expected to be of a higher standard. While every so often we slack that's when she nails us and gets everybody back on the right path. She has a very high standard and we're expected to live up to it. If we don't, bye. There's nothing wrong with expecting people to step up a little bit higher to motivate them to do better. I find that's good for me. That way I am being held to a higher standard and I am good and I know that. It's the motivating factor the fact that she holds our feet to the fire. She does not micromanage us. She doesn't have the time for that. She expects you to be an adult and do your job. [P1:45-48]

These high expectations are already established for the external customers. "Showing tone," for instance is one area that the Director expects professionalism.

However some of my staff think that we show tone and you probably hear it in my voice as I speak already, so I'm hiring a consultant to work with our speech so that we don't show tone. And so that's something we can do that isn't going to interfere with efficiency and effectiveness if we at least staunch our tone when we speak. Don't show our feelings. That sort of thing. So I think that there is an improvement to be made on the feelings dimension. [P7:46]

Internally, showing tone is not the only push from the Director for professionalism. It permeates all facets of life in the UASPSO.

I think that you have a certain pride in what you're doing, that you don't want to have it come back to you as this was incomplete, or this didn't really work, or there's definitely a motivation to do your job well. [What's that motivation?] I think it can be personal, which a lot of it I think personality-wise in our office we have a lot of people that are like that. Just the kind of like the type-A personality - get it done and get it done right the first time and not have to redo it later, so I think that a lot of that comes from personality, but I also think that a lot of our, I would say [the Director] and probably [the Team Leaders], they're the same, they have that and you can see that in their management style and what they're doing. So it's kind of like the company environment [P8:22]

The need for professionalism is also evident in the hiring practices of the UASPSO:

You know I think that we do have a good screening and hiring process, because the people that have not shared that attitude, again either they are not happy here, because I would imagine that the rest of the people that they work with are pressuring them for more and more. And if that's not their standard as well, they feel that they're being overworked and they look for someplace else to be, or maybe we just make it too difficult to stay. I think that a lot of effort is put forth to make sure that we hire people that share standards that are in conjunction with the rest of the department, and I also think that people will seek themselves here. They won't be comfortable and they won't be happy if they don't share the same attitude as the rest of the office. [P2:48]

What is the internal service quality dimension of Professionalism? Reynoso and Moores (1995), of the few researchers to do so, found Professionalism to be a separate dimension in their research as well. Professionalism, in an internal environment, is a broad dimension that encompasses not only other internal service quality dimensions but also aspects of the job, such as the cross-training and hiring practices. It is how a reliable, responsive person, who is trained to a high degree in their job, delivers their product to a colleague with an understanding of what is needed by that colleague. It is, in essence, the culmination of all other internal service quality dimensions. With the original dimensions it is perhaps more closely aligned with Assurance and Responsiveness but is more than that. In an internal environment, Professionalism is that dimension that goes to the heart of the motivation of the employee to bring all of the internal service quality dimensions to bear in their work, and in relations with co-workers.

### *Collegiality*

Teamwork resides in the internal environment of an organization. The existence of teamwork is birthed and fostered in the internal workings, and the provision of

internal service quality, of the organization. Externally the chance to develop a sense of Collegiality, closeness and cohesiveness does not often exist with such superficial contact. This is in spite of a growing practice in establishments such as restaurants where your server carries on personal conversations with his customers or where the entire staff comes out and sings Happy Birthday to you. Of Deming's (1986) 14 points of quality management, Point 14 exhorts management to put everyone to work on the transformation of the organization. The establishment of teamwork, however, can either follow a forced collaboration, or one that occurs naturally. As with teamwork, Hargreaves (1992) distinguishes between various forms of Collegiality. There is collaborative collegiality in which the working relationships between colleagues are spontaneous, voluntary, development oriented, pervasive across time and space and unpredictable. A second form of collegiality is contrived collegiality where the working relationships are administratively regulated, compulsory, implementation oriented, fixed in time and space and predictable, much like restaurant management mandating the singing for birthdays. The relationships in the UASPSO exhibit some of both types of Collegiality. As with any organization, processes and procedures mandate an administrative system designed to regulate working relationships and to make them compulsory. Collaborative collegiality, in the UASPSO, occurs quite often and is a fertile avenue for accomplishing work. As one of the Classified Staff put it:

I feel that when we get to know our co-workers and we get to like them and respect them as people we are more likely to do a better job with them and for them. Because we know them. And we like them, so you genuinely want to help them. I find the people that I really like in the Office, if they come to me I drop what I'm doing to help them. Some of the other people will just drop stuff off and say do it when you get around

to it. And I do it right away though because I feel if it's on their desk and it's on my desk let's get it off both our desks. [P1:79]

The cohesiveness that the collaborative Collegiality generates is often in spite of the contrived collegiality of the Office and often in spite of the reluctance of the Director to promote the "happiness factor." A sort of "underground" Collegiality has developed that enhances the work experience for many. One Team Leader gave an example when discussing the difference in the atmosphere of the Office under the Assistant

Director/Interim Director:

To an extent I know we still get it. We were more reserved. If the Director was out of the office we'd goof off extra. When she was there we'd still do it but quieter. Subdued, but there [P11:69-75].

This collegiality extends into the personal lives of the employees, but not too far. If there is a death in the family or it is someone's birthday there is recognition of the loss or event. This does not necessarily extend to socializing after work or on weekends but there is a sense of caring. I anticipate that the sense of collegiality will grow under the Assistant Director/Interim Director. As one of the Apprentices said:

The environment has definitely changed. The Director was a good boss but she had a different style than the interim. She was very authoritarian and she instilled, not a fear, but you wanted to do well so you wouldn't get yelled at or caught. With the Interim you just feel like you want to do a good job. You're trusted with your work, she doesn't follow up on you but if you need help she checks in and if you go with her to questions, she leaves a lot of the responsibility with us. The environment has changed with casual Friday. It's not too laid back because we still do our job well, but just more of an enjoyable atmosphere [P12:39-41].

### **Summary of Additional Dimensions Findings**

From the analysis of the interviews of the UASPSO employees, several additional dimensions presented themselves. These new dimensions were identified as task-oriented and non-task-oriented dimensions. The task-oriented dimensions include Flexibility, Decision-making and Accountability. These task-oriented dimensions have strong ties to the task-oriented dimensions identified by Parasuraman, Zeithaml and Berry (1985). A couple of non-task-oriented dimensions were analyzed as well. These are Professionalism and Collegiality. Recommendations for further research concerning these additional dimensions will be made in Chapter V.

## **CHAPTER V**

### **SUMMARY AND DISCUSSION**

#### **Purpose of the Study**

The purpose of this study was to determine the goodness of fit between the original SERVQUAL service quality dimensions and those internal service dimensions identified by the UASPSO. Through the identification of these dimensions a model of the culture of service quality of the UASPSO was also to be developed.

#### **Research Questions**

1. Are the original SERVQUAL service quality dimensions valid with respect to internal UASPSO services?
2. What additional dimensions, if any, are important to internal customers in judging satisfaction with internal UASPSO services?
3. What is the culture of service quality at the UASPSO?

#### **Methodology**

This study was conducted by interviewing the staff of the University of Arizona Sponsored Projects Services Office. The staff population studied consisted of all of the employees of the University of Arizona Sponsored Projects Services Office. The UASPSO is staffed by 25 employees, consisting of a Director, an Assistant Director and staff spread over the functional departments of Pre-Award, Post-Award, Cash Management, Property and Management Analysis. Sixteen of the 25 employees agreed to be interviewed for this study. Of those 16 employees, 3 were males and 13 were females. According to the organizational structure of the organization, one respondent was a Director, one an

Assistant Director/Interim Director, 9 were Team Leaders, 2 were Apprentices and 3 were Classified staff (see Table 7). Job experience of the employees ranged from 3 months to 15 years. The average length of employment for all employees is about 6 years. For levels of Team Leader and above the average length of employment is almost 10 years.

This study attempted to determine whether the original SERVQUAL dimensions hold for the internal customers of the UASPSO as well as identification of any new service quality dimensions, using methodology described by Lincoln and Guba (1985). Open-ended questions were used to explore the research questions with the employees of the UASPSO and analysis was supported by outside data sources, including a reflexive journal and a report by a University of Arizona committee. A consent form was used to gain permission for the interview and to explain the study. The interviews were analyzed using the constant comparative method and with the aid of the Atlas.ti qualitative analysis software for data analysis.

### **Summary of the Findings**

This study of the internal service quality dimensions of the University of Arizona Sponsored Projects Services Office followed the concept of Next Operation As Customer (Bhote, 1990) as the basis for studying relationships among, and between, the employees of the UASPSO. The study started from the premise that if external service quality was of a high level then it was necessary for internal service quality to be of an equally high level. The external service quality, as reviewed in evaluations of the UASPSO, is of a high level. There are some problems, namely that academic



departments and Principal Investigators often try to circumvent the rules and regulations handed down by Sponsors and those developed by the University and the UASPSO. This circumvention often leads to problems on an individual basis, but the UASPSO stands firmly on accepted processes and procedures to produce a quality service and product. These processes and procedures formed the basis for an examination of the service quality culture of the UASPSO.

### ***Culture***

The culture of the UASPSO is defined by the rules and regulations its employees must follow and the environment fostered by the UASPSO leadership. This study spanned a change in that leadership and the results on the organization were noticeable. The former Director, while very professional, was very autocratic and focused her employees on professionalism in their jobs. While fear was often a motivator for the younger Apprentices, many of the employees are self-motivated to do good work. The Director attempted to remove the emotional connections to co-workers and the job from the workplace. She described this as the “Happiness Factor” and endeavored to squelch it in her organization. With the recent retirement of the Director the Assistant Director/Interim Director has now taken the reins and has already implemented changes in the environment. A casual Friday has been mandated and decision-making has been pushed to the individuals, rather than at the Director level.

### ***Original Dimensions***

Analysis of the data found that, within this culture of internal service quality, six of the original ten dimensions developed by Parasuraman, Zeithaml, and Berry (1985)

were valid. The internal service quality dimensions included Competence, Reliability, Responsiveness, Understanding the Customer, Access and Communication. Credibility, Courtesy and Security were not strong dimensions in the UASPSO organization.

Tangibles was also not a strong internal service quality dimension, but supported Access and Communication as dimensions. Reliability, Responsiveness and Understanding the Customer were all closely related dimensions in this study and are described under the consolidated dimension of Mutualism. Tangibles, Access and Communication closely related, with Tangibles supporting the dimensions of Access and Communication. These three dimensions are described under the consolidated dimension of Approachability. All of the valid dimensions were task-oriented dimensions and had a strong fit to the characteristics of the dimensions found by the original authors and other researchers. I found that there was a great deal of interrelatedness with the task-oriented dimensions and it was difficult to separate the dimensions.

### *New Dimensions*

In addition, five more dimensions were identified that were specific to the internal service quality of the University of Arizona Sponsored Projects Services Office, three in the task-oriented realm and two in the non-task-oriented realm. 1. Flexibility is that internal service quality dimension that was characterized by the practice of cross-training and was supported by a very porous barrier between the Pre-Award and Post-Award sections. 2. Decision-making is that dimension of internal service quality that is characterized by the empowerment of the individuals to make decisions that might affect the entire University. In the internal setting, Decision-making supports service quality by

allowing individuals along the supplier-customer chain to make changes to processes and environments that will improve the product. 3. Accountability is that dimension that is characterized by a motivation to do the job well and support co-workers in the endeavors of the UASPSO. Most of the employees of the UASPSO are self-motivated and hold themselves accountable to their co-workers and the University. When there is a failure in the Reliability, Responsiveness or Understanding the Customer dimensions, Accountability restores order and lets the organization move forward.

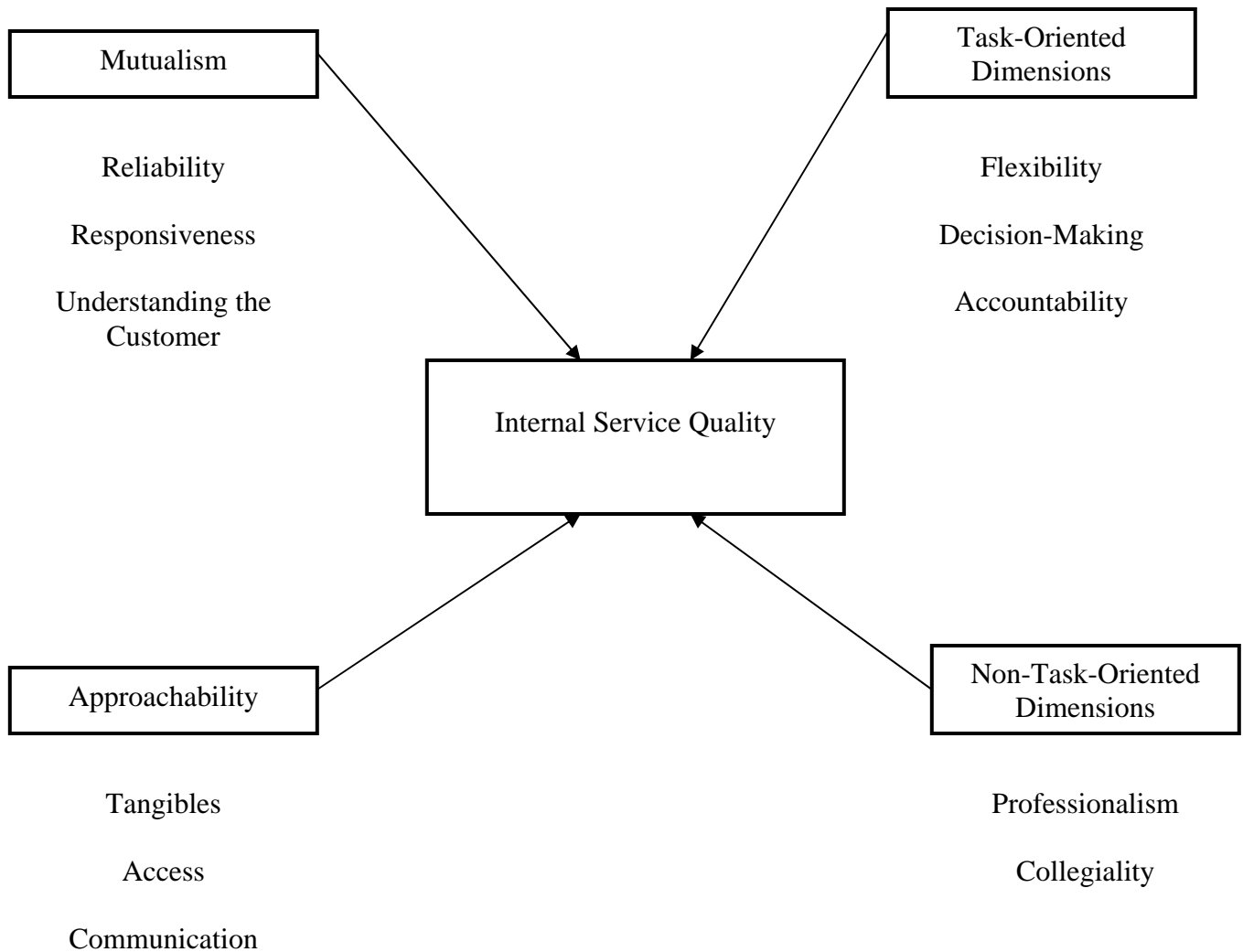
The two dimensions that fell into the non-task-oriented realm were 4. Professionalism and 5. Collegiality. Professionalism is that dimension that is characterized by a motivation to come to work, do the work well, and represent the University to the academic department, the Principal Investigator and the external Sponsor. As with Accountability, most of the employees of the UASPSO are self-starters and are highly motivated to do a good job. This motivation is also encouraged and supported by the UASPSO leadership. Collegiality is that dimension that is characterized by a high level of teamwork but takes the form of collaborative collegiality, where co-workers come together in a spontaneous and voluntary fashion to accomplish the work. While the work of the organization is based on rules, regulations, processes and procedures and a certain level of contrived collegiality, the relationships developed between the employees thrive because of a genuine love of the work and their fellow employees.

### ***A New Model of Internal Service Quality Dimensions***

Analyzed data from the interviews of the employees of the UASPSO have yielded a new proposed theoretical model of internal service quality. Not all of the original dimensions have remained intact and new dimensions have emerged from the data. These dimensions all work simultaneously in the daily operations of the UASPSO. These dimensions, explained above, are represented by the model in Figure 6.

### **Conclusions**

There is no doubt in my mind that the level of internal service quality in the UASPSO is high. It is certainly true that the external level of service quality is high. External reviewers, including the Support Functions Review Committee, have found that the product and service level of the organization is of the highest quality, even with some minor issues. The fact that property audits are consistently passed illustrates that processes and procedures are supportive of outside rules and regulations. To maintain this level of high, external service quality, what goes on “behind the curtain” must also be of a consistently high quality. This quality is maintained by a base of rules and regulations that everyone is trained to understand. This training is supported by a system that allows employees to move freely between sections and jobs within the organization. The culture of the organization is a large factor in the provision of internal service quality. It is this environment where the service quality transactions occur daily. Without a culture of service quality, individual transactions may meet the dimensional criteria but the service will be sporadic and external quality is sure to suffer. For the UASPSO the



**FIGURE 6. Theoretical Model of Internal Service Quality**

culture as defined by the Director has provided a base for service quality to thrive, despite practices that may work against a service quality culture. The employees are highly motivated and have adopted good service quality practices with the Director's guidance and, often, on their own.

Task-oriented dimensions for a financial services office such as the UASPSO rank much higher than those non-task-oriented dimensions. While the Office tends to function well on an emotional level, the absence of those emotions would seem not to affect the quality of the work. Many of the employees, especially those in administration, have a “nose to the grindstone” attitude about their work that keeps them focused on the production of a quality external product. That is not to say that the personal dimensions do not exist. There is a strong sense of professionalism and collegiality that only adds to the task-oriented dimensions.

### **Recommendations for Practice**

As mentioned, this study spanned a changeover in leadership for the organization. The Director was seen as highly professional but also somewhat controlling and autocratic. Rules and regulations governed the workplace she created. The Assistant Director/Interim Director, while maintaining a high level of quality, has loosened up the organization somewhat to mostly positive reviews. At the time of this study, it remained to be seen whether and how long the Assistant Director/Interim Director would stay in her position. No significant movement had been made to recruit a replacement and it appeared the Assistant Director/Interim Director would have a chance to implement more changes as she deemed necessary. There are lessons to be learned from the identification of internal service quality dimensions and several practices could be changed or discontinued with an increase in the quality of the internal service, including abolishing the apprentice system, increasing rewards and recognition, focusing on non-task-oriented dimensions and a renewed focus on the external customer.

### ***Workflow***

As described earlier, the workflow of the UASPSO is surprisingly smooth. Surprisingly, because the lead up to a funded project can be very hectic and unpredictable. How the workflow “works” makes the description of the original service quality dimensions and the development of the new dimensions somewhat easier to write. That said, there are improvements that can be made, both externally and internally. As described by the Support Functions Review Committee’s report there are numerous problems in that area between the Principal Investigator/Business Department and the UASPSO. Principal Investigators often circumvent University, UASPSO and federal rules and procedures. Business Officers are often ineffective in realizing infractions and making corrections. One of the first steps is to better educate the faculty on all of the rules and regulations surrounding funded projects. A better educated “input” into the system will mean less time spent on non-essential work processes. A little time spent up-front in prevention can save enormous amounts of time and energy on the internal processes.

Another area for external improvement, again as cited by the Support Function Review Committee Report, is in better communications. While personalities will always come into play in face-to-face discussions, one area for improvement in communications centers on the UASPSO website. Educational documents, as well as learning modules, can easily be made available to Principal Investigators and Business Officers on the website. In addition, updates from funding agencies as well as a listing of upcoming Requests for Proposals and deadlines for all proposals can be posted. The federal

government is slowly moving to a Federal Commons system where all federal proposals can be loaded onto a single system. It will be imperative that the UASPSO take the lead on training and education. The benefits will not only be a streamlined, centralized system but it will also take much of the work out of the hands of the Business Officers, reducing errors and missed deadlines.

Internal communication is another area for improvement. While the current system as described earlier works very well there are several “hot spots” where a lack of communication can have dire consequences. The current paper and computer systems are outdated and as proposals move through the system and are handed from department to department and person to person there is a potential for documents and changes to financial systems to get lost. A web-based tracking system using only electronic documents will provide many solutions to the current and potential problems in this area. As the University of Arizona moves to new financial systems this can be easily accomplished.

### ***Culture of the Organization***

#### *The Apprentice System*

Indications were that the Assistant Director/Interim Director was in the initial stages of discontinuing the practice of a two year “up or out” contract for Apprentices. This practice lead to a huge amount of turnover in the organization and morale for the Apprentices was much lower than long-term employees. The organizational effort to identify and hire Apprentice candidates was considerable and took resources away from the provision of service quality. A program that values the new employee and trains



them for a long-term organizational commitment could only improve the environment, the culture and internal service quality dimensions.

### *Rewards and Recognition*

Very much related to caring for the employee holistically is a system of rewards and recognitions. The organization must find ways to gain the financial support to keep abreast of salary increases in the external environment and those increases in the University environment. Lower salaries may mean a lower quality of employee in the task-oriented realms of the organization. As those task-oriented dimensions are degraded, the internal service quality culture may also degrade. The Assistant Director/Interim Director should continue to push decision-making down to the individual to give her time to spend on politicking and fundraising to increase salaries and the budget of the organization. In addition, and independent of increased salaries, the organization should look for ways to increase non-monetary rewards and recognition. It seems that a loosening of the organization is already starting to increase moral. The Assistant Director/Interim Director should engage the employees in identifying other avenues for reward and recognition through a survey, feedback form or by interviewing each employee as to work attitudes. It would allow her to find out what employees like most and least about their jobs. Flexible work hours or telecommuting was suggested by many employees as a possible model to allow employees with children a chance to balance home and work. An overt reward system can be implemented with little cost or elaborate administration. Free parking for a month or a team reward of a

free lunch could possibly boost morale. Even a recognition program without any over reward can be implemented for team or office accomplishments.

### ***Service Quality Improvements***

#### *Focus on Non-Task-Oriented Dimensions*

Under the direction of the Assistant Director/Interim Director the organization is evolving a participative system for developing the task-oriented service quality dimensions. The basic processes and procedures are being revised with input from the employees rather than simply handed down from the Director. The office environment has improved with employees becoming empowered to move their desks to where it benefits them the most. Related to rewards and recognition, the “other dimensions,” those in the non-task-oriented realm, will become more important as the organization loosens up and focuses more on the personal dynamics. The “Happiness Factor” will play a larger role in the success of the organization as the financial woes of the University are preventing significant raises in employee salaries. As there are few overt rewards, further empowerment rewards will be significant to keeping employees from seeking employment elsewhere. The current situation has already had the effect of reducing the workforce by about 5 employees and may continue to contribute to high turnover. Mobility within the organization will continue to attract some that have been with the organization for awhile, and the chance to gain valuable experience will continue to attract recently graduated accounting and finance majors. Management should work on ways to continue to build on the collegiality that already exists in the organization.

### *Focus on the External Customer*

If the internal service quality is of a high level, the external service quality will follow suit. In most instances, this is already the case with the UASPSO. Specifically, the UASPSO should look for ways to implement the recommendations of the Support Functions Review Committee. Within those recommendations a focus on finding collaborative ways to prevent circumvention of the rules and regulations of the organization may have a profound effect on the internal service quality of the organization. Less time spent trying to police the University, is more time spent on creating a quality external, and internal, product. As the Support Functions Review Committee suggested, a training program for departmental business managers and Principal Investigators may work to lessen the occurrence of non-compliance with rules and regulations.

### **Recommendations for Further Study**

This study is certainly a first step in a larger study of internal service quality in higher education departments. As with much of the research surrounding the use of the SERVQUAL protocol, interviews to determine initial service quality dimensions set the stage for a greater use of quantitative analysis. This study provides valuable data to inform the UASPSO on those dimensions that are important to maintaining a high level of service quality. Given the importance of the function provided by the UASPSO, as the UASPSO improves so will the University.

1. The first recommendation is to replicate this study in other higher education financial departments. Comparisons of the task-oriented and non-task-oriented

dimensions would serve to provide a better definition of financial services departments on campus.

2. The obvious next step in further determining the fit of SERVQUAL dimensions to University departments would be the quantitative measurement of the strength and interrelatedness of the dimensions identified in this study.

3. A study that would span several different disciplines would be an inquiry into the effect of gender on the customer-supplier chain. While the UASPSO is predominantly female, a study into whether gender is a factor in internal service quality would be useful.

4. Specific to the UASPSO is research to build on leadership styles within financial services departments. Within the UASPSO it will be interesting to see how the loosening of the organization affects the external and internal service quality. Generally, research into leadership styles that are useful and productive in all campus departments would provide a larger picture of how Universities operate on a functional level.

### **Summary**

This study was designed to determine whether the original SERVQUAL dimensions were valid with respect to the internal customers of the University of Arizona Sponsored Projects Services Office. In addition the study was designed to determine if there were any new dimensions that applied to the internal customers and to describe the culture of service quality in the organization.

While the measurement of service quality in the private sector is well documented (Barnard, 1999; Drexler & Kleinsorge, 2000; Fehr, 1999; Hernon & Nitecki, 2001; Miller & Shih, 1999; Sousa, 2003) the measurement of service quality in higher education is still progressing (Anthun, 1999; Barnard, 1999; Gilliland, 1997; Lovett, 2002). This progression has not been inclusive of internal service quality (Broady-Preston & Steel, 2002a, 2002b; Brooks, Lings & Botschen, 1999; Cannon, 2002; Comm & Mathaisel, 2000; Kang, James & Alexandris, 2002; Li, Tan & Xie, 2002; Lings, 2004), however, and the measurement of internal service quality of Sponsored Projects Offices is non-existent (Davis & Lowry, 1995; Kirby & Waugaman, 2001). While this study is but a first step in a larger need, the measurement of internal service quality in a Sponsored Projects Office is significant in that it fills a gap in our understanding of service quality in diverse settings. As it has been with the LibQUAL+ battery (Cook, 2001; Cook & Heath, 2001; Cook, Heath & Thompson, 2001; Cook, Heath, Thompson & Thompson, 2001, Cook & Thompson, 2001; Cook & Thompson, 2000a, 2000b; Thompson, Cook & Heath, 2001; Thompson, Cook & Heath, 2000), a larger program of measurement can be instituted for Sponsored Projects Offices that will introduce a new metric language into the profession.

The SERVQUAL tool was chosen due to its widespread use and its proven application to higher education organizations (Cook & Heath, 2001; Hiller, 2001; Li & Kaye, 1999; Mafi, 2000; Nitecki, 1996; Wright, 2000) and the grounding of the survey tool in a qualitative methodology. The original ten dimensions identified by Parasuraman, Zeithaml and Berry have stood the test of time with relatively few

variations. There are differences, however, and these differences are important to the sector being studied. This study found many of those original dimensions were applicable to the internal customers of the University of Arizona Sponsored Projects Services Office including Competence, Reliability, Responsiveness, Understanding the Customer, Access and Communication. Tangibles, Credibility, Courtesy and Security were not retained. Several new dimensions were identified that existed in the task- and non-task-oriented realms. Those new dimensions in the task-oriented realm included Flexibility, Decision-making and Accountability, The new dimensions in the non-task-oriented realm included Professionalism and Collegiality. While the results are not generalizable to other institutions, future studies will be able to use this methodology as a first step to the development of a survey tool and the application of statistical tools to determine the strength of the new dimensions and their fit to the organization. The process can then be repeated until a clearer picture of internal service quality in Sponsored Project Offices is painted.

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## APPENDIX 1

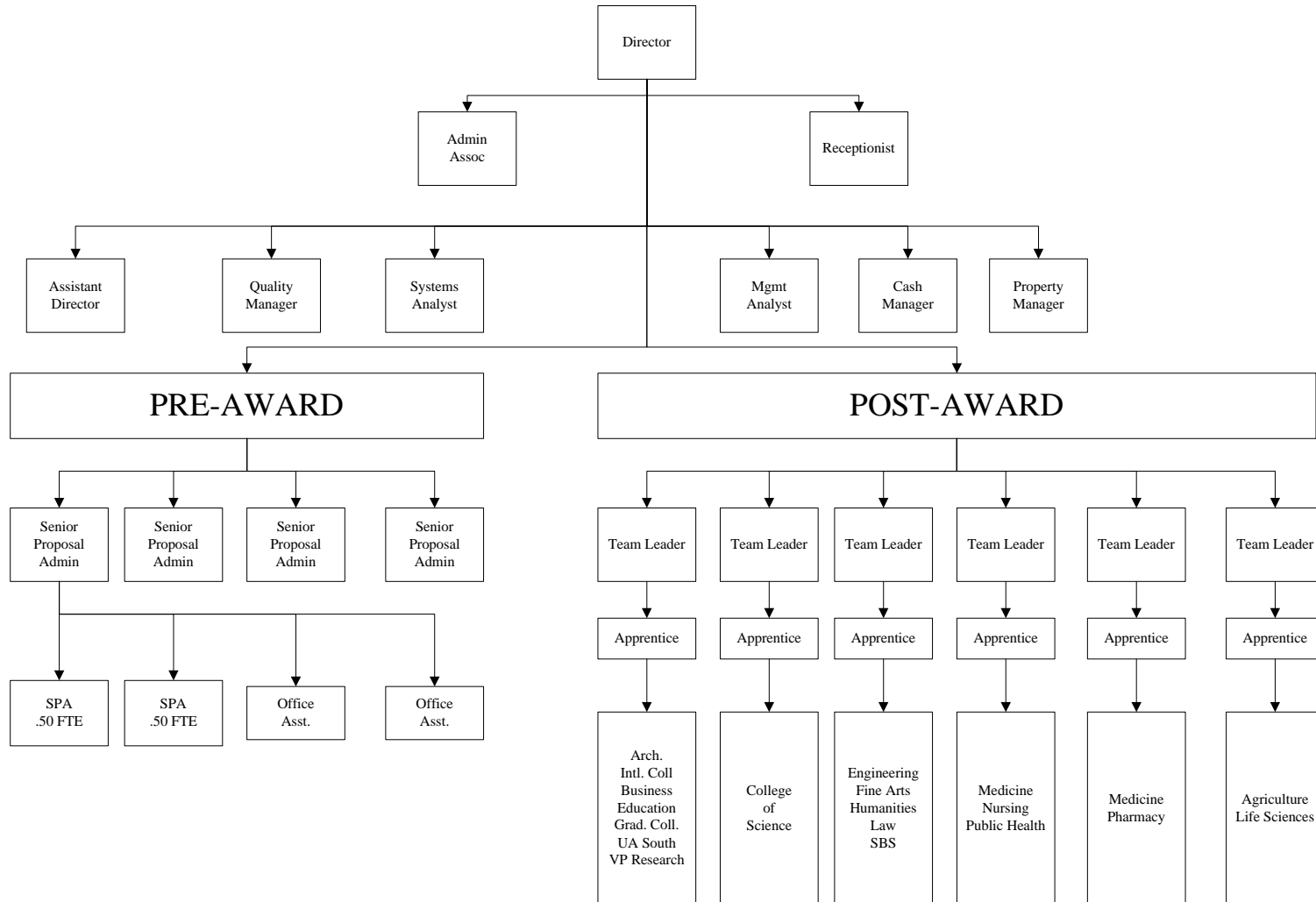
### INTERNAL MARKETING DIMENSION COMPARISONS WITH SERVQUAL

Adapted from Kang, G.D., James, J. & Alexandris, K. (2002). Measurement of internal service quality. *Managing Service Quality*, 12 (5), 278-291.

ServQUAL	ServQUAL	Chaston	Reynoso	Young	Edvardsson	Lings & Brooks	Brooks et al.
1985	1988	(1994)	& Moores (1995)	& Varble (1997)	et al. (1997)	(1998)	(1999)
Tangibles	Tangibles	Tangibles	Tangibles	Tangibles	Tangibles		
Reliability	Reliability	Reliability	Reliability	Reliability	Reliability	Reliability	Reliability
Responsiveness	Responsiveness	Responsiveness	Promptness	Responsiveness	Responsiveness	Responsiveness	Responsiveness
Credibility	Assurance	Assurance	Flexibility	Assurance	Assurance	Credibility	Credibility
Security			Confidentiality				
Competence			Professionalism			Competence	Competence
Courtesy			Helpfulness			Courtesy	Courtesy
Communication	Empathy	Empathy	Communication	Empathy	Empathy	Communication	Communication
Understanding the			Consideration			Understanding	Understanding the
Customer						the Customer	Customer
Access			Preparedness			Access	Access
		Proactive				Proactive	
		Decision-making				Decision-making	
						Attention to Detail	Attention to Detail
							Leadership

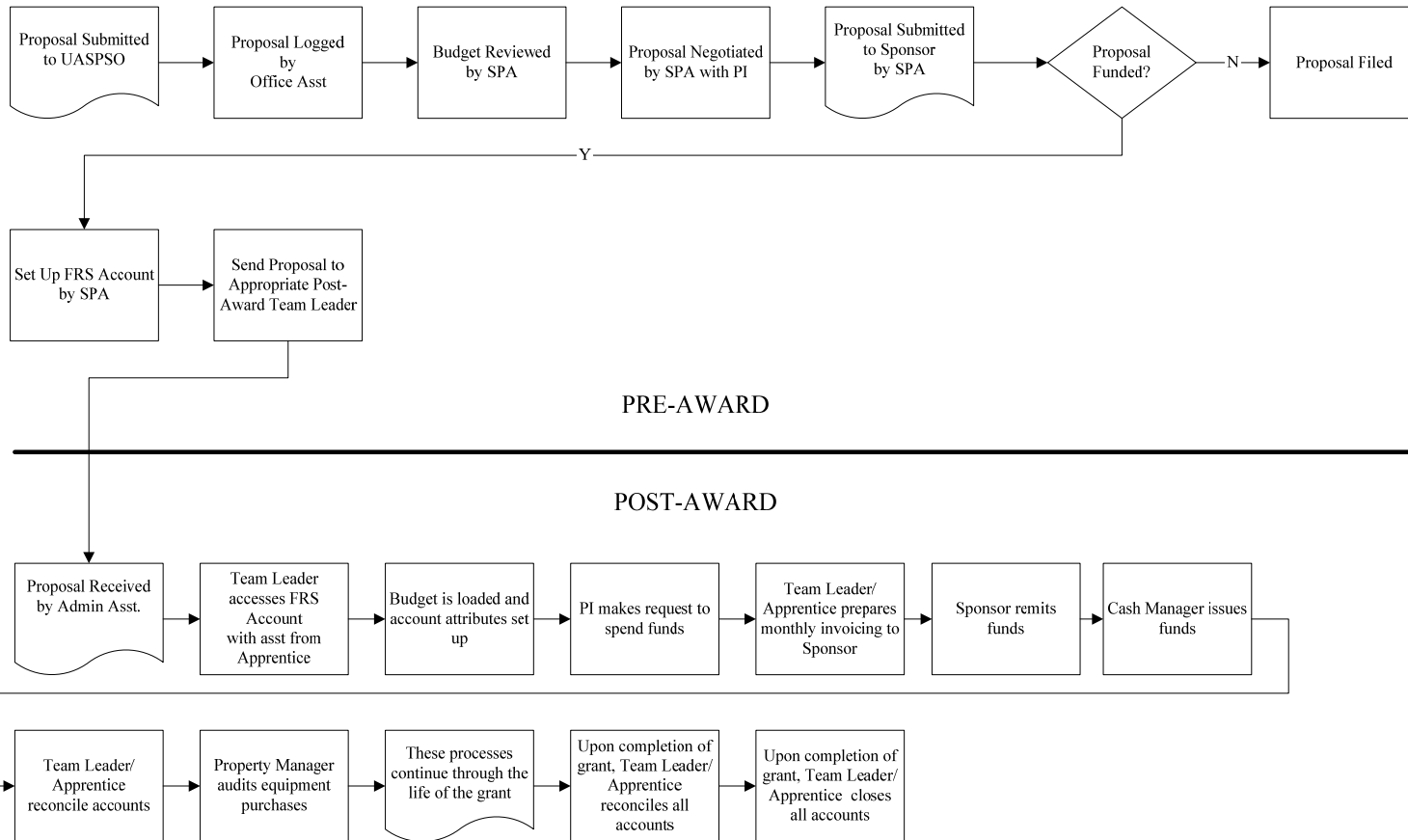
## APPENDIX 2

### ORGANIZATIONAL CHART



### APPENDIX 3

### WORKFLOW



**APPENDIX 4**

**REPORT OF THE FINANCIAL SUPPORT FUNCTIONS REVIEW**

**COMMITTEE**

Leslie Tolbert, Ph.D. (chair), Regents' Professor, ARL Division of Neurobiology  
 David Baca, Director, Science-Engineering Library  
 Richard Davis, Assistant Director of Business Services, Business Affairs  
 Caroline Garcia, Associate Director, Arizona Research Laboratories  
 Julius Parker, Associate Vice President for Administrative Services, Business Affairs  
 Marilyn Taylor, Department Administrator, Microbiology and Immunology  
 James Wyant, Ph.D., Professor and Director, Optical Sciences Center

**Executive Summary**

The financial support operations of a university should be seamless with the management of academic and support units, so that the university can focus unhindered on its missions of teaching, research, and service. An overarching framework of effective business management and internal controls should provide reasonable assurance that financial activities are processed accurately, quickly, and in compliance with applicable laws and regulations, with a minimum of interference with other functions.

The University of Arizona faces challenges faced by many universities today. In recent years, we have grown faster than our infrastructure can support. We are at an inflection point now, with no reserve in the coffers. Through a series of budget cuts, we have eroded our administrative and business infrastructure both at the central administrative level and in the departments and colleges. Decisions to decentralize the University's business management were not accompanied by the creation of new business structures necessary to effectively accommodate the new operating environment. Absent a comprehensive, coordinated approach to its financial business, the University meets its mission inefficiently and is precariously vulnerable to serious audit findings.

A Review Committee, comprising two faculty members, two business officers, one appointed personnel member, and two members of the Business Affairs administrative unit, was charged by Vice Presidents \_\_\_\_\_ and \_\_\_\_\_ to review the five units of the University of Arizona that are the primary units implementing and overseeing the financial transactions of the University. The Review Committee, through careful research and extensive interviews, has evaluated the effectiveness of the Budget Office, Financial Services Office, Department of Procurement and Contracting Services, Sponsored Projects Services Office, and Office of Research Contract Analysis. The



Committee's findings and recommendations fall in two areas: a need for a unified, forward-looking strategic plan for the University's financial management, and a need for much more effective communication among the central financial support units and between those units and the teaching, research, and administrative communities they serve.

The Committee makes numerous specific recommendations for action, including:

- development of an overarching strategic plan for the financial operations of the University, to include:
  - assessment of the needs of the University in the new climate of Focused Excellence;
  - clear delineation of the roles and responsibilities of each central financial support unit, the colleges, the departments, and individual faculty members;
  - incorporation of standardized business rules into all transactions;
  - an integrated university information system that is capable of handling the comprehensive financial needs of the University;
  - recognition that substantial investments in personnel and information systems must be made soon in order to achieve savings in the long run;
  - coordination of policies among financial support units and with stakeholders, including personnel in departments and colleges; and
  - an emphasis on overall nimbleness in handling the University's financial operations;
- codification of a workflow process for planning, developing, testing, and instituting new initiatives, with emphasis on incorporation of more, earlier, and ongoing involvement of departmental end-users (business staff and faculty) in the process;
- implementation of measures that will reduce mistrust and antagonism between staff of financial services units and faculty and staff in colleges and departments. These should include efforts to:
  - enhance the "customer"-centered attitude in the service units
  - reverse the culture of non-compliance among faculty and departmental staff, by providing mandatory training in roles and responsibilities and introducing more accountability for the quality of their business transactions;
- creation of a climate that encourages more flexibility and creativity in the central offices, toward the development of a unified team approach to the financial business of the University;
- streamlining and synergizing of procedures and forms across financial services units, including development of a single Internet portal for access to University financial and business policies, rules, and forms; and, finally,
- participation of senior University leadership, including the President, Provost, Chief Financial Officer, and Vice President for Research, in demanding, promoting, and supporting these measures for improvement.

## **Committee's Charge**

The Financial Support Functions Review Committee was charged by Vice Presidents \_\_\_\_\_ and \_\_\_\_\_ to provide the first review ever performed of the five UA units most closely involved in providing financial transactions support. The units to be reviewed included the Budget Office, Financial Services Office, and Department of Procurement and Contracting Services, which are the staff responsibility of Senior Vice President for Business Affairs \_\_\_\_\_. These units are responsible for conducting and monitoring university financial business including budgets, expenditures, procurement and payment of goods, services, and employees, safeguarding university assets, assuring the financial integrity of the institution in accordance with University, ABOR, and Federal and State policies. The two other units to be reviewed, the Office of Sponsored Projects and Office of Research Contract Analysis (ORCA), report to Vice President for Research, Graduate Studies, and Economic Development Richard Powell. These units process proposals and administer grants and contracts from external sources, in compliance with UA, funding-agency, and government regulations.

The purpose of the review was to evaluate the effectiveness and efficiency of the current operations of these offices in providing support to the research, teaching, and service missions of the university, with a special focus on the interfaces among these central offices and between these offices and the departments as well as other units. Specific questions to be addressed included: How well do the offices coordinate and integrate to provide seamless service that completely covers the required spectrum? Does appropriate communication, coordination, and integration of efforts among units occur at the level of their directors? staff? How responsive are the units to requests for support and suggestions from departments? Overall, how supportive are the units of the education, research, and service missions of the university? What changes are recommended in the units being reviewed, or elsewhere, that would avoid problems and enhance the efficiency and/or effectiveness of these units in the future?

## **Review Process**

- Interviewed directors of all five units, to determine mission, operating philosophy, special accomplishments, problems faced; read the annual reports, strategic planning documents, audits, survey results, etc., provided by them
- Met with some key “customers:”
  - College Academic Business Officers (CABO)
  - Research Administrators Group (RAG)
  - Committee of Eleven
  - Focused Excellence Task Force
- Met with \_\_\_\_\_, Chief Auditor of the University

- Met with \_\_\_\_\_, Vice President for Learning and Information Technologies and Chief Information Officer, and \_\_\_\_\_, Co-Director of the Center for Computing and Information Technology (CCIT) and Director of Administrative Computing
- Surveyed staff of units through web-based questionnaire [*summary forthcoming*]
- Held open forum for UA community to provide input (~60 attended); invited email input from any unable to attend forum
- Wrote draft report
- Met again with unit directors to review recommendations together
- Submitted final report to Vice President Powell and Senior Vice President Valdez

## **Findings and Recommendations**

### **I. General Findings and Recommendations**

#### **A. Preamble**

The timing of this review coincides with a University-wide effort to achieve “Focused Excellence” in the face of decreasing support from the State of Arizona. The Review Committee holds the opinion that this review and similar reviews of all of the service units of the university are critical to assessing strengths and weaknesses, as a basis for implementing changes that will streamline workloads, create efficiencies, and provide opportunities to cut particular costs, releasing funds for areas of special need or interest. The Committee did not take as our mandate to determine in detail the causes for the 2% budget cut imposed on academic and service units very late in the financial planning cycle for ‘04-‘05; rather, we sought to determine if there were systemic problems for which corrections would help the University avoid such financial crises in the future. Our review is in some ways similar to the Academic Program Reviews (APRs) that are mandated for all academic units every seven years, but is notably different in that we are reviewing multiple interacting units and focusing on their effectiveness as a whole, rather than reviewing a single unit in great detail. We recommend APR-style reviews, requiring the participation of outside experts from peer institutions, of all service units *in addition* to the first-pass review of functional groups, such as the review performed here. These more detailed reviews would help each unit to develop mechanisms to function more efficiently.

#### **B. General Findings and Recommendations**

The units reviewed generally comprise staff who have a strong desire to provide service to the University community. However, decentralization in the early 1990’s and budget rescissions in the late 1990’s and early 2000’s triggered a chain of events that have hurt financial transactions services across the entire university. First, *the current organizational structure is a result of history, rather than of central planning, and is not ideal for the jobs that need to be done.* Compounding this, *the disproportional budget cuts required of the service units in recent years have caused a reduction in the number of staff positions in these units and have reduced expertise/training levels to critically*

*low levels in some offices.* For instance, the Financial Services Office has lost a significant number of Certified Public Accountants and the Sponsored Projects Services Office has suffered from significant turnover, and, as a result, departments and colleges receive inadequate or inconsistent information and service. The short staffing appears to be the cause of the development of a “silo” mentality in some of the offices as they struggle to perform too many functions with too few people, and some responsibilities that previously were handled centrally have fallen through the cracks between current units. The sum of the current parts is less than the previous whole. A consequence of this shortfall, in turn, is that *departments and colleges have had to absorb increasing numbers of the functions that used to be handled centrally, without being given the tools to handle this increase in workload and responsibility.* The University has not created effective training and professional development programs to ensure that individuals in business management roles have the capabilities and resources needed to do their jobs well. Furthermore, *the University has not focused on the total internal control environment, essential with the transfer of responsibilities to colleges and departments.* This has left the University vulnerable. Inadequate infrastructure and internal control systems have caused many of our peer institutions to suffer serious financial consequences; to avoid a similar situation, the University must assess the effectiveness of its current management process for decentralized, or distributed, business management.

Concerns with University business management and internal controls and the deleterious effects of budget cuts have been shared with the senior administrative leadership of the University and with the leadership of various central administrative units several times in recent years. Documented efforts include the FSO White Paper on Improving Internal Control and Business Management (April 2001), the College Academic Business Officers (CABO) report to the Provost on Issues Surrounding the Role of Business Professionals in Colleges and Departments (September 2001), the UA Facilities and Administrative Cost Proposal report (June 2002), Business Affairs Annual Reports (2002, 2003), the CABO memo on College Oversight and Approvals (February 2003), and the CABO and Research Administrators Group (RAG) memo on eTravel (October 2004). Yet, little action has been taken until recently to address these concerns.

***What is needed now is comprehensive, overarching financial-services planning mandated by the University’s President and Cabinet.*** Such planning would encompass:

- direct involvement of the highest-level University administrators, the Core Finance Committee, the leadership of the financial services support units, selected interested faculty, and selected departmental or college-level business officers;
- an understanding that the University community – both those in central units and those in colleges – must work cooperatively as a unified team in conducting the financial business of the institution;
- an assessment of current needs and a realistic projection of needs for the coming decade;

- clear definition of the roles and responsibilities of service units as key *facilitators* of the University's business and an expectation that they meet their responsibilities with flexibility and creativity;
- clear definition of the roles and responsibilities of faculty and college- and department-level business managers in their financial transactions and an expectation that they meet their responsibilities;
- establishment of the Financial Services Office as the University's leader in ensuring a framework for effective business management and internal control;
- creation of a business model for the financial services units that ensures adequate controls and compliance;
- early involvement of personnel from departments in the planning and implementation of specific initiatives that will have a direct or indirect impact on them;
- a comprehensive assessment of the full impact of proposed changes, such as proposed budget-cutting measures, which would include broad analysis of financial and workload impacts on both the central offices *and* the departmental stakeholders;
- establishment of a workflow model to ensure coordination of all new policies and/or programs into the comprehensive financial plan prior to approval and implementation; and
- establishment of a universal program that sets skill, knowledge, training, and accountability standards (with consequences) for college- and department-level business officers and faculty, along with a mandatory orientation program for all newly assigned business officers.

### C. Specific Findings and Recommendations

The development of a comprehensive financial plan for the University, recommended above, might well result in reorganization of the financial support units, which currently are a legacy more of history than of planned efficiency. ***The resulting units then should be directed to undertake development of a fully coordinated set of plans, laying out missions, spheres of authority, operations and policies, strategies, and measures of success for each of the units, as well as formal mechanisms for interaction across units and with college-based stakeholders.*** The planning effort should be inclusive of users and other stakeholders from the earliest stages and should lay the foundation for organized ongoing review and improvement of policies with user input.

A specific result of decentralization is that there is no comprehensive vision, plan, or leadership in developing a uniform business system for the University. Instead, various financial services units and colleges and departments are "doing their own thing" in the development of business systems. For instance, the central financial services units have created separate applications for many business processes, such as budget change forms, purchase requisitions, the Purchasing Card, ePurchasing, payroll expense transfers, and payroll. Staffed with their own information technology (IT) groups, the units are independently creating new business forms and websites without any

coordination among themselves or input from key stakeholders. At the same time, departments and colleges have found it necessary to develop their own employee timekeeping, shadow accounting, and reporting systems and/or have spent significant resources to purchase business systems, because the legacy systems do not meet their needs and the new business applications developed centrally do not meet their needs. This situation results in serious duplications of effort, unnecessary expense, and a lack of consistency across campus. ***Central administration must commit to the development of a comprehensive plan to provide, centrally, the necessary business systems to the University community as a necessary foundation for maintaining a well formulated and effective level of local authority.*** In this way, the University will be optimally nimble in its financial transactions, walking the fine line between creation of a cumbersome central juggernaut and irresponsible delegation of too much autonomy to local units.

We find that, overall, the personnel in the units under review work hard to carry out their duties, but that inadequate communication between the service units and the faculty and departmental and college-level staff often has led to an omission, misplacement, or confusion in the provision of service-unit effort. Well-intentioned, hard-working unit staff are pursuing efforts that often do not, in the end, address the precise needs of stakeholders or adequately protect the internal control environment. Efforts to accurately and thoroughly assess stakeholders' needs while balancing necessary institutional controls are inadequate. This is true whether those stakeholders are other central financial units, faculty, or departments. The lack of proper focus has resulted in situations in which effective communications are either non-existent or frustrating for both service-unit staff and college and departmental personnel; this, in turn, diminishes the effectiveness of feedback mechanisms and leads to insufficient buy-in on important projects and initiatives. Rather than feeling like part of a cohesive University team dedicated to enabling its academic mission, personnel in the financial service units and college and departmental personnel often view each other as impediments to be circumvented. ***Planning and evaluation in the central financial services support units should be done in regular communication with faculty and departmental business staff*** in all cases that affect UA units. This might be accomplished through already established committees such as the Committee of Eleven, CABO, RAG, and the Business Operations Committee, to bridge the chasm that currently exists between the units under review and the colleges and departments. Members of these committees have expressed the concern that they often are brought in only after policy decisions have been made or systems developed, and thus they have little opportunity to influence outcomes.

***Simultaneously, to develop a partnership between central support staff and colleges and departments, business staff in the colleges and departments must be well trained in business and/or accounting procedures, must be educated in the importance of compliance with mandates, and must be provided – and must take advantage of – good access to training in University business management.*** Central budget cuts and the decision to authorize more locally-based decision making have had the effect of shifting some of the workload from central administration to the departments and

colleges. The Purchase Card program, for example, in exchange for faster procurement, has shifted the burden of processing orders and maintaining auditable records to the departments. This was also the case with eTravel until the temporary suspension of the program in October 2004. At least one college that now has significant grant and contract activity still has the same business staff who oversaw the operations of the college's departments when they had little or no extramural funding. Not only does this stress the departments, but the situation, in turn, puts a huge burden back on the central financial services units: the lack of a common language between college-based and central staff, along with the lack of understanding of federal, State, ABOR, and University regulations at the department level, leads to misunderstandings and acrimony. The University must reinstate some of the training lost to recent budget cuts and must provide the resources to allow college-based business management staff to perform their responsibilities effectively. Comprehensive programs should include training and web-based tools for those in business management roles. With such training programs in place, business managers will know exactly what their financial duties are and will be positioned to interact cooperatively and collegially with the central financial offices. We have learned that departments and colleges with strong business managers who interact regularly with central financial support units are more generally satisfied and effective than academic units with inadequately experienced business staff.

Strong, well-trained department and college business officers are essential, but will not alone be sufficient to support the University's decentralized business model. Dissolution of the antagonism that exists between the central financial support offices and the colleges and departments also will require fundamental measures designed to ***dispel the pervasive culture of non-compliance on the part of faculty***. Oversight and enforcement of compliance with University, State, ABOR, and federal guidelines and laws fall to central financial services offices, which have no real enforcement power. As a result, faculty and the departmental business officers, frequently blissfully unaware of the terms and conditions of their grants and contracts, commit sloppy or even illegal business acts, leaving the University in a precarious legal position. Like staff, faculty must be educated in the business policies and procedures of the University, and must take a more active role in understanding the requirements of soliciting and expending funds from private, State, and federal sources. Currently, few faculty understand their responsibilities in this regard, and based on this lack of understanding they blame central financial support offices for imposing what seem to them to be arbitrary rules and regulations. To reverse this trend, ***departmental and college leadership must be held accountable, with consequences, by upper level administration, for the quality of their financial transactions***.

In addition to engaging in long-term planning and better communication, the financial services units must deal with the issue of inadequate development and promotion of internal personnel. ***An improved culture of ongoing professional development and grooming of "the next generation" would improve morale internally and continuity of service to the external constituencies of these units.***

## II. Findings and Recommendations Pertaining to Individual Units under Review

### A. Financial Services Office (FSO)

*Summary description:* FSO is responsible for the overall financial integrity of the institution, the accuracy and reliability of the institution's financial statements, and managing the University's assets. The unit is responsible for establishing and managing the University's financial policies and procedures and for establishing proper internal control for all university business processes. FSO comprises the areas of Financial Management, Capital Finance, Bursar's Office, Operations, Administration and Customer Service, and Information Technology, and works directly with all University financial units, including Procurement and Contracting Services, Sponsored Projects, and the Budget Office and with colleges and departments. FSO is headed by Charles Ingram, Assistant Vice President for Financial Services. \_\_\_\_\_ serves as Comptroller. In recent years, FSO has lost 25 staff positions, including several key CPA positions, and over \$1,000,000 in personnel, while facing the need to comply with new and updated federal, State, and ABOR mandates.

*FSO should be given the responsibility and authority to serve as the leader of all central financial administrative units in ensuring that a framework of effective business management and internal controls is in place.* FSO should serve as the role model and leader in developing business systems for the whole campus that incorporate University business rules and automatic workflow for the routing and approval of business documents. FSO has instituted several e-business initiatives, including electronic forms, Student Link WebPay, and Employee Link, in an effort to streamline and improve efficiency of certain tasks, but in several cases these initiatives have simply automated paper processes that were themselves flawed; the initiatives were developed without incorporating business rules and appropriate automated routing for document approval at the department and college levels, in spite of users' stated concerns that these elements were critical components for all business applications. FSO did not discourage input, but did not seek input actively enough from key users and other stakeholders or respond adequately to the input they did receive. In response to complaints by faculty and departments regarding the inadequacies of the existing system, the Vice President for Research formed a committee in August 2004 to review the University's authorized signer's process. FSO was asked to lead the committee, and little progress has been made to date.

Even more importantly, FSO's recent electronic initiatives are very focused and do not address critical needs for the overall business management of the University. The current climate of decentralization of authority creates a desperate need for central leadership who are charged to set the tone of the business practices carried out across the University and to set specific internal controls to ensure compliance. FSO should be developing specific business systems that have the flexibility to address both their internal needs *and* the needs of business officers across the university.



Once FSO is playing the required leadership role, we recommend that the University Finance Committee be delegated to serve as the “referee” for any serious issues arise and cannot be resolved between FSO and supported units.

FSO Director \_\_\_\_\_ has placed a high priority on improving communication within FSO, improving FSO’s communication with other central financial services units, and improving FSO’s communication with the broader University community. As reviewed above, communication with personnel in colleges still must be improved. Communication within the unit appears to have improved to a satisfactory level, and communication at the working level between FSO staff and the staff of the various other central financial units appears to work well. Communication with the Director of the Sponsored Projects Services Office (SPSO), however, remains a particular problem and has led to a disintegration of the working relationship between the two units. FSO’s suboptimal strategy for the development of the employee-related expenses (ERE) proposal, the consequent lack of provisional ERE rates, and the deliberate decision by the University Administration to delay the submission of the ERE proposal until late Spring 2004 had a significant detrimental effect on research proposals, grants, and contracts handled by SPSO. The lack of communication about budget problems to Deans, Department Heads, and Investigators caused considerable turmoil within the research community. *Issues of importance to both FSO and SPSO, such as ERE rates, per diem rates for federal grants and contracts, and 1098-T tax forms for students, must be addressed through improved interaction between the two units. Furthermore, FSO’s leadership of the Business Operation Committee should be developed to improve communication with the broader University community.*

FSO has an unusual organizational structure. In most organizations, the Controller, or Comptroller, is responsible for accepting money, paying the bills and safeguarding the institution’s assets, preparing the financial statements, and ensuring internal and business control. With FSO’s current organizational structure, the Comptroller is not responsible for accepting money and paying the bills. Both of those functions report separately to the Assistant Vice President for Financial Service. A significant amount of University business flows through FSO’s Operations section, which includes Accounts Payable, Payroll, and Travel, and which reports to the Director of Strategic Planning and Operations. This structure may create gaps in the Institution’s internal control environment. *The Review Committee recommends that the Senior Vice President for Business Affairs conduct an assessment of the current organizational structure to determine whether this is the appropriate reporting relationship.*

## **B. Budget Office**

*Summary description:* The Budget Office is responsible for the development, execution, monitoring, and reporting of the University’s budget and for the establishment of capital and operating accounts. They play a significant role as advisors to the President’s and Provost’s Offices and to the Finance Committee through almost daily interaction in developing various financial scenarios that present alternative operational strategies. The Budget Office is led by the Assistant Vice President and Budget Director \_\_\_\_\_ and Assistant Budget Officer \_\_\_\_\_, who report to

\_\_\_\_\_, Senior Vice President of Business Affairs. Successive cuts in the State budget have forced the Budget Office leadership and staff to allocate and re-allocate continually in their effort to ensure the fiscal solvency of the UA.

The Budget Office is responsible for developing revenue and expenditure models for the University budget process. The revenue model includes State allocation, tuition, revenue from indirect costs from grants and contracts, investments, and auxiliaries, and other University income. The expenditure model includes priorities from the President's Cabinet and the Finance Committee, projected Employee Related Expenses (ERE), bonding for new buildings, facility operations and maintenance, etc. The Budget Office advised the other financial services service units and the University senior administration on problems associated with meeting additional State-mandated absorption of ERE early in the winter of 2003/2004, but probably not as proactively as it should have. Impressive new interactive computerized financial models that the unit's staff were developing allowed estimations based on the hope for additional financial relief from the State, as well as estimations not including additional State funds, and ***should have been used to emphasize to the central administration the more conservative estimates of the budget shortfall to confront the University.*** This might have prevented the delay until late spring of the communication of the extent of the problem to deans and department heads. Continued refinements of the computer modeling system, the recent reorganization of the Finance Committee, and the establishment of a new subcommittee on revenue projection should help to alleviate this problem.

To help the Budget Office to provide the information to facilitate and validate budget decisions, ***the University needs an administrative computing system that provides rapid access to common data bases for all university resources, presents resources data in a comprehensive and cohesive manner, and has the potential of obviating the need for shadow systems.***

The Budget Office has developed a web-based application for processing and viewing Request for Budget Change (RBC) Forms. The application is easy to use and convenient for locating and viewing processed RBC forms. The RBC forms, however, cannot be routed and approved electronically; users must print multiple copies of the RBC on special paper, sign them, and route them through normal channels. Furthermore, the application is not compatible with all web browsers. This is a relatively minor irritation, but is emblematic of the problem of inadequate user input and coordination among central financial services offices in the development of new electronic initiatives. ***The Budget Office should work with the Financial Services Office to incorporate the RBC process along with other university forms into one common University-wide system.***

To absorb budget cuts in recent years, the Budget Office has severely reduced the amount of training it offers. This has resulted in inefficiency as more and more department-based personnel make individual telephone calls to Budget Office analysts, swamping the Office's ability to meet their needs one on one and distracting budget analysts from their other responsibilities.

The Budget Office is also responsible for the annual budget shell process for University auxiliary units, projecting auxiliary revenue and expenses for the current and the coming year. The process is still a mostly manual process at the department level, although Excel spreadsheets are available. ***The Budget Office should develop a web-based application for this process and tools to assist departments in developing appropriate revenue and expense models locally.***

### **C. Procurement and Contracting Services Department (PACS)**

*Summary description:* The PACS Department, directed by \_\_\_\_\_, is responsible for procurement of products and services and contracting services in support of UA activities and for ensuring that the services provided are performed in accordance with policies established by the UA, ABOR, State government, and agencies from which the UA secures funds for special programs. In 2001/02, PACS handled ~68,000 purchasing transactions and ~65,000 Stores transactions; in 2002/03, procurement contracts of ~\$304M, including 20% to small businesses. PACS includes offices that manage purchasing, non-research contracting, Central and Medical Receiving, UA Stores, Surplus Property, Printing and Graphics Services, the Small Business Supplier Diversity Program, and coordination of events on the mall.

PACS is probably the most visible interface between the broad University community and the central financial services units. PACS has spent considerable effort in recent years in developing several electronic mechanisms for purchasing, which departmental and college-level business staff rate as ranging from excellent to cumbersome. The Purchasing Card may have the broadest visibility. As reflected in a November 2004 PACS survey on the P-Card, a large percentage of users like it because it enhances responsiveness in the purchasing of goods and services. Some departmental business personnel and faculty, however, complain that the move toward electronic purchasing is being done with inadequate involvement of end-users, especially at early stages. Although the P-Card program offers many benefits to the University units, it has created an increase in the operational workload at the departmental level and a new requirement that departments maintain auditable records. ***PACS must more explicitly acknowledge the increase in workload caused by the P-Card program and must work with colleges and departments to minimize the impact on departments and to establish best practices; this will include working more closely with the Comptroller to incorporate adequate internal controls into the program.*** The omission of authorized account signature from the P-Card program has created significant accountability problems. PACS and FSO together must ensure that all relevant University policies are followed and those policies are updated and communicated to the campus community to ensure the overall integrity of the P-Card program.

PACS also has developed a new, innovative “strategic alliance” mechanism for contracting for goods and services for major commodity groups. The strategic alliance goes beyond negotiating the best price for the commodity; it also involves sponsorship of various campus initiatives and departments and provides a revenue stream back to the University. Strategic alliances have been formed for wireless services, document

processing, and desktop/laptop computers. The Committee applauds PACS for this initiative, and urges PACS to clearly communicate the value of these strategic alliances, since buy-in from the University community is critical to the success of the alliances.

***PACS should also coordinate with other central financial services units to develop a single Internet portal for all electronic forms and business processes used by departments and by vendors.*** They currently are developing an eBusiness solution, in which orders are placed with many different vendors from one web portal. The system is being piloted by a few small university departments; we recommend that it also be tested by large, research-intensive units and be coordinated with other portals before being implemented University-wide.

Assessments by PACS of the cost-savings resulting from electronic innovations such as the P-Card do not routinely include the full spectrum of indirect – and hard to assess – costs to departments, which can be significant. Current policy dictates that net revenues from the P-Card program (estimated to approach \$1M last year) be allocated to Operations and Management. In the future, ***consideration should be given to sharing cost savings and revenues that result from a move to eBusiness with the colleges and departments, in relation to any added burdens they absorb.***

An admirable consumer-oriented “whatever it takes” philosophy is stated in PACS annual reports, but the attitude is not pervasive: department-based personnel sometimes feel that PACS staff dictate unnecessarily stiff rules, rather than working with them flexibly to find solutions. An uncomfortable standoff can ensue, with each side feeling self-righteous in its approach. PACS staff, in turn, feel that they are fighting an uphill battle to ensure compliance with rules and regulations that are poorly comprehended by department-based faculty and staff, and those faculty and staff may feel that PACS personnel enjoy erecting roadblocks and are not sufficiently driven by an understanding that their mission is to facilitate research and teaching activities. ***Better training of department personnel in purchasing-related regulations, and a deeper inculcation of PACS staff in the importance of serving their clients’ needs through flexibility and creativity, are needed.***

#### **D. Sponsored Projects Services Office (SPSO)**

*Summary description:* SPSO administers approximately \$500 million of external funds annually in about 6000 accounts, or one third of the University’s total annual revenue. SPSO is a link in the administrative chain for processing proposals, awards, and post-award transactions; it enforces compliance with federal and State laws, funding agency regulations and University policy; and it is the interface between sponsoring agencies and the University investigators they sponsor. SPSO is headed by Director \_\_\_\_\_, who has been at the helm for 16 years and directs approximately 30 full-time staff members.

The SPSO is another common interface for faculty and the financial units. Often that interface is transparent – but not always. The transparency of the interface is in many cases proportional to the expertise of the departmental business staff. While many experienced departmental business officers and long-time faculty feel that the SPSO provides a high level of service, especially compared to that at other universities they

know, many others feel that they often are being asked to deal with compliance issues on their own, in spite of, rather than in cooperation with, SPSO. In turn, SPSO often feels that faculty and business officers try to work around compliance issues to get what they want, regardless of the legal and financial ramifications. The problem arises from the fact that the University has not adequately defined the roles and responsibilities of all parties involved in sponsored projects. This has led to unrealistic expectation placed on SPSO by departments and colleges, who have come to expect one-day turnaround on proposal submissions. The expectation is nearly always met, but sometimes at the expense of a thorough review. This is particularly problematic with very large proposals, grants, and contracts, for which inadequate University review can lead to insufficient infrastructure in place to support the grant or contract when it is awarded. ***The Vice President for Research should develop new, realistic guidelines for review and approval of proposals, and include special guidelines for SPSO involvement in development, review, and approval of very large proposals.***

The University has not invested sufficiently in the research infrastructure. With ever-diminishing funding from the State of Arizona, funding from sponsored grants and contracts is one of the few areas in which the University has an opportunity to increase its funding. Yet it is the one area where the University is most vulnerable to the threat of outside audits and costly fines for noncompliance with federal policies and procedures. Several other universities have spent significant resources in developing their research infrastructure after they were levied multi-million dollar fines by the federal government. To administer all pre- and post-award activities, our SPSO relies on a very fragile Sponsored Projects Information System (SPINS), which, implemented in the 1980's, runs on obsolete hardware and an obsolete operating system and has inadequate technical staff support. To minimize the University's vulnerability, ***SPINS should be updated and provided proper technical support***, perhaps through the Center for Computing and Information Technology. Updating should include ensuring that it meets the specific needs of colleges and departments, as well as of SPSO.

A further need for increased staff support is illustrated by the fact that many of our peer institutions, including Arizona State University, have recognized the importance of a strong federally negotiated indirect cost rate for federal grants and contracts and devote full-time staff to this effort year round. The University of Arizona, in contrast, pulls together an ad hoc committee to work with the Indirect Cost Steering Committee of FSO to develop our Facilities and Administration (F&A) rate proposal. The lack of an effective coordination mechanism/process between SPSO, FSO, and Space Management has led to suboptimal strategies for our rate negotiation. ***FSO should collaborate to develop a more effective process for indirect cost rate negotiations.***

Communication, generally, is a strength of SPSO. The unit uses the RAM-Talk listserv to communicate important issues to departmental business staff and, more recently, Director \_\_\_\_\_ implemented “\_\_\_\_\_’s Blog” as a mechanism for disseminating and explaining important compliance and other policies issues to the University community. Communication within the unit is good and staff appear to feel free to express ideas and to explore new territories. Communication and the interface

with other financial units at the working-staff levels appear to be smooth and effective. But communication problems persist with some departments. Turnover of staff within SPSO and transfer of SPSO administrators between the various teams is a problem for departmental personnel; often SPSO administrators are transferred to other teams without announcing the transfers or introducing the new team members to relevant departments. ***The two-year internship and team-leader rotation programs for Sponsored Projects Administrators should be assessed for their effectiveness in providing a stable workforce for the SPSO.***

More problematic is the relationship between the senior leadership of SPSO and FSO. The problem goes beyond one of mere communication. Both SPSO and FSO feel that the other is not responsive to issues they raise, and SPSO feels that business affairs management discourages frank discussion and debate of the issues with SPSO. Those issues include federal per diem rates for federal grants and contracts, ERE rates and the delay in submitting the most recent ERE proposal, 1098-T tax forms for students, authorized signers and establishing proper internal control, and suboptimal strategies for the federal indirect cost rate. Both SPSO and FSO must work to improve relations. ***The University must require that the appropriate financial managers take responsibility and solve these problems. Solutions will require a broad understanding that research, just like education, is a central mission of the University and is everyone's issue, not simply the purview of the Vice President for Research.***

Finally, SPSO offers virtually no opportunities for training in research administration for departmental business staff and investigators. It is common for department business staff to manage grants and contracts with little to no experience and for investigators not to be knowledgeable about the terms and conditions of their awards. ***The University should provide funding for SPSO to provide mandatory training for all business staff who manage grants and contracts and for all new investigators.***

#### **E. Office of Research Contract Analysis (ORCA)**

*Summary description:* ORCA's mission is to ensure that agreements that support the University research enterprise, those that fund agreements that support other University enterprises, and those that fund instruction and public service, comply with federal and State laws, comply with Arizona Board of Regents and University of Arizona policies and preserve the rights of publication and protect intellectual property. ORCA also provides contract and grant activity management reports to the Office of the Vice President for Research, Graduate Education, and Economic Development, as well as information to the National Science Foundation for its Annual Report of Expenditures by research universities. ORCA's Director, \_\_\_\_\_, reports to the Vice President for Research, \_\_\_\_\_ and supervises two full-time and two half-time contract and intellectual property specialists and two full-time subcontracting specialists. The office also has one administrative secretary and it previously had one computer support person.

ORCA generally fulfills its mission, and the quality of its work is excellent. As a matter of efficiency, however, and to reduce the current precarious dependence on a small staff, ***the Review Committee recommends that ORCA be retained as an entity,***

*but become an office within either the Sponsored Projects Services Office or the Office of Technology Transfer (OTT).* ORCA was at one time a single department with SPSO; it was created as a separate department due to a management issue, not as a strategic move to improve the organizational structure. The committee believes that consolidation of ORCA with SPSO or OTT would eliminate confusion on campus as to which department performs certain functions and strengthen the communication between the staff of the relevant organizations. The consolidation would also minimize the passing of agreements back and forth between offices.

In addition, several changes that would improve the efficiency of ORCA and expedite the execution of agreements with external sponsors are recommended. Most importantly, *at least one additional full-time ORCA staff member should be appropriately trained and then delegated signature authority.* Currently, only the director and one additional staff member in ORCA are authorized to execute agreements on behalf of the university. Thus, the director must perform a second review before the execution of a majority of the non-federal agreements, and additional delays may develop when the director is not available. An additional authorized signer will mean that routine contracts may be dealt with more quickly by office staff, leaving time for larger proposals to be handled by the director.

ORCA's staff is small and will need to grow to handle the increased scope of research activity predicted for the future. In the mean time, the Committee recommends that an outside consultant be engaged as needed to assist with large subcontracts.

Communications between the University and grant-sponsoring institutions are adversely impacted by having two ORCA employees who are directly involved in the negotiation of agreements being part-time employees and working primarily from their home residences. Although a fair amount of the negotiation may take place via email, having office coverage during normal business hours is essential. This employment arrangement may also adversely impact communications between ORCA employees and departmental faculty and staff.

Finally, the University requirement that research agreements contain original signatures appears to be outdated and an unnecessary source of delay in the execution of the agreements. The requirement appears to be inconsistently applied: faxed signatures are permitted on other types of agreements, such as Non-Disclosure Agreements and on research agreements if the sponsor provides a written statement that this is the sponsor's method of doing business. *ORCA should determine to what degree wet signatures are still a requirement on financial documents and should consider the merits of initiating a change in the signature policy, if allowable.*

### **III. Conclusion**

The University of Arizona's financial support units are a complex set of highly functional and less optimally functional pieces that have arisen more by accident of history than through thoughtful planning. The units themselves desire to do a good job; however, budget cuts in recent years have led to a patchwork approach that does not

cover the full range of financial needs in the University. Issues and problems facing the support units are foundational and pervasive, but by no means insurmountable. Small repairs to financial systems and processes are needed to alleviate problems in the very short term, but a fundamental shift is required for these units to provide seamless and forward-thinking administrative support in the current environment of diminishing financial support from the State and increasing procurement of external grants and contracts. The shift must involve a change in leadership attitudes in both financial services and academic units and the development of coordinated practices that are more clearly based in a mindset of uniformly facilitating the academic missions of the University. A coordinated overarching plan for the financial business of the University and codified mechanisms for communication across the campus will be essential.

The changes we recommend can not be made overnight. They require a shift to a culture of mutual trust and cooperation, and so will happen only with a mandate and continuing support from the highest levels of the University Administration and with an understanding that trust, between central financial services support units and between these units and the colleges and departments, will require time to develop. The goal should be a streamlined approach to business that the entire University community undertakes as a team.



## APPENDIX 5

### CONSENT FORM

#### **Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office Internal Customers**

I have been asked to participate in a study to determine the dimensions of service quality for internal customers of the University of Arizona Sponsored Projects Services Office. I was selected to be a participant because I am an employee of the University of Arizona Sponsored Projects Services Office. A total of 30 people have been asked to participate in this study. The purpose of the study is to determine the validity of the existing SERVQUAL dimensions of service quality and to determine if there are additional dimensions of service quality that apply to internal customers in the University of Arizona Sponsored Projects Services Office.

If I agree to be in this study, I will be asked to answer questions concerning my knowledge of University of Arizona Sponsored Projects Services Office procedures and my perceptions of the quality of customer service within the Office. I understand that I will be audiotaped by the researcher, David R. Baca. I understand that I may withdraw from the study at any time. The initial interview will take approximately an hour with a followup interview taking an additional hour. There are no anticipated risks or discomforts associated with participation in this study, either physical or psychological. There are also no benefits associated with participation in this study. I will receive no compensation for participation in this study.

This study is anonymous. 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. Research records will be stored securely and only David R. Baca will have access to the records. Audiotapes will be transcribed and coded to protect the identity of the participant. The tapes will be immediately erased upon transcription.

My decision whether or not to participate will not affect my current or future relations with the University of Arizona. If I decide to participate, I am free to refuse to answer any of the questions that might make me uncomfortable. I can withdraw at any time without my relations with the university, job, benefits, etc. being affected. If I have any questions about this study I can contact:

David R. Baca  
5701 E. Glenn, #10  
Tucson, AZ 85712  
520.977.2326  
[baca@u.arizona.edu](mailto:baca@u.arizona.edu)

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Bryan R. Cole  
Dept. of Educational Administration  
Texas A&M University  
College Station, Texas 77843-4226  
979.845.5356  
[b-cole@tamu.edu](mailto:b-cole@tamu.edu)

DATE: \_\_\_\_\_

INITIAL: \_\_\_\_\_

This research study has been reviewed by the Institutional Review Board – Human Subjects in Research, Texas A&M University. For research-related problems or questions concerning subject 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](mailto:mwbuckley@tamu.edu)).

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Printed Name of Subject: \_\_\_\_\_

Signature of Investigator: \_\_\_\_\_

Date: \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_

DATE: \_\_\_\_\_

INITIAL: \_\_\_\_\_

## APPENDIX 6

### INITIAL INTERVIEW QUESTIONS

#### Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office Internal Customers

1. Please state your name and position title and how long you have worked here.
2. The purpose of the interview today is to gain some understanding about internal service quality in the University of Arizona Sponsored Projects Services Office. I will ask you a series of questions but I would like us to have more of a conversation about service quality rather than a call and response. You may refuse to answer any of the questions. Do you understand?
3. I would like to get an understanding of the organization. To whom do you directly report, and who reports to you?
4. Who do you consider your customers? Who do you consider yourself a customer of? How would you define service quality in this organization?
5. What are the products that you produce? What input into your work is given to you by others?
6. If you have a problem getting input into your work, how is the problem resolved?
7. Reliability: How accurate is the work that is given to you as an input into your work?
8. Responsiveness dimension: If you do have a problem, how responsive is the person to your needs? Do you get input into your work on time? Is there a willingness to help you with your needs?
9. Assurance dimension: Do you have trust in the system as it now stands and in the people that are giving input into your work? Are you informed if there are problems, delays or changes to work?
10. Empathy dimension: If you give feedback to the people giving input into your work, do you feel that they listen to you and care about your needs?
11. Tangibles dimension: What about the physical facilities here? How important are they to you? Do they meet your needs? Are you comfortable? Does everyone dress appropriately? What systems do people use to communicate and do they work?
12. Now that we have covered some questions relating to service quality, how would your definition of service quality differ from your previous definition?

## APPENDIX 7

### INTERVIEW QUESTION REVISIONS

2<sup>nd</sup> interview script

Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office  
Internal Customers

1. Please state your name and position title and how long you have worked here.
2. The purpose of the interview today is to gain some understanding about internal service quality in the University of Arizona Sponsored Projects Services Office. I will ask you a series of questions but I would like us to have more of a conversation about service quality rather than a call and response. You may refuse to answer any of the questions. Do you understand?
3. First I want to talk about service quality. Think of a situation where you have gotten service. What made it a good experience? If it was a bad experience, what made it bad?
4. Now think of service quality in the context of your work here. What is important in getting, or giving, good service quality?
5. I would like to get an understanding of the organization. To whom do you directly report, and who reports to you?
6. What input into your work is given to you by others?
7. What are the products that you produce?
8. Where, and to whom, does your work go?
9. Who do you consider your customers? Who do you consider yourself a customer of?  
How would you define service quality in this organization?
10. If you have a problem getting input into your work, how is the problem resolved?
11. Reliability: How accurate is the work that is given to you as an input into your work?
12. Responsiveness dimension: If you do have a problem, how responsive is the person to your needs? Do you get input into your work on time? Is there a willingness to help you with your needs?
13. Assurance dimension: Do you have trust in the system as it now stands and in the people that are giving input into your work? Are you informed if there are problems, delays or changes to work?
14. Empathy dimension: If you give feedback to the people giving input into your work, do you feel that they listen to you and care about your needs?
15. Tangibles dimension: What about the physical facilities here? How important are they to you? Do they meet your needs? Are you comfortable? Does everyone dress appropriately? What systems do people use to communicate and do they work?
16. Now that we have covered some questions relating to service quality, how would your definition of service quality differ from your previous definition?

3rd interview script  
Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office  
Internal Customers

1. Please state your name and position title and how long you have worked here.
2. The purpose of the interview today is to gain some understanding about internal service quality in the University of Arizona Sponsored Projects Services Office. I will ask you a series of questions but I would like us to have more of a conversation about service quality rather than a call and response. You may refuse to answer any of the questions. Do you understand?
3. First I want to talk about service quality. Think of a situation where you have gotten service. What made it a good experience? If it was a bad experience, what made it bad?
4. Now think of service quality in the context of your work here. What is important in getting, or giving, good service quality?
5. What contributes to your work satisfaction?
6. I would like to get an understanding of the organization. To whom do you directly report, and who reports to you?
7. What input into your work is given to you by others?
8. What are the products that you produce?
9. Where, and to whom, does your work go?
10. Who do you consider your customers? Who do you consider yourself a customer of? How would you define service quality in this organization?
11. Have you had any customer service training?
12. If you have a problem getting input into your work, how is the problem resolved?
13. How do you hold each other accountable? How does decision-making happen?
14. Reliability: How accurate is the work that is given to you as an input into your work?
15. Responsiveness dimension: If you do have a problem, how responsive is the person to your needs? Do you get input into your work on time? Is there a willingness to help you with your needs?
16. Assurance dimension: Do you have trust in the system as it now stands and in the people that are giving input into your work? Are you informed if there are problems, delays or changes to work?
17. Empathy dimension: If you give feedback to the people giving input into your work, do you feel that they listen to you and care about your needs?
18. Tangibles dimension: Where you in the old offices? How have things changed? What about the physical facilities here? How important are they to you? Do they meet your needs? Are you comfortable? Does everyone dress appropriately? What systems do people use to communicate and do they work?
19. Now that we have covered some questions relating to service quality, how would your definition of service quality differ from your previous definition?

4th interview script  
Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office  
Internal Customers

1. Please state your name and position title and how long you have worked here.
2. The purpose of the interview today is to gain some understanding about internal service quality in the University of Arizona Sponsored Projects Services Office. I will ask you a series of questions but I would like us to have more of a conversation about service quality rather than a call and response. You may refuse to answer any of the questions. Do you understand?
3. First I want to talk about service quality. Think of a situation where you have gotten service. What made it a good experience? If it was a bad experience, what made it bad?
4. Now think of service quality in the context of your work here. What is important in getting, or giving, good service quality?
5. What contributes to your work satisfaction?
6. I would like to get an understanding of the organization. To whom do you directly report, and who reports to you?
7. What input into your work is given to you by others?
8. What are the products that you produce?
9. Where, and to whom, does your work go?
10. Who do you consider your customers? Who do you consider yourself a customer of? How would you define service quality in this organization?
11. How does collegiality come into play with the quality of work that is done? (11 Collegiality)
12. Is there a fear factor that goes into the quality of work done? (11 Coercion)
13. How do high standards contribute to quality? (11 High Standards)
14. How do you hold each other accountable? How does decision-making happen? What feedback do you need from the person downstream of you?
15. Reliability: How accurate is the work that is given to you as an input into your work?
16. Responsiveness dimension: If you do have a problem, how responsive is the person to your needs? Do you get input into your work on time? Is there a willingness to help you with your needs?
17. Assurance dimension: Do you have trust in the system as it now stands and in the people that are giving input into your work? Are you informed if there are problems, delays or changes to work?
18. Empathy dimension: If you give feedback to the people giving input into your work, do you feel that they listen to you and care about your needs?
19. Tangibles dimension: What about the physical facilities here? How does the cubicle life affect you?
20. Now that we have covered some questions relating to service quality, how would your definition of service quality differ from your previous definition?

## APPENDIX 8

### AUDIT LETTER

Chestalene Pintozzi  
P.O. Box 210054  
University of Arizona Libraries  
University of Arizona  
Tucson, AZ 85721-0054  
520.621.6392  
pintozzi@u.library.arizona.edu

September 12, 2006

To the Committee:

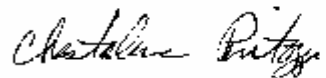
This letter is in reference to an audit trail of *Dimensions of Service Quality of the University of Arizona Sponsored Projects Services Office Internal Customers* by David R. Baca. I am an Associate Librarian at the University of Arizona Libraries.

Mr. Baca has been very involved with qualitative research projects at the University of Arizona. I have observed his techniques and methods during those projects and have been impressed with his commitment to naturalistic inquiry methods. He has not only been a leader in that area for the research projects but has taught others how to do qualitative research as well. We worked together on a project involving over 40 interviews of faculty, graduate students and undergraduates, with data gathered by a team of nine researchers. The challenges in that project were much more than Mr. Baca faced with his dissertation and I found that he always followed correct procedures.

I have audited Mr. Baca's methods, data, results and analysis and have found them, for the most part, to be sound. There were some initial problems with the coding of the Primary Documents and the use of Atlas.ti software but those were quickly resolved. I do note that Mr. Baca did not make full use of the software in his analysis but I find that his limited use of the software was correct. In addition I found, as did his advisory committee, that findings were not explained fully. I believe Mr. Baca has remedied that situation.

While this project involved a single department and a small number of interviews I believe Mr. Baca made the most of the data in accurately describing the organization and development of the dimensions of internal service quality.

Sincerely,



Chestalene Pintozzi

## APPENDIX 9

### CODES ASSIGNED TO UNITIZED DATA

Self Motivation	Learning
Rules and Regulations	Intimacy
Hiring	Email
Training	Meetings
Collegiality	Helpfulness
Service Quality Definition	Comm from Dir
Salary	Working Out Problems
Policies	Comm Hierarchy
Arrogance	Dir Expectations
Firings	Errors
Job Important Not People	Cross Experience
Staff Shortages	Speed/Errors
Promotion	Rejected Proposals
Turnover	Info Readily Available
Peer Pressure	Messy Workplace
Hiring Into University	Efficiency/Effectiveness
Happiness Factor	Temporary Worker
High Standards	Listening/Opinions
Professionalism	Approachability
Fear Factor	Attitudes
AD Happiness Factor	Negativity
AD Fear Factor	Type A Personality
Teamwork	Demeanor
Decision Making	Conflict
New VPR	Attitudes of Cooperation
Delegation	Variability
Amnesty	Asking Permission
Showing Tone	Old Building
Experience	New Building
Cubicles	Trust
Noise	Empowerment
Listening In	Control
Talking Across Cubicles	Director Involvement
Equipment	Contribution to University
Concentration	Work Relationships
Private Rooms	Underground Social Relationships
Dress	Respect
Cleanliness	Asst Dir Influence
Informality	



## APPENDIX 10

### DIMENSIONS ASSIGNED TO CULTURE CODES

AD Fear Factor	Leadership
AD Happiness Factor	Leadership
Amnesty	Leadership
Approachability	
Arrogance	Capital "C" Culture
Asking Permission	
Asst Dir Influence	
Attitudes	
Attitudes of Cooperation	
Cleanliness	
Collegiality	Capital "C" Culture
Comm from Dir	
Comm Hierarchy	
Concentration	
Conflict	
Contribution to University	
Control	
Cross Experience	
Cubicles	
Decision Making	Leadership
Delegation	Leadership
Demeanor	
Dir Expectations	
Director Involvement	
Dress	
Efficiency/Effectiveness	
Email	
Empowerment	
Equipment	
Errors	
Experience	Cross Experience
Fear Factor	Leadership
Firings	Capital "C" Culture
Happiness Factor	Leadership
Helpfulness	
High Standards	Leadership
Hiring	Apprentices, Capital "C" Culture, Cross Experience

Hiring Into University	Apprentices
Info Readily Available	
Informality	
Intimacy	
Job Important Not People	Capital "C" Culture
Learning	
Listening In	
Listening/Opinions	
Meetings	
Messy Workplace	
Negativity	
New Building	
New VPR	Leadership
Noise	
Old Building	
Peer Pressure	Apprentices
Policies	Capital "C" Culture, Leadership
Private Rooms	
Professionalism	Leadership
Promotion	Apprentices
Quality of Work	
Rejected Proposals	
Respect	
Rules and Regulations	Capital "C" Culture
Salary	Capital "C" Culture
Self Motivation	Capital "C" Culture
Service Quality Definition	Capital "C" Culture
Showing Tone	Leadership
Speed/Errors	
Staff Shortages	Capital "C" Culture
Talking Across Cubicles	
Teamwork	Leadership
Temporary Worker	
Training	Apprentices, Capital "C" Culture, Cross Experience
Trust	
Turnover	Apprentices
Type A Personality	
Underground Social Relationships	
Variability	
Work Relationships	
Working Out Problems	

## APPENDIX 11

## CODES ASSIGNED TO ORIGINAL DIMENSIONS

AD Fear Factor	
AD Happiness Factor	
Amnesty	
Approachability	Responsiveness
Arrogance	
Asking Permission	Courtesy
Asst Dir Influence	
Attitudes	Responsiveness
Attitudes of Cooperation	Courtesy
Cleanliness	Tangibles
Collegiality	
Comm from Dir	Communication
Comm Hierarchy	Communication
Concentration	Communication, Tangibles
Conflict	Credibility
Contribution to University	
Control	
Cross Experience	Reliability, Responsiveness, Understanding the Customer
Cubicles	Tangibles
Decision Making	
Delegation	
Demeanor	Credibility
Dir Expectations	Competence
Director Involvement	
Dress	Tangibles
Efficiency/Effectiveness	Reliability
Email	Communication
Empowerment	
Equipment	Tangibles
Errors	Competence
Experience	Competence, Understanding the Customer
Fear Factor	
Firings	
Happiness Factor	
Helpfulness	Communication, Understanding the Customer
High Standards	Competence

Hiring	Competence
Hiring Into University	
Info Readily Available	Reliability
Informality	Access, Communication
Intimacy	Access
Job Important Not People	
Learning	Access
	Access, Communication, Tangibles,
Listening In	Understanding the Customer
Listening/Opinions	Responsiveness
Meetings	Communication
Messy Workplace	Reliability
Negativity	Responsiveness
New Building	Security
New VPR	
Noise	Communication, Tangibles
Old Building	Security
Peer Pressure	
Policies	Communication, Credibility, Reliability
Private Rooms	Communication, Tangibles
Professionalism	
Promotion	
Quality of Work	Competence
Rejected Proposals	Reliability
Respect	
Rules and Regulations	
Salary	
Self Motivation	Competence
Service Quality Definition	
	Communication, Competence, Courtesy,
Showing Tone	Credibility, Reliability
Speed/Errors	Reliability, Responsiveness
Staff Shortages	
Talking Across Cubicles	Access, Communication, Tangibles
Teamwork	
Temporary Worker	Reliability
Training	Competence, Reliability
Trust	
Turnover	
Type A Personality	Understanding the Customer
Underground Social Relationships	
Variability	Courtesy
Work Relationships	
Working Out Problems	Communication

## APPENDIX 12

## CODES ASSIGNED TO NEW DIMENSIONS

AD Fear Factor	
AD Happiness Factor	
Amnesty	
Approachability	
Arrogance	
Asking Permission	
Asst Dir Influence	Collegiality
Attitudes	
Attitudes of Cooperation	
Cleanliness	
Collegiality	
Comm from Dir	
Comm Hierarchy	
Concentration	
Conflict	
Contribution to University	Professionalism
Control	Decision-Making
Cross Experience	Flexibility
Cubicles	
Decision Making	
Delegation	
Demeanor	
Dir Expectations	
Director Involvement	Accountability
Dress	
Efficiency/Effectiveness	
Email	
Empowerment	Decision-Making, Flexibility
Equipment	
Errors	Accountability
Experience	Flexibility
Fear Factor	
Firings	
Happiness Factor	
Helpfulness	
High Standards	Accountability, Decision-Making, Flexibility
Hiring	Flexibility
Hiring Into University	

Info Readily Available	
Informality	
Intimacy	
Job Important Not People	
Learning	
Listening In	
Listening/Opinions	
Meetings	
Messy Workplace	
Negativity	
New Building	
New VPR	
Noise	
Old Building	
Peer Pressure	Accountability
Policies	Flexibility
Private Rooms	
Professionalism	
Promotion	
Quality of Work	
Rejected Proposals	
Respect	Collegiality
Rules and Regulations	
Salary	
Self Motivation	Accountability, Professionalism
Service Quality Definition	
Showing Tone	
Speed/Errors	Flexibility
Staff Shortages	
Talking Across Cubicles	
Teamwork	Collegiality
Temporary Worker	Accountability, Decision-Making,
Training	Flexibility
Trust	Flexibility
Turnover	
Type A Personality	
Underground Social Relationships	Collegiality
Variability	
Work Relationships	Collegiality
Working Out Problems	

## APPENDIX 13

## FREQUENCY OF QUOTATIONS ASSIGNED TO CULTURE

Dimension	Frequency of Quotations			
	Pre-Award	Post-Award	Administration	Totals
<b>Capital “C” Culture</b>				
<i>Self-motivation</i>	10	14	5	29
<i>Rule and Regulations</i>	8	10	3	21
<i>Hiring</i>	8	8	4	20
<i>Training</i>	7	8	5	20
<i>Collegiality</i>	6	6	3	15
<i>Service Quality</i>	4	4	2	10
<i>Definition</i>				
<i>Salary</i>	3	3	1	7
<i>Policies</i>	2	2	3	7
<i>Arrogance</i>	1	2	0	3
<i>Firings</i>	1	2	0	3
<i>Job Important Not</i>	1	1	0	2
<i>People</i>				
<i>Staff Shortages</i>	0	0	2	2
				139
<b>Apprentices</b>				
<i>Hiring</i>	5	6	3	14
<i>Training</i>	5	5	4	14
<i>Promotion</i>	3	5	5	13
<i>Turnover</i>	3	4	4	11

<i>Peer Pressure</i>	3	3	3	9
<i>Hiring into University</i>	2	2	4	8
				69
<b>Leadership</b>				
<i>Happiness Factor</i>	8	10	2	20
<i>High Standards</i>	7	7	3	17
<i>Professionalism</i>	7	6	3	16
<i>Policies</i>	5	5	4	14
<i>Fear Factor</i>	6	5	0	11
<i>AD Happiness Factor</i>	6	4	1	11
<i>AD Fear Factor</i>	5	5	0	10
<i>Teamwork</i>	4	4	1	9
<i>Decision-Making</i>	4	4	1	9
<i>New VPR</i>	2	2	1	5
<i>Delegation</i>	1	1	2	4
<i>Amnesty</i>	0	0	1	1
<i>Showing Tone</i>	0	0	2	2
				129
<b>Cross Experience</b>				
<i>Training</i>	4	3	3	10
<i>Hiring</i>	4	4	1	9
<i>Experience</i>	2	2	2	6
				25



## APPENDIX 14

## FREQUENCY OF QUOTATIONS ASSIGNED TO ORIGINAL DIMENSIONS

Original Dimension	Frequency of Quotations			
	Pre-Award	Post-Award	Administration	Totals
<b>Tangibles</b>				
<i>Cubicles</i>	5	7	3	15
<i>Noise</i>	5	5	3	13
<i>Listening In</i>	4	6	3	13
<i>Talking Across Cubicles</i>	4	5	4	13
<i>Equipment</i>	3	3	4	10
<i>Concentration</i>	3	3	2	8
<i>Private rooms</i>	2	2	1	5
<i>Dress</i>	0	2	0	2
<i>Cleanliness</i>	2	0	0	2
				81
<b>Access</b>				
<i>Talking Across Cubicles</i>	4	5	3	12
<i>Listening In</i>	4	5	2	11
<i>Informality</i>	4	5	2	11
<i>Learning</i>	2	2	2	6
<i>Intimacy</i>	1	1	0	2
				42
<b>Communication</b>				
<i>Talking Across Cubicles</i>	4	5	3	12

<i>Listening In</i>	4	5	3	12
<i>Informality</i>	4	5	3	12
<i>Email</i>	4	4	2	10
<i>Concentration</i>	3	3	3	9
<i>Policies</i>	4	1	1	6
<i>Meetings</i>	2	2	2	6
<i>Noise</i>	2	3	1	6
<i>Helpfulness</i>	3	2	0	5
<i>Comm from Dir</i>	1	3	0	4
<i>Working Out Problems</i>	2	2	0	4
<i>Comm Hierarchy</i>	1	2	0	3
<i>Private rooms</i>	0	1	1	2
<i>Showing Tone</i>	0	0	2	2
				93
<b>Competence</b>				
<i>Self-motivation</i>	4	3	3	10
<i>Hiring/Training</i>	4	4	2	10
<i>High Standards</i>	3	4	2	9
<i>Dir Expectations</i>	3	4	2	9
<i>Errors</i>	3	4	1	8
<i>Quality of Work</i>	3	4	0	7
<i>Experience</i>	1	3	0	4
<i>Showing Tone</i>	0	0	2	2
				59
<b>Reliability</b>				
<i>Cross Experience</i>	6	7	4	17

<i>Training</i>	6	6	5	17
<i>Speed/Errors</i>	6	4	4	14
<i>Policies</i>	4	4	3	11
<i>Rejected Proposals</i>	3	3	1	7
<i>Info Readily Available</i>	3	2	1	6
<i>Messy Workplace</i>	2	2	0	4
<i>Efficiency/Effectiveness</i>	0	0	2	2
<i>Showing Tone</i>	0	0	2	2
<i>Temporary Worker</i>	0	0	1	1
				81
<b>Responsiveness</b>				
<i>Cross Experience</i>	6	5	4	15
<i>Speed</i>	4	5	2	11
<i>Listening/Opinions</i>	4	4	2	10
<i>Approachability</i>	3	2	1	6
<i>Attitudes</i>	3	2	1	6
<i>Negativity</i>	1	1	1	3
				51
<b>Understanding the Customer</b>				
<i>Cross Experience</i>	5	5	3	13
<i>Helpfulness</i>	3	5	1	9
<i>Experience</i>	2	5	2	9
<i>Listening In</i>	2	2	2	6
<i>Type A Personality</i>	0	1	0	1
				38

<b>Credibility</b>				
<i>Policies</i>	1	1	2	4
<i>Demeanor</i>	2	1	1	4
<i>Conflict</i>	1	1	1	3
<i>Showing Tone</i>	0	0	2	2
				13
<b>Courtesy</b>				
<i>Attitude of Cooperation</i>	4	1	0	5
<i>Showing Tone</i>	0	1	2	3
<i>Variability</i>	1	1	0	2
<i>Asking Permission</i>	2	0	0	2
				12
<b>Security</b>				
<i>Old Building</i>	3	4	2	9
<i>New Building</i>	2	3	2	7
				16

## APPENDIX 15

## FREQUENCY OF QUOTATIONS ASSIGNED TO NEW DIMENSIONS

New Dimension	Frequency of Quotations			
	Pre-Award	Post-Award	Administration	Totals
<b>Flexibility</b>				
<i>Cross Experience</i>	5	5	5	15
<i>Speed</i>	4	6	3	13
<i>Trust</i>	2	5	6	13
<i>High Standards</i>	4	5	4	13
<i>Policies</i>	2	4	2	8
<i>Hiring/Training</i>	2	3	2	7
<i>Empowerment</i>	2	2	1	5
<i>Experience</i>	0	2	0	2
				76
<b>Decision-Making</b>				
<i>Empowerment</i>	6	7	5	18
<i>Control</i>	5	6	4	15
<i>High Standards</i>	4	5	2	11
<i>Training</i>	3	2	1	6
				50
<b>Accountability</b>				
<i>Training</i>	3	7	4	14
<i>High Standards</i>	4	6	4	14
<i>Self-motivation</i>	3	5	3	11

<i>Peer Pressure</i>	4	5	2	11
<i>Errors</i>	3	3	3	9
<i>Director Involvement</i>	3	2	1	6
				65
<b>Professionalism</b>				
<i>Self-motivated</i>	4	5	5	14
<i>Contribution to University</i>	5	6	2	13
				27
<b>Collegiality</b>				
<i>Teamwork</i>	7	6	3	16
<i>Work Relationships</i>	5	5	5	15
<i>Underground Social Relationships</i>	4	6	4	14
<i>Respect</i>	4	4	2	10
<i>Asst Director Influence</i>	3	2	0	5
				60

## APPENDIX 16

### LIST OF DOCUMENTS

Document Name	Issue Date
Sponsored Projects Services Annual Report FY 1998-1999	July 7, 1999
Sponsored Projects Services Annual Report FY 1999-2000	July 25, 2000
Sponsored Projects Services Annual Report FY 2000-2001	July 3, 2001
Sponsored Projects Services Annual Report FY 2001-2002	July 12, 2002
Sponsored Projects Services Annual Report FY 2002-2003	June 17, 2003
Report of the Financial Support Functions Review Committee	Spring, 2004
Sponsored Projects Services Review of Activities and Effectiveness	July 16, 2004
Sponsored Projects Services Organizational Chart	July 2004
Sponsored Projects Services Organizational Chart	January 2005

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