RECRUITMENT EXPERIENCES AND DECISION FACTORS OF HIGH SCHOOL SCIENCE TEACHERS IN TEXAS

A Dissertation

by

RASHEEDAH KAY RICHARDSON

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

DOCTOR OF PHILOSOPHY

August 2012

Major Subject: Curriculum and Instruction

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Approved by:

Chair of Committee,	Carol Stuessy
Committee Members,	Barbara Erwin
	Valerie Hill-Jackson
	Timothy Scott
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ABSTRACT

Recruitment Experiences and Decision Factors of High School Science Teachers in Texas. (August 2012)

Rasheedah Kay Richardson, B.A.; M.Ed. Texas A&M University

Chair of Advisory Committee: Dr. Carol Stuessy

The state of Texas reflects the teacher shortages experienced by the rest of the United States. The three studies included in this dissertation use exploratory mixed-methods and qualitative research designs to understand experiences of Texas high school science teachers at the entry stage of the teacher professional continuum (TPC): recruitment. Little is understood about the relationship between recruitment, job satisfaction and retention of teachers. A conceptual framework (i.e., teacher-to-school match, realistic job previews, decision factors) was used to guide the inquiry process and help draw connections between the literature and findings from this study regarding teacher recruitment, job satisfaction, and retention. This research was completed in collaboration with the PRISE Research Group at Texas A&M University.

The first study describes recruitment activities of new-to-school science teachers for their current positions. A content analysis of teachers' interviews suggested that schools are not maximizing valuable resources supporting teacher-to-school match and realistic job previews (RJP). Further analyses indicated teachers' interview experiences

and participation in various types of RJP activities were associated with minority student enrollment profile (MSEP) and size of school.

The second study explores reasons for teachers' decisions to accept their positions. New-to-school teachers indicated 12 categories of reasons. Subjective factors relating to non-pecuniary aspects of the job were reported by teachers more frequently than objective or critical contact factors. Teachers' responses for accepting their positions were found to be associated with MSEP and size of school.

The third study describes recruitment experiences of highly satisfied and retained new-to-school teachers. Trends were identified regarding teachers' match to schools, engagement in RJP activities, and use of decision factors. Findings from this study direct researchers towards new questions with regard to teacher recruitment as a leveraging factor for job satisfaction and retention.

The final chapter provides a summary of all three studies. Recommendations are made to stakeholders regarding progressive recruitment practices and policies for high school science teachers. Concurrently, themes in this chapter provide researchers with a topology for the design of future studies addressing teacher shortages on campus using the initial stage of the TPC: recruitment.

DEDICATION

This dissertation is dedicated to my mother who has given me more love and support than I could have asked for. May the Lord bless her in return.

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Carol Stuessy, who has modeled before me scholarship in teaching and research. I have also learned a tremendous amount about mentoring from her. I'd like to thank my committee members, Dr. Barbara Erwin, Dr. Valerie Hill-Jackson, and Dr. Timothy Scott. Their guidance and support throughout my coursework and this research has meant so much to me. It has honored me to have my committee chair and each member. I've enjoyed being their student. Additionally, I would like to thank Dr. Dianne Goldsby and others in the teacher education program. I am so very appreciative for the time they've taken to share best practices in pre-service teacher education.

Special thanks go to the PRISE Scholars. I don't have space in these pages to say how much their friendships have meant to me. (I've shared so many wonderful experiences with each of you. Thank you for your contributions to my development as a researcher; and thank you for doing it within the contexts of true friendships. I pray that God would bless each of you.) Thanks also to the department faculty and staff for making my time at Texas A&M University a great experience. I also want to extend my gratitude to the National Education Foundation which provided the support for my research.

I would like to thank the body of ReJOYce for their prayers, encouragement, and help as I have worked to complete my doctorate degree. (To my Pastor, Danielle, and Debbie, thank you for your examples of faith. I have learned so much from each of you

that has been invaluable during this process.) Finally, I'd like to thank my family for their patience, love, and support. I've enjoyed the fun moments they've brought to my life. Those moments have always been right on time and a major source of encouragement for me.

NOMENCLATURE

MSEP	Minority Student Enrollment Profile
PRISE	Policy Research Initiative in Science Education
RJP	Realistic Job Previews
TPC	Teacher Professional Continuum

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CHAPTER I

INTRODUCTION: THE IMPORTANCE OF SCIENCE TEACHER RECRUITMENT FOR TEXAS PUBLIC HIGH SCHOOLS

Twenty years prior to the turn of the latest millennium, agencies such as the National Academy of Sciences (1987) and the National Commission on Excellence in Education (1983) warned stakeholders in education of an impending shortage of American public school teachers. Thirty years after the initial warning, teacher shortage represents one of the nation's leading problems in public schools.

Increases in student enrollments and the number of teachers retiring were once thought to be the cause of teacher shortages. These factors alone, however, cannot account for the currently elevated turnover rates of teachers. Recent research findings indicate that teacher shortages in public schools are the result of large numbers of teachers leaving the profession for reasons other than retirement (Ingersoll, 2001).

The state of Texas reflects the teacher shortages experienced by the rest of the United States. Texas experienced a 47 percent increase in the demand for public school teachers between 1996 and 2002 (Fuller, 2002). In the 2000-2001 school year more than 44,000 open positions existed in public schools in Texas, while only 14,000 new teacher recruits were available to fill these positions (Texas A&M University System, 2001). A policy brief on teacher mobility released in 2009 by the PRISE Research Group

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This dissertation follows the style of *Educational Administration Quarterly*.

estimated that if the population of Texas were to remain constant, 3,500 to 4,000 new science teacher hires a year will be need to replace teachers lost to attrition over the next ten years (Stuessy, Bozeman, & Ivey, 2009). Additionally, close to thirty-five percent of novice (i.e., in their first through third years) teachers in Texas left their positions between the 2007-2008 and 2008-2009 school years. Mid-career and veteran teachers also left their positions but at lower rates, about twenty-five and twenty percent, respectively (Stuessy, Bozeman, & Ivey, 2009). See Table 1.1.

Table 1.1
Mobility of Texas high school science teachers in PRISE sample schools by profession type (years of teaching experience) between the 2007-2008 and 2008-2009 school years

	Teacher Profession Type (Years of Teaching Experience)				
Mobility	Beginning (≤ 3) (%)	Mid-career (4-7) (%)	Veteran (≥8) (%)	Not Known (%)	Total (%)
Retention [a]	65.6	77.0	80.8	60.0	75.6
Migration [b]	14.6	14.8	8.0	16.7	10.6
Attrition [c]	19.8	8.2	11.2	33.3	13.8
Total	100.0	100.0	100.0	100.0	100.0

Note. Adapted from "Mobility of High School Science Teachers in Texas," by Stuessy, C., Bozeman, D., and Ivey, T., 2009, *PRISE Policy Brief #2*, October, p.3.
[a] Retention rate was calculated by comparing school master schedules for two school years. The proportion of teacher remaining from one year to the next was determined to be the retention rate. [b] Migration rate was calculated by comparing the number of teachers in the first year to those who left a school but were found in the Texas educator database as employed at another school. [c] Attrition rate was calculated by counting the number of teachers who had left a school and were not found in the Texas educator database the following year.

Teacher shortages can have far-reaching and significant effects on students, teachers, and the school at large. Many of these effects are not measured in dollars. For example, high levels of employee turnover can weaken the professional morale of employees. Furthermore, students can lose the advantage of being instructed by experienced teachers who are familiar with school culture and ready to focus on classroom instruction. High levels of employee turnover can also place organizations at a financial deficit. Teacher attrition costs the American public education system $7 billion dollars each year (National Commission on Teaching and America's Future, 2007). Statewide, estimates of costs to Texas schools from teacher turnover are $329 million to $1.59 billion dollars per year (Benner, 2000). It is not a far stretch to conclude that, in many ways, the effectiveness and health of a school system may depend on factors such as teacher recruitment and retention.

My three studies were done in conjunction with the Policy Research Initiative in Science Education (PRISE) Research Project. Specifically, data for the proposed studies were provided by PRISE. PRISE was a-five year research study funded by the National Science Foundation to investigate aspects of the high school science teacher professional continuum (TPC) in Texas. See Figure 1.1. The high school science teacher professional continuum "refers to the professional lives of high school science teachers along the continuum of their recruitment, induction, renewal, and [retention] in the teaching profession" (Bozeman, Stuessy, Hollas, Spikes, Richardson, Vasquez, Yoo, & Ivey, 2010, p.7). The PRISE Research group integrated field-based research and prior research findings to answer the questions: "Where are we?", "Where do we want to go?", and

"How do we get there?" in terms of reducing teacher shortages and improving the overall quality of high school science teachers in the state. Mixed methods research techniques were used to query and analyze data sets of teacher interviews and archival data in the PRISE data base. The query and analyses were used to describe teacher

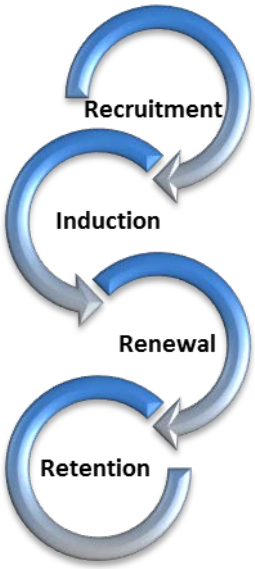

Figure 1.1. Schematic depicting stages of the Teacher Professional Continuum. Recruitment marks a teacher's entrance into the TPC. Following initial recruitment, a teacher progresses through subsequent stages (i.e., induction, renewal, and retention) over the duration of her professional career.

recruitment experiences and to investigate the relationship between recruitment variables relating to teacher job satisfaction and retention.

Purpose of the Proposed Study

The purpose of this mixed methods study was to explore new-to-school teachers' views about their recruitment experiences with the intent of using this information to develop understanding of school recruitment practices most supportive to job satisfaction and retention of teachers and develop a modified recruitment model. A conceptual framework emphasizing (1) teacher-to-school match, (2) job choice theory, and (3) realistic job previews (RJP) was used to guide the inquiry process. Initial stages of this body of work involved a qualitative exploration of recruitment using interview data from new-to-school teachers at 50 sample schools in Texas. Themes from this qualitative data were then developed into instruments so that research questions could be tested that relate practice with size, minority enrollment student profiles of schools, teacher job satisfaction and teacher retention for new-to-school teachers in Texas.

Research Questions

The central question in this body of work is "What are the recruitment experiences of high school science teachers for their current positions?" This question is supported by several subquestions comprising the contents of this three paper dissertation study. The first study pertains to networking experiences of teachers used to find out about open positions and realistic job preview experiences of teachers used to gain information about the working conditions and facilities of the school. The following three research questions were posed:

1. How do science teachers first find out about their science position?

2. With whom do science teachers interview with for their current teaching position?
3. What do science teachers do to learn about their positions before accepting them?

Teachers are decision makers and actively reason about aspects of the job before choosing to accept a position. The second study examines the reasons indicated by teachers as affecting their decisions to accept their current positions. The following questions are posed:

4. What are science teachers' reasons for their decisions to accept their current positions?
5. Is there an association between school size (i.e., small, medium, large) and the reasons indicated by teachers for accepting their positions?
6. Is there an association between the minority student enrollment profile (i.e., low-MSEP and high-MSEP) of the school in which a teacher works and the reasons indicated by these teachers as affecting their decisions to accept their current position?
7. What are the decision factors (objective theory, subjective theory, and critical-contact theory) science teachers use to accept their current positions?

The final study related aspects of teachers' recruitment experiences for their current positions to job satisfaction and retention scores of the same teachers. The following questions are posed in the study:

8. What are the differences in highly satisfied teachers' and highly dissatisfied teachers' engagement with Modified Recruitment Practices?

Theoretical Perspectives

Practices used by schools to recruit science teachers and fill open classroom positions on their campuses are diverse. The PRISE Research Group identified five major recruitment categories and sub-categories of practices used by Texas schools to recruit science teachers: (1) Networking, (2) Marketing, (3) Incentives, (4) Teacher Identification, and (5) Interviewing (Richardson & Stuessy, 2010). While it is known that the practices schools use to recruit teachers are diverse, very little is known about the effectiveness of diverse recruitment strategies in attracting specific "teacher-types" (i.e. Newly Prepared Teachers, Delayed Entrants, Transfer, and Reentrants (Broughman & Rollefson, 2000). Furthermore, it is not readily understood how teachers perceive recruitment practices at their schools. Best practices as attributed in recent literature on teacher recruitment suggest that recruiting institutions approach the recruitment process with discretion, purposefully matching recruitment incentives to the type of teacher candidate they desire to attract (Clewell, Darke, Davis-Googe, Forcier, & Manes, 2000; Guarino, Santibanez, & Daley, 2006; Torres, Santos, Peck, & Cortes, 2004). Richardson, Troncosco-Skidmore, and Wilson (2007) documented a complex recruitment process involving more than the purposeful use of incentives to attract teachers. The authors suggest that schools and districts employ "active, effective, coherent recruitment processes for all teachers" (p. 6). Breaugh & Starke (2000) reviewed the literature on employee recruitment and also suggested that the recruitment process is complex. These

authors concluded that attention be focused on the entire recruitment process rather than on one aspect of it (e.g., effects of recruitment sources, recruiters, realistic job previews, etc.). Collectively these authors suggested that the recruitment process is not a unilateral process but involves many interacting variables.

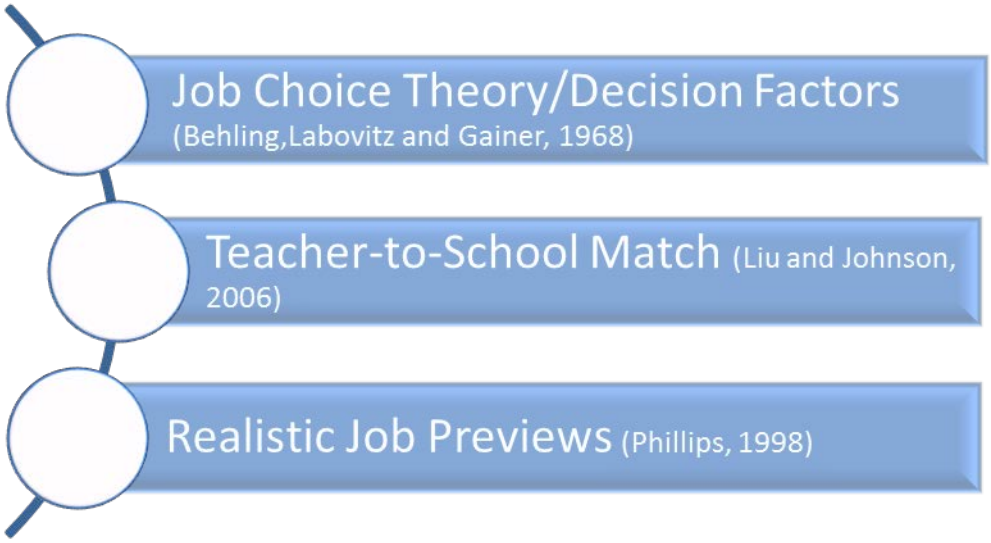

Figure 1.2. Schematic depicting multiple recruitment variables. The association of these variables to size of school, minority student enrollment, job satisfaction and retention of teachers will be examined in subsequent chapters.

One such variable is teacher decision factors. The decision-making process of teacher candidates has not been studied with as much rigor as other areas within the research on teacher selection. Traditionally, teacher selection research has focused on the decision-making process of administrators (Young, Rinehart & Place, 1989). Teachers are decision makers and actively choose to accept or decline open positions. Behling,

Labovitz, and Gainer (1967) proposed three theories of job choice to define how candidates make decisions to accept positions: (1) Objective Theory, (2) Subjective Theory, and (3) Critical-contact Theory. Liu & Johnson (2006) asserted that it is important to consider whether hiring practices used by schools are "effectively matching new teachers to schools and positions" (p. 325). A final variable in the recruitment process is realistic job previews (RJP). RJP refer to "the presentation by an organization of both favorable and unfavorable job-related information to job candidates" (Phillips, 1998, p. 673). See Figure 1.2 listing variables associated with recruitment practices.

Recruitment practices that have assumed an overly simplified perspective of recruitment may not be most effective in increasing recruitment rates, retention, or job satisfaction. Authors, (e.g., Ingersoll, 2001; Kelley, 2004), have asserted the overall ineffectiveness of current recruitment practices in addressing the teacher shortage. These claims warrant examination. In particular, examination of the validity of such claims in the light of recruitment models considering the complexity of the recruitment process must be considered by researchers.

Definition of Terms

Several terms are used in this body of work. These terms are defined below for the reader's convenience. In most instances definitions are consistent with those of the PRISE research Group.

Attrition

Unless otherwise specified, attrition describes the event of teachers who have left their schools and the teaching profession altogether.

Job Satisfaction

Job satisfaction refers to teachers' satisfaction (happiness) with various aspects of their professional work environment. Adapted from Bozeman & Stuessy (2009).

Minority Student Enrollment Profile (MSEP)

Minority student enrollment profile refers to the number of non-white students attending a school. Texas Education Agency's distinctions were adapted and used to define schools by the proportion of minority students at a campus, that is low-MSEP (< 50.0 % on non-white students) and high-MSEP ($\geq$ 50.0 % non-white students) school types.

New-to-school Teacher

New-to-school teacher refers to a teacher within her first year at a school. Based on total years of teaching experience, a New-to-school teacher may be a Beginning, Mid-career or Veteran teacher.

Recruitment

Recruitment is defined as the policies and practices schools use to attract and hire teachers.

Retention

Unless otherwise specified, retention describes the event of a teacher remaining in their positions from one year to the next.

Size of School

Size of School refers to the number of students enrolled at a school as defined by the University Interscholastic League (U.I.L.) that is 1A, 2A, 3A, 4A, and 5A.

Subsequent terminology as defined by the PRISE Research Group is used to reference U.I.L. categories and thus the number of students enrolled at a campus: small (1A); medium (2A and 3A); and large (4A and 5A) schools (Bozeman & Stuessy, 2009b).

Teacher Professional Continuum (TPC)

TPC is referenced in this body of work as defined by the PRISE Research Group. PRISE describes the high school science TPC as "the professional lives of high school science teachers along the continuum of their recruitment, induction, renewal, and [retention] in the teaching profession" (Bozeman, Stuessy, Hollas, Spikes, Richardson, Vasquez, Yoo, & Ivey, 2010, p.7). Within this document both the terms "high school science teacher professional continuum", "teacher professional continuum", and "TPC" will be used and carry the afore mentioned meaning.

Teacher Type

Teacher type references three categories of teachers based on their years of teaching experience. Beginning teachers are those teachers within their first three years of teaching. Mid-career teachers are those teachers having between 4-7 years of experience in the profession. Veteran teachers are those teachers who have 8 years or more of teaching experience (Stuessy, Bozeman, Ivey, 2009).

Significance of the Dissertation Study

The dissertation is intended to contribute to the understanding of teachers' recruitment experiences for their current positions, schools' recruitment practices for teachers' and how job-choice decisions are made by teachers during the recruiting process. The study also sought to characterize recruitment practices associated with job

satisfaction and retention of teachers. The issues are examined by assessing the recruitment experiences of a diverse group of high school science teachers in Texas and their perceptions about their experiences, including the reasons affecting their decisions to accept their current positions. Results of the study serves the pre-service teacher as a reference or guide for engaging in the recruitment process, mainly assuming a proactive role during the recruitment process that exhorts the pre-service teacher as a "decision-maker" communal to the school hiring group. Results of the study help administrators and other policy makers to develop a deeper understanding of specific factors influencing teachers' decisions to accept their positions and the nature of teachers' reasoning process about open positions including assumptions associated with job choice. Policy-makers are also privy to factors influencing teachers' decisions to accept their positions associated with the size of school or minority student enrollment numbers at a school. Results of the study benefit future researchers by identifying elements of the recruitment process that may exert a significant influence on teachers' decisions to accept a position, including those specific to the size of school and minority student enrollment numbers at the school. Additionally, recruitment activities potentially associated with teacher job satisfaction and teacher retention will be identified. The results of this dissertation study include a descriptive synthesis and analytic review of the recruitment experiences of high school science teachers for their current positions and a proposed model for recruitment addressing teacher job satisfaction and teacher retention.

CHAPTER II

LITERATURE REVIEW

In the1980s a series of national reports (Darling-Hammond, 1984; National Academy of Sciences, 1987; National Commission on Excellence in Education, 1983) projected a shortage in the number of public schools teachers. Thirty years after the initial warning, teacher shortages still represent one of the nation's leading problems in public education. Stakeholders and policymakers in education fear that the limited availability of teachers will require school systems to lower teaching standards (National Commission on Teaching and America's Future, 1997) and fill open classroom positions with teachers who are less qualified, thus threatening the quality of teaching and learning in the Nation's schools (National Council for Accreditation of Teacher Education, 2001). Reports by groups such as the National Commission on Excellence in Education (1983) have suggested that teaching be made "a more rewarding and respected profession" (p. 26) through highly deliberate measures (e.g., incentives, teacher preparation program co-designed by master teachers, and diversification of school recruitment efforts.) In response, numerous new policies and practices (e.g., Teach for America, Troops to Teachers, Alternative Certification Programs, "grow your own programs") were initiated at the federal, state, and local levels to reduce the shortages of teachers. Nevertheless, teacher shortages remain a problem. In many instances, teacher shortages have persisted because many teachers leave their positions before retirement (Ingersoll, 2001). As many as half of all novice teachers in the nation leave the profession during their first five

years of teaching (Ingersoll & Smith, 2003, The National Commission on Teaching and America's Future and NCTAF State Partners, 2002). Novice teachers, however, are not the only ones leaving their positions. Significant numbers of mid-career and veteran teachers are also vacating their teaching positions for reasons other than retirement (Ingersoll, 2001).

Problem

The nation is experiencing a shortage of teachers in public schools. It is estimated that over the next ten years the nation will need between 2.2 million and 2.4 million teachers to fill open positions in public schools (http://hubpages.com/hub/Where-Are-the-Teacher-Shortage-Area). Shortages of teachers are not dispersed uniformly among school types and content areas (Patterson, 2002; Hirsch, 2001). The shortages of teachers are greatest among schools in urban and rural communities and in content areas such as biology, physics and chemistry (College Board, 2006).

Conventional theory holds that the shortage of teachers faced in America is due to increases in student enrollments and the number of teachers retiring (Ingersoll, 2001). These factors alone, however, cannot account for the currently elevated turnover rates of teachers. Ingersoll's (2001) empirical research study on teacher turnover and teacher shortages has called this phenomenon the "revolving door."

The state of Texas reflects the shortages experienced by the rest of the United States. Between 1996 and 2002, a six-year span, Texas experienced a 47 percent increase in the demand for public school teachers (Fuller, 2002). The State Board for

Educator Certification (SBEC) indicated that while there were only 14,000 new teacher recruits, there were more than 44,000 open positions in public schools for the 2000-2001 school year (Texas A&M University System, 2001). A policy brief on teacher mobility in Texas released in 2009 by the PRISE Research Group estimated that if the population of Texas were to remain constant, 3,500 to 4,000 new teachers will need to be hired to replace teachers lost to attrition over the next ten years (Stuessy, Bozeman, & Ivey, 2009). Between the 2007-2008 and 2008-2009 school years alone, approximately thirty-five percent of novice teachers (1-3 years) in Texas left the teaching profession. Mid-career and veteran teachers left the profession at lower rates, between twenty and twenty-five percent (Stuessy, Bozeman, & Ivey, 2009).

Shortages of teachers, in particular science teachers, represent a significant problem for schools. Some employee turnover can be beneficial to organizations, such as schools. Low turnover rates can reduce stagnancy, facilitating innovation as newly trained teachers add fresh knowledge and skills to the collective professional knowledge of the school and remove low-performing employees. The vacancies in job positions the removal of low-performing employees create makes positions available for higher performing individuals. While low employee turnover rates can be beneficial, higher rates of turnover can be detrimental to organizations (Mobely, 1982). High levels of employee turnover can weaken the professional morale of employees. For example, a sense of instability may be experienced by remaining employees as excessive numbers of employees leave or are removed from the organization (Mobely, 1982). Mobely (1982) suggests this may be especially true in organizations that depend on extensive

interaction and continuity among the employees. The teaching profession represents one such institution.

Teachers are not the only ones affected by teacher shortages at a campus. Students are affected as well. Students lose the advantage of being instructed by a teacher who has had the benefit of experiencing the time necessary to become familiar with school culture and who are now ready to focus on classroom instruction. Research study findings suggest that students learn best from teachers who are adjusted to the school culture and are now prepared to focus on classroom instruction (e.g., Feiman-Nemser, & Parker, 2002; Feiman-Nemser, Carver, Katz, & Schwille, 1999).

In addition, high levels of employee turnover can place organizations at a financial deficit. The National Commission on Teaching and America's Future (2007) reports that teacher attrition cost the American public education system $7 billion dollars each year. This includes the costs of finding, preparing and training new teachers to replace the ones who have left (The National Commission on Teaching and America's Future, 2007). In many instances, the effectiveness of a school system may actually depend on factors such as recruitment and retention of teachers. Statewide, estimates of costs to Texas schools from teacher turnover are 329 million to 1.59 billion dollars per year (Benner, 2000).

Recruitment Practices in Schools

Teacher shortages have such far-reaching and significant effects on students, teachers, and the schools at large. As a result, many educational policy reforms address the shortages of teachers by focusing on increasing the teacher pool. As such, school

recruitment practices have received significant attention. A review of the literature on recruitment practices (Clewel et al., 2000) suggests that the practices schools use to recruit teachers are diverse.

Recruitment Practices in Texas

The PRISE Research Group confirms these findings among schools in Texas (Stuessy, 2009). The PRISE Research Group used modified random stratified sampling to identify a sample of Texas public schools representative of the entire population. Fifty sample schools were selected to represent all 1,333 public high schools in Texas. In the 2007-2008 school years, principals from fifty schools were interviewed to understand schools' practices and policies for recruiting high school science teachers. Other data sources, including demographic information from sample high schools and school master schedules, were used by the PRISE Research Group to understand the unique recruitment practices at each school. Findings indicated high schools in Texas employ many different recruitment practices and these practices varied by size of school. They concluded "one size does not fit all" (Richardson & Stuessy, 2010).

The PRISE Research Group identified five major recruitment categories and sub-categories of practices used by Texas schools to recruit science teachers: (1) Networking, (2) Marketing, (3) Incentives, (4) Teacher Identification, and (5) Interviewing. Nearly 30 percent of high schools in Texas identified using practices in three categories (Networking, Teacher Identification and Marketing). Less than ten percent of principals stated their schools used Incentives in their recruitment practices. Fewer than eight percent reported using Interviewing as a recruitment practice. Details

of these findings reveal significant information about the recruitment practices of Texas high schools to fill high school science teaching positions.

Networking practices. The PRISE Research Group found Networking practices represented the most frequently mentioned category of recruitment practices in Texas high schools. Networking practices related to such activities of the school as attending job fairs outside the district (56%), posting on district and or school website (54%), advertising by word-of-mouth (52%), posting open positions on a regional Education Service Center (ESC) website (48%), contacting colleges of education (46%), collaborating with teacher preparation institutions or alternative certification programs (26%), contacting alternative certification programs (24%), using print media to advertise vacancies (22%), posting vacancies on external professional websites (22%), networking with administrators (20%), and contacting science teachers from other schools (18%). Less than fifteen percent of principals indicated that their schools participated in or used district-level job fairs (14%), grow your own community-based programs (10%), district databases for availability (10%), online websites for teacher availability (6%), or out-of-state contacts (2%). (See Richardson & Stuessy, 2010, for more details.) Schools that used networking practices made valuable information about their campuses available to prospective candidates and teacher preparation institutions. Some school districts even purchased billboard space along major highways to advertise open positions in their district. Media sources, such as videos, brochures, and flyers, provided university placement centers and alternative certification programs with information relating to the practices and culture of the school. PRISE findings

corroborate national findings by Johnson, Berg and Donaldson (2005). These authors stated that schools presenting an accurate picture of school culture and significant school features, as conveyed through media sources, provide prospective teachers with key information needed to decide whether a school is a good fit for them (Johnson, Berg & Donaldson 2005).

Teacher identification practices. While the PRISE Research Group found Networking represented the most frequently mentioned category of recruitment practices, identification of teachers with personalities matching those of other teachers in the science department (i.e., "personality matching") represented the single most frequently mentioned strategy by high school principals. Personality matching represented a sub-category of practices within the larger category Teacher Identification. Sixty percent of high schools principals stated their schools used personality matching to identify teachers for open positions during the recruitment process. The category Teacher Identification also included practices such as: certification (e.g., composite or subject specific), professional content knowledge (i.e. student and subject knowledge, science pedagogy and classroom management), and personal and community focus (e.g., desire of candidate to work with students, desire of candidate to live in the local area of the school). One out of ten small schools as compared to one out of two medium and large-sized schools in Texas indicated the identification of specific teacher qualities as being a challenge during the recruitment process (Richardson & Stuessy, 2010).

Marketing practices. Marketing was identified by the PRISE Research Group as the third most frequently used category of recruitment practices by high school science

principals in Texas (Bozeman, Stuessy, Hollas, Ivey, Richardson, Spikes, Vasquez, & Yoo, 2009). During interviews, Texas high schools principals reported they used the following marketing practices to recruit teachers: advertising campus characteristics (e.g., school size, campus size, academic reputation, athletic reputation, student reputation); advertising campus science resources (e.g., professional development opportunities, new teacher support, science facilities, laboratories, diverse science courses, and collegial/family work environment); and advertising community characteristics (i.e., access to informal science, community resources, environment and/or geography and local economics). (See Richardson and Stuessy, 2010).

Incentive practices. PRISE results also indicated that Texas high schools used Incentives to recruit science teachers. Incentives, however, were used less frequently than other practices. Incentive practices included science-specific stipends, science signing bonuses, living expenses, competitive salaries, and financial assistance for certification (Richardson & Stuessy 2010). Richardson, Troncosco-Skidmore, and Wilson (2007) reviewed the literature regarding teacher recruitment for the PRISE Research Group, which resulted in a white paper (http://prise.tamu.edu). In this paper, the authors identified best practices in the educational research literature, which they clustered into five distinct categories of school-based recruitment practices including use of a variety of hiring incentives. In addition the authors found previous empirical and investigative studies (e.g., Clewell, Drake, Davis-Googe, Forcier, & Manes, 2000; Guarino, Santibanez, & Daley, 2006; Torres, Santos, Peck, & Cortes, 2004) suggested that “incentives” should be purposefully used by schools during recruitment based on the

unique needs of the teacher candidate. For example, school recruitment programs particularly effective in attracting new teachers used incentives such as scholarships, loan forgiveness, summer employment, and academic and social networks. On the other hand, school recruitment programs particularly effective in attracting re-entrant or retired teachers offered refresher training courses, signing bonuses, increased salaries, and transfers of pensions and licenses (Clewell et al., 2000).

Interview practices. The PRISE Research Group also noted that interview practices were the least frequently used recruitment practice. High school principals mentioned the Interviewing practice "Actors" most frequently. Actors refereed to the practice of including campus personnel (e.g., principal, science department head, science teacher, non-science teacher or campus group). Other less commonly used types of Interview Practices included pre-interviewing (e.g., screening tests) or on-site strategies (Richardson & Stuessy, 2010). Research studies (e.g., Carless & Imber, 2007; Liden, Martin, & Parson, 1993; Schmitt & Coyle, 1976) have indicated the influential role of the personality of the interviewer in a candidate's decision to accept a job position.

Liu and Johnson (2006) in their study of first and second year teachers in California, Florida, Massachusetts, and Michigan reported data discrepant to the findings of the PRISE Research group. Liu and Johnson (2006) found that a majority of new teachers (91%) were involved in at least one interview for their current positions. While the study found that a number of individuals (e.g., district personnel, school principal, other school administrators, current teachers, parents, and students) could be involved with the new teacher candidate during the interview process, most frequently teacher

candidates interacted with the school principal. In the four states, about 80% of the individuals with whom new teachers interviewed for their current position were their school principals. The percentage of new teachers who interview with personnel other than their school principals during the hiring process drops to 45.6% current teachers at the school, 34.9% district personnel/HR office, 33.2% school administrators (other than the principal), 14.7% department chairs, 9.0 % parents at the school and 0.1% students at the school. The discrepancy between the PRISE Group findings and Liu and Johnson's study could be due to state-and-regional level differences, or the working definitions of "interview" practices as used by the two groups. Furthermore, the PRISE Research Group considered the recruitment experiences of new, mid-career and veteran teachers without differentiating them. Liu & Johnson (2006) studied a subset of teachers, specifically new teachers in their first and second years of teaching.

Not much is understood about the effectiveness of diverse recruitment strategies in attracting specific "teacher-types." The National Center for Education Statistics (Broughman & Rollefson, 2000) identified teachers newly hired by schools as one of four types based on their paths into the profession: (1) Newly Prepared Teachers, (2) Delayed Entrants, (3) Transfer, and (4) Reentrants. Several authors (e.g., Clewell et al., 2000; Guarino, Santibanez, & Daley, 2006; Torres, Santos, Peck, & Cortes, 2004) suggest that recruiting institutions approach the recruitment process with discretion, purposefully matching recruitment incentives to the type of teacher candidate they desire to attract. In their literature review of recruitment programs, Clewell and colleagues (2000) suggested that recruitment programs and practices boasting specific features are

more likely to attract one teacher type over the other. Recruitment programs with features such as scholarships, loan forgiveness, summer employment, academic and social support systems, transportation stipends, school and district based training and a streamlined application process were particularly effective in attracting newly-minted teachers. A similar set of features were successful in attracting Delayed Entrant teachers to teaching. Transfer teachers were attracted to recruitment practices featuring a streamlined application process and easily accessible employment opportunities. Reentrant teachers were particularly responsive to recruitment programs offering signing bonuses, increased salaries and benefits, pensions and licenses transfers, favorable placement on the district salary schedule, refresher training opportunities, and home-buying grants. (See more details in Clewell et al., 2000.)

Within the field of education, theory development still needs to occur regarding reasons why certain recruitment features have the effects they do. It is questionable as to whether similar patterns may be observed when the variable "teacher-type" is viewed as the ethnicity of the teacher. A most hopeful outcome would be that such patterns would better enable homogenous school types (e.g., high minority schools) to attract teachers representative of their student body. Goldhaber and Player (2005) and Torres and associates (2004) considered the purposeful use of recruitment incentives. They viewed recruitment incentives as practical ways for schools to recruit toward a specific demand for teachers and to build a teacher faculty mirroring the student body of the school.

The white paper by Richardson, Troncosco-Skidmore, and Wilson (2007) revealed that the recruitment process is complex and involves more than the purposeful

use of incentives to attract teachers. These authors suggest schools and districts employ "active, effective, coherent recruitment processes for all teachers" (p. 6). These processes were clustered into five distinct categories of school-based recruitment practices: (1) efforts to actively expand the teacher pool; (2) regular evaluations of recruitment practices; (3) use of a variety of hiring incentives, (4) selection from an assortment of high quality recruitment media, and (5) establishment of a streamlined hiring process (Richardson, Troncoso-Skidmore & Wilson, 2007).

Breaugh & Starke (2000) reviewed the literature on employee recruitment and also suggested the recruitment process is complex. These authors concluded that attention be focused on the entire recruitment process rather than on one aspect of it (e.g., effects of recruitment sources, recruiters, realistic job previews, etc.). In discussing the recruitment process, these authors proposed an organizing framework delineating five phases: (1) recruitment objectives (e.g., retention rates, job performance, job satisfaction); (2) strategy development (e.g., whom to recruit, where to recruit, and what message to communicate); (3) recruitment activities (e.g., recruitment sources, recruiters); (4) intervening/process variables (e.g., applicant attention, applicant comprehension, message credibility, accuracy of applicant's expectations) and (5) recruitment results (i.e. compare outcomes to objectives).

Collectively these studies suggested the recruitment process is not a unilateral process but involves many interacting variables. Recruitment practices that have assumed an overly simplified perspective of recruitment may not be most effective in increasing recruitment rates, retention, or job satisfaction. In fact, authors, including

Ingersoll (2001), have identified the ineffectiveness of recruitment practices in addressing the teacher shortage. These claims warrant examination. In particular, examination of the validity of such claims in the light of recruitment models considering the complexity of the recruitment process has to be considered by researchers.

Opposition to Recruitment Practices

Ingersoll (2001) contends that recruitment practices alone cannot reduce teacher shortages. Using data from a nationally representative survey of teachers, the Schools and Staffing Survey and the Teacher Followup Survey, Ingersoll (2001) identified organizational characteristics as a cause of school staffing problems, thereby minimizing the importance of recruitment practices to increase the teacher pool and reduce the shortages of teachers on campuses. Organizational factors were identified after findings in his study indicated major contributors in teacher turnover to include teacher job dissatisfaction and teachers' pursuits of better jobs or other careers (Ingersoll, 2001). After controlling for teacher and school variables, organizational factors such as "low salaries, inadequate support from the school administration, student discipline problems, and limited faculty input into school decision-making all contribute to higher rates of turnover" (Ingersoll, 2001, p. 5). In short, Ingersoll's analysis suggested school staffing problems are neither synonymous with, nor primarily due to, teacher shortages in the conventional sense of a lack or deficit of qualified candidates. Rather, the data suggest school staffing problems are primarily due to excess demand resulting from the "revolving door," where large numbers of teachers depart their jobs for reasons other than retirement (Ingersoll, 2001, p. 5).

Findings from Ingersoll's study have important implications in dismissing demographic trends including increased student enrollments and increased teacher retirement (due to the aging of the Baby Boomer generation) as the sole culprit of the teacher shortage (e.g., Aaronson, 2008; Pytel, 2007; Werneck, 2001) . Given the role of school organizational factors in producing a revolving door and perpetuating teacher shortages on campus, Ingersoll (2001) concludes recruitment practices "alone will not solve staffing problems of schools if they do not address the organizational sources of low retention" (Ingersoll, 2001, p. 5).

Stakeholders in education (e.g., Liu & Johnson, 2006; Winter, Ronau, & Munoz, 2004) have suggested recruitment practices for teachers have not been as effective in today's labor market because the theoretical approach to recruitment is flawed. The traditional theoretical approach to recruitment perpetuates recruitment as marketing theory in which to obtain applicant decisions …favorable to the hiring organization [school or school district], the organization should present itself in the most favorable way possible and conduct its recruitment and selection procedures in a manner that is maximally attractive to job applicants (Liu & Johnson, 2006, p. 329, from Winter, Ronau, & Munoz, 2004, p. 89).

The traditional recruitment theory has several flaws. First, hiring organizations (or schools, in our instance) do not present prospective candidates with all the information necessary for them to make an "informed decision" about the school. Plainly spoken, schools hide their "warts." A second flaw with traditional recruitment theory is its assumption that only the hiring organization fulfills the role of "evaluator." In effect,

prospective candidates also evaluate. They evaluate the hiring organization; and they need rich information to do this. “Rich information” comes from tours of the school campus and community; meetings with other staff and faculty; preview of the curriculum and facilities; and the school policy documents regarding mentoring and professional development support.

The flaws in traditional recruitment theory (Winter, Ronau, & Munoz, 2004) suggest three things relating to the teacher candidate and the school: (1) teacher candidates, as well as schools, are evaluators; (2) as an evaluator, teacher candidates make decisions based on an assessment of their personal needs or preferences; and (3) teacher candidates may be misled during the recruitment process due to a limited disclosure of information by the school. Truly assessing the “fit” or “match” of the school to the candidate’s personal needs or preferences requires, further in-depth assessment is necessary. Teacher candidates must assume a proactive stance to project the idea that recruitment is a dynamic and complex process in which the requirements and needs of both teacher candidate and hiring organization have to converge if teacher job satisfaction and retention are to be achieved.

Teachers as Decision-Makers

Teachers are evaluators. The dynamic context of classroom teaching requires teachers to constantly evaluate their environments and make hundreds of decisions every day. Education research on the process by which teachers make instructional decisions in their classrooms has been conducted (e.g., see Brownlee, Boulton-Lewis, & Purdie, 2002; Kang & Wallace, 2005; Luft & Roehrig, 2007; Magnusson, Krajcik, & Boroko,

1999;Lumpe, Haney, & Czerniak, 2000). Less is understood, however, about the processes by which teachers make decisions to accept their current positions. In many instances, teacher recruitment practices represent the first line of defense against teacher shortages at a campus. For this reason, understanding how teachers make decisions to accept or decline an open classroom position is important.

The decision-making process of teacher candidates has not been studied with as much rigor as other areas within teacher selection research. Most teacher selection research has focused on the decision-making process of administrators. Specifically, the research has focused on macroanalytic and microanalytic aspects within decision-making. Researchers studying macroanalytics have searched for predictors of teacher performance with hopes that these predictors could be used to select teachers (Young, Rinehart & Place, 1989). (See also Quirk, Witten, & Weinberg, 1973; Schalock, 1979; Greaney, Burke & McCann, 1999; Duckwort, Quinn, and Seligman, 2009.) On the other side, microanalytic researchers have attempted to identify the variables that influence administrators' decisions related to the selection of a job candidate (Young, Rinehart & Place, 1989). (Reference Cable & Gilovich, 1998; and Young, 2005.) Young, Rinehart and Place (1989) suggest that results from macroanalytic and microanalytic fields of research have increased the base of knowledge about teacher selection from the perspective of the administrator; however, they assert much still remains to be understood about selection from the perspective of the teacher candidate. Acknowledgement of both the administrator and teacher candidate as decision-makers within the teacher-selection process represents a holistic view of teacher selection, which

could contribute to the design of effective recruitment practices leading to the alleviation of the revolving door as discussed by Ingersoll (2001) and teacher shortages. As well, recruitment practices founded on the consensual perspective of administrator and teacher candidate as decision-makers could also increase teacher job satisfaction and retention.

Traditionally, decision-making during the recruitment process has been conceived as a one-way process in which the employer is the sole decision-maker. During the hiring process the employer collects information about the candidate in order to form an accurate impression of him or her that will influence a decision for hiring. This model limits the role of the teacher candidate during the hiring process. In addition, it assumes the teacher candidate does not have a participatory role in agreeing or declining to become an employee of the school. However, we know this is not true. Teacher candidates, ultimately, have the final say about their career experiences. While a school may want to hire a particular teacher candidate and chooses to offer available recruitment incentives, the teacher candidate has the final say in choosing to accept or decline the position. This autonomy continues post-hire as well. While a school may be anxious to retain new teachers, the decision of a new teacher to remain in her current position is hers to make. Post-hire job statistics in Texas indicate about twenty percent of novice teachers in Texas left the teaching profession between the 2007-2008 and 2008-2009 school years (Stuessy, 2009). As such, decision processes about job placements occur during recruitment, hiring, and throughout the teacher's career. Such consideration may not only help schools meet their immediate goals of having teachers fill open positions but may also help schools meet their long-term goals of teacher job satisfaction

and retention. PRISE research findings in progress indicate job satisfaction and retention have substantial effects on school climate and student achievement (C. Stuessy, personal communication, July 15, 2010).

Theories of Job Choice

Perhaps before educational researchers, industrial and organizational psychologists have recognized the role of the applicant (or teacher candidate) as a decision-maker within the selection process (previously discussed). Research studies in the area of industrial and organizational psychology have suggested that the decisions of applicants to accept or decline a position were "influenced systematically by certain aspects of the selection process" (Young, Rinehart, & Place, 1989, p. 329). Three theories of job choice were used to organize these findings: (1) Objective, (2) Subjective Factor, and (3) Critical-contact. These theories were conceived by Behling, et al., (1968) and have been developed over the years by subsequent researchers.

The Objective theory of job choice depicts candidates as "economic beings" (Young et al., 1989). Implicit in this perspective is the idea that teacher candidates select a position "based on a weighing of the advantages and disadvantages of each offer in terms of objectively measurable factors" (Behling et al., 1968, p. 14). Objectively measurable factors may include salary, benefit programs, long and short term opportunity for advancement, and location. It is hypothesized that each of these factors "is weighted in terms of its relative importance to the individual (teacher candidate), and the results are combined into some over-all index of desirability" (Behling et al., 1968, p. 15). When depicted in advertisement literature, factors such as salary, benefits, and

opportunities for advancement are often presented as a bold-faced listing, suggests Behling and associates. (1968). For example, three-fourths of the left panel of a district brochure advertising open classroom positions may be dedicated to a bolded, 16pt. font, bullet-point list emphasizing first-year teacher salary, and signing bonuses, as well as various aspects of a first-rate family insurance plan. Behling and associates (1968) would explain the typical goal of most schools is to present themselves in the best light and that this practice carries the assumption that the objective factors are the most important in the candidate's decision to choose to accept a position. This predominant view has been debunked in many instances by recent studies on teacher selection (e.g., see Young et al., 1989, Judge & Bretz, 1992).

The Subjective theory of job choice describes applicants as psychological beings motivated by psychological needs (Young et al., 1989, p. 330). Subjective theory emphasizes the perceived ability of the organization or school "to provide satisfaction for deep-seated and often unrecognized emotional needs of the candidate" (Behling et al., 1968, pp 15-16). Gellerman (1963) explains,

Thus the security-oriented individual will be attracted to a solidly established firm with a reputation for paternalism, while the socially ambitious man will seek a firm that he thinks is likely to advance rapidly to a position of prestige or at least likely to reflect a little of its corporate glory onto him (Behling et al., 1968, p.16).

The assumption is that teacher candidates will choose to accept the position which is perceived to have a work environment that "is most conducive to their particular psychological needs" (Young et al., 1989, p. 330).

Behling and associates (1968) further defined the Subjective theory as a candidates' desire to establish congruence between basic personality patterns and the "image" of the firm to satisfy those needs in the candidate as a determinant in the job selection process. Subjective factor theory is best displayed in the concern of some schools to project a progressive and informal work environment. Proponents of Subjective theory hold that objective factors (incentives) are only used to enhance or detract from the candidate's perceived image of the firm to satisfy psychological needs in the candidate. Researchers propose the image of a firm held by candidates was developed by secondary sources long before the candidate began "actively" to seek employment. They also suggested the image of the firm to satisfy the psychological needs of candidates is relatively fixed and resistant to change (Behling et al., 1968).

Critical-contact theory describes teacher applicants as rational beings rather than economic or psychological beings. As rational beings, teacher candidates are concerned with the work itself over incentives or the work environment (Young et al., 1989). Critical-contact theory assumes that job choice for rational beings "is influenced by the specific job requirements and job expectations communicated during the initial contact with an organization or school" (Young et al., 1989, p. 330). Economic incentives and psychological aspects are negated within Critical-contact theory because of two assumptions: (1) the variance between competing organizations relating to economic incentives is too small to represent any substantial differentiation, and (2) candidates' exposure is too brief for a meaningful assessment of the organization to be made (Young et al., 1989). In other words, the teacher candidate may see the Objective (economic

incentives) and Subjective (satisfaction of psychological needs) offers presented by schools as making the schools more or less identical. Because the teacher candidate is unable to differentiate between the schools' offers, she will choose to base her selection on the job requirements and job expectations communicated to her during her first contact with the organization.

The use of Objective, Subjective, and Critical-contact theories of job choice have been confirmed by business and management literature. Traditionally, this support has been based on the findings from retrospective studies and laboratory simulations (Young et al., 1989). Retrospective studies are based on candidates' recall of interview experiences. Classic retrospective studies include those by Alderfer and McCord (1970), Hilgert and Eason (1968), Schmitt and Coyle (1976), and Sutton and Carlton (1962). (See Young et al., 1989.) Laboratory simulations of job choice use the manipulation of variables within a controlled setting to identify salient aspects of job selection (Young et al., 1989). Rynes, Heneman, and Schwab (1980) provide examples of laboratory simulations. While beneficial to understanding aspects of job selection, retrospective studies and laboratory simulations have limitations. Retrospective studies are limited in that labor markets can rapidly change. Rynes and Miller (1983) suggest that labor market conditions can influence the selection process of candidates (Young et al., 1989). Because retrospective studies involve candidates' recalls of an interview experience, candidates' experiences and thus research findings may not apply to the current "climate" of the labor market. A similar phenomenon may be experienced with laboratory simulations that do not control for parameters of the current labor market

(Young et al., 1989). Within the field of job selection, supplementary research studies appropriately relating to the labor market context are needed. (It is important to note here that my research study design will address this need.)

In addition, retrospective and laboratory simulation studies have been described as limited in their discussion of teachers as job candidates involved in the selection process (Young et al., 1989). Papers by Rynes and Lawler (1983) and Young and Heneman (1986) provide two such classical studies. These studies are critically reviewed in Young et al. (1989). Rynes and Lawler (1983) investigated the role of subjective theory in teachers' job choices. In the study, work environment (geographic location of the school; i.e., midwest, northwest, north east, and southwest); location of the school district within the state (i.e., small city, inner city, and suburban area); and grade level taught (i.e., primary or middle school) were manipulated to ascertain teacher selection behaviors (Young et al., 1989). These variables were manipulated through various written job descriptions, supposedly relating to open classroom positions, distributed to preservice teachers participating in the study (Young et al., 1989). Evaluation of the research data revealed that Midwestern elementary school preservice teachers preferred teaching positions that would allow them to remain in the Midwest and that were not in inner city schools (Young et al., 1989). Furthermore Rynes & Lawler (1983) suspect certain personality traits (subjective factors), such as need for achievement, "may be important sources of individual differences in search and choice behaviors" (pp. 628-629).

Young and Heneman (1986) examined critical contact theory in job choice for teachers. In this study, the probability of a teacher candidate accepting a job position and a candidate receiving a job offer was assessed as experienced teachers and administrators role-played the part of interviewees and interviewers (Young et al., 1989). These probabilities were then regressed against a series of variables drawn from from previous studies (e.g., source of job information, interviewer age, and interviewer personality); (Young et al., 1989). Research findings from Young and Heneman (1986) indicated that the personality of the interviewer was the only variable accounting for variance in teacher candidates' perceived probability to accept and receive a job offer (Young et al., 1989).

A final limitation of research relating to theories of job selection is that many studies have not manipulated objective, subjective, and critical-contact variables within the same experimental setting (Young et al., 1989). Typically, classical studies have focused on examining one theory of job choice at a time. While this is useful to understanding systematic variance associated with job choice, assessment of objective, subjective, and critical-contact theories concurrently gives a more organic and holistic perspective of teachers' selection processes.

Teacher-to-School Match

Assuring that open positions are staffed with classroom teachers before the start of the school year is important. Liu and Johnson (2006) asserted it is important to consider whether hiring practices used by schools are "effectively matching new teachers to schools and positions" (p. 325). In their study of the hiring experiences of

486 first- year and second-year teachers in Michigan, Massachusetts, Florida and California, Liu and Johnson (2006) suggested “good matches” between teachers and their schools’ positions are important for two reasons. First, a good match can influence teacher effectiveness. One school and its teaching positions are different from another school and its teaching positions (Liu & Johnson, 2006). For example, when “school” as a single variable is viewed, The PRISE Research Group showed that schools differ in characteristics relating to campus size, geographic location, minority student enrollment profile (Stuessy, 2009). Furthermore, the skills, knowledge and disposition required of a teacher to be effective in teaching Advance Placement Chemistry in an affluent, suburban and homogeneous high school are different from those needed to teach untracked General Science in a working-class, urban, and heterogeneous middle school (Liu & Johnson, 2006, p. 325). As such, a new teacher’s effectiveness in her classroom position may rely not only on her general qualifications but also on the match between her particular skills, knowledge, and dispositions and the position she has been hired to fill (Liu & Johnson, 2006). Second, Liu and Johnson (2006) suggested that the match between a new teacher and her position can relate to her satisfaction and retention on the job. They reasoned the teacher’s professional preparation, interests and preferences that “match” the position being hired for affect her levels of satisfaction and ultimate decisions to leave or remain as a teacher at the school or even to remain in the profession (Liu & Johnson, 2006).

Realistic Job Previews

Johnson, Berg and Donaldson (2005) suggested key information relevant to a candidate's decision to accept or reject a position resides in the reality of the picture presented of the school culture and other significant features. Realistic job pre-views may provide a means for teacher candidates to become acquainted with the culture of the school and other significant features and aid in the facilitation of a teacher-to-school match before a decision to accept a position is made.

Breaugh and Starke (2000) describe recruitment as a complex process involving the interaction of a number of variables. One such variable is realistic job previews (RJP), which refers to "the presentation by an organization of both favorable and unfavorable job-related information to job candidates" (Phillips, 1998, p. 673). Examples of unfavorable job-related information might include time challenges associated with a position, complex employee-client interactions, and limited organizational resources. A school recruiter expressing good faith in the effectiveness of RJP may choose to inform teacher candidates during the interview process of time challenges and interactions with difficult students and or parents (both presumably negative features) associated with the job position at his/or her school. It is the expectation of the recruiter that the early disclosure of this information would bring about greater attraction to the position, retention and job satisfaction once the candidate is hired than reporting exclusively positive messages. A school's failure to provide an accurate portrayal of the school environment to candidates may contribute to the candidate's holding inaccurate job expectations. Wanous (1992) in a review of RJP

studies indicated new employees often report experiencing unmet expectations. RJP may be especially important in teacher recruitment, where teacher candidates may not have information about the climate and culture of the school and other job related responsibilities. Furthermore, RJP may influence recruitment process variables and several outcome variables (Phillip, 1998). The realistic information hypothesis may pose an explanation as to why various recruitment sources are differently associated with outcomes (Breaugh & Starke, 2000). Multiple models of the process by which RJP may affect such variables as job survival (retention), work attitudes (job satisfaction), and job performance exist. (See Saks and Cronshaw, 1990; Shetzer and Stackman, 1991; Breaugh, 1992; Wanous, 1992; Fedor, Buckley and Davis, 1997; Hom, Griffeth, Palich and Bracker, 1998; Phillips, 1998; and Thorsteinson, Palmer, Wulff, and Anderson, 2004 for proposed models.)

While there are many methods for conducting an RJP, O'Nell, Larson, Hewitt and Sauer (2001) advise, however, that RJP be developed and implemented with the guidance of existing direct support staff, frontline supervisors (such as principals), other administrators, human resource personnel, and other vested individuals (such as parents). Budget and time are considerations as an organization chooses among a myriad of formats for a RJP. Within the field of human services nine types or formats for RJP have been defined (O'Nell, Larson, Hewitt & Sauer, 2001). Each type holds a set of benefits and disadvantages. Structured observation represents one type of RJP. Structured observation within the context of teacher recruitment would involve a teacher candidate visiting the school and engaging in observations purposefully arranged by school

personnel. While the employer may spend some time talking with the candidate, the candidate is expected to assume responsibility in gathering the information he or she needs. In that regard, working staff are focused on performing their duties in their usual way (O'Nell et al., 2001). Structured observations are inexpensive to the employer and can be easily customized to meet the needs of the teacher candidate. A disadvantage of this type of RJP is that it may be invasive to working employees, in particular classroom teachers engaged in the instructional process with students. Additionally, structured observation may pose a challenge to candidates receiving answers for questions of interest such as pay, benefits and specific job duties.

Meetings with current workers and or parents is a second type of RJP (O'Nell et al., 2001). Meetings with current employees and vested individuals allow candidates to hear about the position in person from personnel and other individuals having experience in the setting. O'Nell and associates (2001) recommend that these meetings occur on site and that they be carried out in a private location. An sdvantage of this RJP format is that it provides the opportunity for others besides administrators to be involved in the hiring process. Disadvantages include scheduling conflicts and that staff and faculty may be required to take time away from their regular job duties.

Pre-application screening is yet another RJP. Pre-application screening is initiated by the candidate usually upon calling the organization and/or requesting an application. Traditionally designed to be brief, pre-application screening assures that candidates meet minimal job requirements; screening also provides information about pay, benefits and specifications of the position. Designed properly, pre-application

screening should save the organization and candidate valuable time should the candidate be ineligible or not interested in the position (O'Nell et al., 2001). While pre-application screening is advantageous in the selection process, it can be challenging to facilitate. Pre-application screening mixes two distinct activities: (1) helping the employer assess whether or not a candidate will be a good match for the position and (2) helping candidates decide whether the position is suitable to their needs. Unlike meetings with current workers, consumers and or parents, information about the position is provided to the candidate by supervisors (administrators) or human resource personnel rather than laymen (O'Nell et al., 2001).

Videotapes are another type of RJP. Videotapes can be made to highlight specific features of the job site and duties associated with the job position. O'Nell and associates (2001) suggest administrators identify the features that show the job most realistically and cause the highest employee turnover due to a lack of information. Videotapes tend to be advantageous RJP because they can a have great impact on the viewer. They are also portable, only requiring a viewing device such as a DVD player. Videotapes can be arranged to show a variety of issues and features that may represent concerns for candidates. Furthermore, videotapes are beneficial to candidates because they can actually show current employees engaging in the tasks associated with the job position (O'Nell et al., 2001). One challenge associated with using videotapes as RJP is the difficulty of updating. Any new features of the job site or job position the employer would like to showcase would require the video to be re-recorded. Video production can also be costly, requiring expert filming and production to look professionally done.

Unlike meetings in person, videotapes do not allow candidates to meet directly with current employees (O'Nell et al., 2001). This feature could be unattractive to candidates valuing first-hand information about the job position from current employees.

Booklets or brochures can be used as a RJP. Differing in length and level of sophistication, booklets and brochures can provide candidates with positive and negative information about the job position. O'Nell et al. (2001) advised that organizations be specific about tasks associated with the position when describing them in the booklet or brochure. They advised avoiding generic word choices. Similar to videotapes, booklets and brochures are highly portable and can be distributed by employees and administrators alike. Drawbacks are that they require expert production to look polished, are less effective than other RJP in helping candidates to understand the responsibilities associated with the position, and do not afford candidates real-life opportunities to meet with current employees (O'Nell et al., 2001).

Web-based multimedia RJP involve placing comprehensive information about the position on a website that is viewed by candidates. Web-based multimedia RJP can include video clips, photos, and written information about the organization. Excelling over other RJP in flexibility of the type and format of presented information, web-based multimedia RJP are also easily accessible to candidates. Candidates can access this RJP through any internet-based media in the privacy of home, in public buildings, or at the job agency itself. Furthermore, any new developments within the job agency can be easily and inexpensively updated. Web-based multimedia can be disadvantageous in that personnel trained in web design and server maintenance are needed. In addition, server

problems can prohibit candidates from accessing valuable information (O'Nell et al., 2001).

Group RJP is a seventh type of RJP. Within a Group RJP, candidates are invited by the hiring agency to hear information about the job. Information relating to the job (e.g., job duties, pay and benefits, working conditions) is divided into short segments and presented to the group. Questions are answered at the end of each segment. Each segment is followed by a break which allows those who have decided the job is not a good match for them to leave. A benefit of Group RJP is that it enables the hiring agency to provide information to multiple candidates at a time, thus reducing the time commitment per candidate. It also conveys to candidates that it is okay to choose not to pursue the job. Group RJP can be disadvantageous to the job agency in that the cost-to-benefit ratio can be low. Substantial amounts of planning, scheduling and materials may be needed (as compared to limited accessibility) in Group RJP (O'Nell et al., 2001). For example, Group RJP requires candidates to be available at predetermined scheduled times, which may cause some conflicts with the existing schedules of candidates and potentially limit the number of available candidates for the position.

Internship or volunteer programs are another type of RJP. This RJP allows candidates who may be unsure of the job fit to engage in the position or within the context of the organization without a formal commitment. Internship and volunteer programs provide candidates with a realistic view of the job positions. In addition, they provide employers and employees on the job with information about the candidate (O'Nell et al., 2001). For example, internship and volunteer programs can allow

employers to become familiar with a candidate's professional experience and work ethic. Internship and volunteer programs can require a large investment of time on the part of the employing agency, and when compared to actual number of candidates that are deemed qualified and apply for the position, this form of RJP may be disadvantageous to the agency (O'Nell et al., 2001).

Hybrid method is the final type of RJP. This RJP combines one or more RJP types. The hybrid method can represent a more flexible and comprehensive RJP. Hybrid methods are viewed as advantageous because they can be adapted to the agency's and candidates' needs. A disadvantage of the hybrid method is that the hiring organization could lose track of the types of information that have been presented to candidates (O'Nell et al., 2001).

RJP seek to offer candidates a balanced portrayal of the organization emphasizing both positive and negative aspects of the organization (Gardner, Reithel, Foley, Cogliser, & Walumbwa, 2009). A majority of RJP models hypothesize that if candidates are provided "realistic" job descriptions they will have their job expectation met. For these reasons, RJP are influential in the recruitment process. Furthermore, schools and districts face the soaring costs of selection and retention of classroom teachers. These demand costs additional research on the relationships between realistic job previews and teacher job satisfaction and retention.

New Proposal Modified Recruitment Practices

I propose Modified Recruitment Practice (MRP) to represent a tool to address teacher shortages relating to the revolving door. MRP involves practices of recruitment

that adhere to the theoretical bases of (1) teacher-to-school match, (2) objective, subjective, and critical-contact theories of job choice, and (3) realistic job previews. While studies, such as Liu and Johnson (2006), have suggested the important literature bases for each of these elements, they have not combined the effects on teacher recruitment, job satisfaction and retention among diverse school types. (As my dissertation proposes to do). MRP can help schools meet their immediate goals of filling open positions while also helping them meet their long term goals of teacher job satisfaction and retention. Teacher job satisfaction and retention have been found to have effects on student achievement (Anderson, 1982; Darling-Hammond, 2000; Caprara, Barbaranelli, Steca, & Malone, 2006). In addition, MRPs may provide a means for "underdog" school types to compete with neighboring schools for qualified teacher candidates.

Given the traditional theoretical approach to recruitment, Ingersoll is correct in saying "school recruitment practices" will not address teacher shortages resulting from the revolving door effect. The traditional theoretical approach perpetuates recruitment as marketing theory in which

> to obtain applicant decisions …favorable to the hiring organization [school or school district], the organization should present itself in the most favorable way possible and conduct its recruitment and selection procedures in a manner that is maximally attractive to job applicants (Liu & Johnson, 2006, p 329 in Winter, Ronau, & Munoz, 2004, p. 89).

Traditional recruitment theory has several flaws. First, hiring organizations (or schools in our instance) do not present prospective candidates with all the information necessary for them to make an "informed decision" about the school. Plainly spoken, schools hide their "warts." A second flaw with traditional recruitment theory is that it assumes that only the hiring organization fulfills the role of evaluator. In effect, prospective candidates are also evaluators. They evaluate the hiring organization and they need rich information to do this.

Summary and Implications

MRP may represent schools' first line of defense against teacher shortages at their campus. A model of recruitment practice considering a match between the subject matter knowledge and expertise, interest, and talents of prospective teachers and the needs of the school may provide a means to reduce teachers' shortages and slow the revolving door in public schools. This review suggests the current ineffectiveness of teacher recruitment practices are due to antiquated approaches to recruitment. This approach perpetuates recruitment as marketing theory. While this approach to recruitment may be logical and meet the short-range goal to fill an open position, it does not consider long-range goals of having teachers who are committed to and satisfied with their current positions. Traditional recruitment theory and practice may be less effective in helping schools meet long-term goals of teacher job satisfaction, teacher retention, and student achievement.

The purpose of this literature review was to summarize the current understandings of school-based recruitment practice and provide stakeholders in

education with an initial understanding of an alternative model of recruitment practice. The alternative model facilitates teacher recruitment as a cooperative process between prospective teacher candidates and schools. Within this context the richest information about both parties is shared and a teacher-to-school match is achieved before a candidate accepts his or her position. Moving from a more traditional model of recruitment to a more cooperative model will enable the design and implementation of effective recruitment practices that consider the diversity among school types, thus meeting immediate and long-term goals that benefit schools, teachers, and students.

CHAPTER III

NEW-TO-SCHOOL TEACHERS' NETWORKING, INTERVIEW, AND REALISTIC JOB PREVIEWS EXPERIENCES

My aim in this chapter is to answer the overarching question, "What are the recruitment experiences of high school science teachers in Texas?" Specifically I answer the following three questions: How do science teachers first find out about their science position? With whom do science teachers interview with for their current teaching position? What do science teachers do to learn about their positions before accepting them? Recruitment is defined as "the practices schools use to attract and hire teachers" (Richardson & Stuessy, 2010). The topic of teacher recruitment is not new in educational literature. Numerous articles have discussed the strategies of schools and districts to attract and hire teacher candidates at their campuses. In most cases, these stories have been told from the perspectives of an administrator or a personnel officer in Human Resources Development. Very rarely have recruitment practices been discussed from the perspective of the teacher. Possibly more interesting is to understand school recruitment practices from the perspective of teachers who have undergone recruitment at their schools and have chosen to accept their positions. A substantial literature base exists supporting the diversity among schools. In this chapter, I provide a description of the recruitment experiences of high school science teachers in Texas who chose to accept their teaching positions. Furthermore my research study examined the recruitment experiences of teachers in diverse and hard-to-staff school types including: small,

medium, and large schools, and Low- and high-minority student enrollment profiles (MSEP) schools. Teacher-to-school matches and realistic job previews (RJP) were used as a conceptual framework to guide the inquiry process and organize understanding with regards to the varied recruitment experiences of public school teachers. General trends in the experiences of teachers relating to their engagement in activities supporting teacher-to-school match and participation in RJP at each of these school types will be discussed.

Teacher Recruitment Practices

The public school system in the United States seeks to provide a high-quality education to every student. To do so requires a sufficient supply of competent individuals who are willing to serve as teachers. As such, districts and schools are continually involved in activities relating to teacher recruitment. These activities can be diverse. When asked about recruitment at their schools, high school principals in Texas identified five major recruitment categories and sub-categories of practice used to recruit science teachers (1) Networking, (2) Marketing, (3) Incentives, (4) Teacher Identification, and (5) Interviewing. Networking was the most frequent recruitment practice identified by high school principals in Texas (Richardson and Stuessy, 2010). For the purposes of this study related literature regarding Networking and Interviewing practices are discussed below.

Networking

Networks support the development and maintenance of contacts with individuals and agencies that share in the interests and goals of the school. Goals for teacher recruitment and staffing are in particular supported by a school's networking activities.

In their research study of school recruitment practices, Richardson and Stuessy (2010) noted differences among schools regarding the investment of resources (e.g. time, personnel) for networking activities. The terms “passive networking” and “active networking” were used to describe these differences. Passive networking practices relate to such activities of the school as: posting vacancies on external professional websites and using print media to advertise vacancies (Richardson & Stuessy, 2010, p. 11). Active networking practices relate to activities such as: using word of mouth to make known position vacancies, cold-calling science teachers from other schools to arrange interviews, participating in job fairs, contacting colleges of education for new candidates, contacting alternative certification programs, and “growing your own teachers” from the local community. High schools in Texas were more likely to use active than passive networking practices to recruit candidates. Over one half of high school principals indicated their schools participated in job fairs (56.0%), advertised by word-of-mouth (52%), posted open positions on a Regional Education Service Center (ESC) website (48%), and contacted colleges of education (46%). Less than 30% of principals indicated their schools used additional active networking practices including collaborating with teacher preparation institutions or alternative certification programs (26%), contacting alternative certification programs (24%). Principals indicated that their schools at an equal or lesser frequency posted open positions on a Regional Education Service Center (ESC) website (48%) and used print media to advertise vacancies (22%) Richardson & Stuessy, 2010). See Appendix A for additional information regarding the frequencies of occurrence of recruitment practices. Schools

that used networking practices developed contacts and shared valuable information with teachers and teacher agencies that supported the interest and goals of the school for attracting and hiring new teachers.

Interviewing

Interviews are potentially one of the most interactive parts of the recruitment process. Schools, districts, and teachers are afforded rich information about the other through the interview process (Liu & Johnson, 2006). In their research study examining the hiring practices for new teachers in four large states, Liu and Johnson (2006) described two types of interview experiences, “information poor” and “information rich.” Information poor interviews provide both candidates and the hiring organization with few opportunities to exchange information about one another. In some instances, teachers are not interviewed and paper credentials are simply reviewed by the recruiting team. Teachers who report having experienced an information-poor interview also appear to have accepted positions that were not a great match for them (Liu & Johnson, 2006). It is not uncommon for these teachers to report they felt ill-prepared for the grade level or subject area they were assigned to teach. In some instances teachers that have had an information-poor interview have found they accepted a teaching assignment at a school implementing a pedagogical approach drastically different from their own.

Information rich interviews, on the other hand, provide candidates and the hiring organization with sufficient opportunities to exchange information about one another (Liu & Johnson, 2006). Information-rich interviews allow teachers to meet with multiple school and district individuals (e.g., principal, counselor, teacher, student). Other

practices might include inviting teacher candidates to attend an evening school fair to meet students and their parents or to observe the class of a teacher sharing their same subject expertise. However varied the interview process, information-rich opportunities increase the likelihood that teacher candidates are provided with a balanced perspective of the work they will be doing and the organizational structure and climate at the school.

Liu and Johnson (2006) found a majority of new teachers (91%) participated in at least one interview for their current position. Teachers most frequently (80.1%), were found to interview with the school principal. Less than half (45.6%) of teachers interviewed with the current teachers at the school. Even fewer were found to interview with parents of students at the school (9%) or the students themselves (0.1%). Overall, the interview process in the four states in their study was found to be heavily dominated by administrators. Valuable insights from teachers, parents, and students which might have provided candidates with rich-information about what the school was like, was not available in most cases (Liu & Johnson, 2006).

Hard-to-Staff Schools

Schools have different recruitment experiences. In some schools hiring committees sift through numerous applications to find the candidate that best meets the needs of their school (e.g. certification area, years of professional experience, philosophy of teaching). In other schools, hiring committees have no more than the choice of three candidates; they struggle to fill vacancies at their campuses. Hard-to-staff schools are schools that have difficulty in finding and retaining teachers (http://www.nea.org/tools/16917.htm0). Reasons for the staffing difficulties experienced

by these schools can vary; including geographic isolation, high-poverty levels (often connected with high minority student enrollment), and lower teacher salaries. While the reasons for staffing difficulties can vary, the results are relatively stable. High turnover rates and high percentages of relatively new teachers are common among hard-to-staff schools. Hard-to-staff schools experience difficulty in maintaining stability, including a professional culture among teachers where veterans support the induction of novice teachers and student learning is a shared active goal of all teachers in the school.

Small Schools

Small size schools represent hard-to-staff schools. Small size schools often experience recruitment challenges related to their geographic isolation. When asked to identify particular challenges associated with recruiting high school science teachers, 6 out of 10 small school principals identified school features, such as geographic location (Richardson and Stuessy, 2010). Geographic isolation poses a barrier to recruitment because the pool is small. Few qualified teachers live in the area and in some instances, reaching these areas can be difficult even for teachers who are willing to commute (American Federation of Teachers, 2007).

High-minority Student Enrollment Schools

High-minority student enrollment schools are also classified as hard-to-staff school types. As High-minority schools are often located in urban or inner-city environments, urban and inner city schools will be referred to as high minority schools for the purpose of this literature review. High-minority schools face unique challenges to teacher recruitment at their campuses. While shortages of math and science teachers are

common, shortages are particularly critical (95% and 98.0%, respectively) in high minority districts (Recruiting New Teachers, 2004). Research findings also suggest that teachers in High-minority schools more frequently lack credentials in their assigned content areas when compared with teachers in low-minority schools.

Prevailing discussions have occurred regarding the achievement gap separating minority students from other American students. Stakeholders in education have watched this gap oscillate. In the eighteen years between 1970 and 1988 the achievement gap between African American and white students was reduced by one half. During the same eighteen year time-span, the gap separating Latino and white students was reduced by one-third (Haycock, 2001) Immediately following 1988, the gains made in reducing the achievement gap between minority students and other American students ceased (Haycock, 2001). Among some grade levels and in certain subject areas the achievement gap widened.

The knowledge base of teachers affect students' achievement (Sanders & Rivers, 1996). Other findings indicate large numbers of minority students are taught by teachers who do not hold expertise in the subject areas they teach (Haycock, 2001). In math and science, only about half the teachers in schools with 90 percent or greater minority enrollments meet their states minimum requirements to teach those subject areas (Haycock, 2001, p.5). This number is fewer among teachers in predominately white schools. These findings suggest in many cases students who are most dependent on their teachers for subject-matter learning are assigned teachers with the weakest academic foundations (Haycock, 2001). This makes understanding the recruitment practices of

high-minority schools even more relevant. How would the achievement gap between minority students and other American students be affected if High-minority schools employed recruitment practices allowing them to compete with low-minority schools for the pool of competent teachers?

Ferguson (1998) found that when low-performing school districts (presumed high minority) recruited from the top of the teacher pool, low-performing first-graders were identified as high-performing students when they reached high school. The opposite was true for high-performing school districts recruiting from the bottom of the teacher pool (Haycock, 2001). The El Paso Collaborative confirmed these findings. When teachers from the collaborative were provided with the necessary supports systems (e.g. improved teacher preparation programs, summer workshops, and regularly-scheduled meeting for teachers within content areas) to improve subject area understanding, low-performing schools increased achievement for all groups of students. Bigger achievement gains were noted among students that were by tradition behind (Haycock, 2001). Findings from these and other studies suggest the important role of teachers in supporting achievement of high-poverty and minority students. Teacher recruitment may stand as an essential lever to reducing the achievement gap between minority and other American students.

Recruitment Practices in Small Size and High Minority Student Enrollment Schools

PRISE corroborated findings pertaining to the uniqueness of small size and High-minority schools among other school types (Richardson and Stuessy, 2010). Small-

size schools were less likely than medium and large size schools to use Networking practices (i.e. university contacts, job fairs, websites, word-of-mouth) to recruit teachers. Differences were also noted in the practice of small schools to match the personality of prospective teachers with the personalities of teachers already teaching at the school (Richardson and Stuessy, 2010). Similar differences were found for High-minority schools. Statistically significant differences were found between low-minority schools and high-minority schools regarding their efforts to seek teachers with specific content knowledge backgrounds.

Findings on the recruitment challenges faced by hard-to-staff school types (i.e., small-size and high-minority enrollment schools) lead to the conclusion that these schools face very unique challenges compared to their counterparts. In many instances the challenges faced by these schools lie in their inability to recruit and retain qualified teachers at their campuses. The development of comprehensive networking and interviewing recruitment practices that evaluate the match between teachers and schools may provide an effective solution to teachers shortages at small and high minority student enrollment profile schools.

Methods

Sampling Plan and Participants

A modified random stratified sampling plan was used to identify 50 sample schools representative of the 1,333 public schools that offer high school science courses to high school students. The approximately 10,000 teachers who teach high school science in Texas were also represented by the sampling plan. Sample schools were

randomly selected using two explicit stratification variables: (1) school size (small, medium, and large) and (2) student minority enrollment profile (very low, low, high, and very high). The University Interscholastic League (U.I.L.) classification system in Texas was used to define stratifications. A third implicit variable, geographic location, was also employed (Bozeman, Stuessy, Hollas, Ivey, Richardson, Spikes, Vasquez & Yoo, 2009). Chi-square analysis was used to verify the validity of the sample as representative of the entire population of schools in Texas (Stuessy, 2009). A random participation rate of 78% (n=39) was obtained by the PRISE Research Group, among the original 50 schools selected to participate. A 100 % participation rate (including replacements) was maintained among sample schools (Bozeman, & Stuessy, 2009). The PRISE study's participants included principals (n=50) and teachers (n=385). (For a thorough description of the PRISE sampling plan, see McNamara & Bozeman 2007.)

New-to-school teachers. This study's target population included a subset of all the population of high school science teachers (n=385) included in the PRISE database. Specifically, new-to school teachers were selected for participation in the study. New-to-school teachers were defined by the PRISE Research Group (2010) as teachers within their first year of hiring at their current school. New-to-school teachers represent one of three teacher types as defined by the PRISE Research Group: beginning teachers (1-3 years of teaching experience), mid-career teachers (4-7 years of teaching experiences), and veteran teachers (8 or more years of classroom teaching experience) (Stuessy, Bozeman, & Ivey, 2009). A total of 75 new-to-school science teachers were identified by the PRISE Research Group. Of 75 new-to-school teachers, 63 new-to-school science

teachers agreed to be interviewed about their recruitment experiences, yielding an 84.0% response rate. Interviews were conducted over the telephone by a PRISE researcher. Audio recordings, transcripts, field notes and chart data from these interviews were used in this study.

New-to-school teacher demographics. New-to school teacher data was selected for this study because these teachers were within one year of engaging in the recruitment process at their schools. It was felt that new-to-school teachers provided a description of the most current recruitment practices at their schools. It was also believed that, in most cases, new-to-school teachers would be able to recall their recruitment experiences with more detail than teachers who were hired two or more years prior. Table 3.1 provides demographic information about new-to-school science teachers identified in the sample.

Highest degree earned. Table 3.1 identifies a majority of new-to-school science teachers (73.0%) as holding a Bachelor's degree. Less than 20 percent of teachers hold a Master's degree, and even fewer, about 3 percent, hold a Doctoral degree.

Gender. Slightly over a majority of new-to-school science teachers (55.6%) identified in the study are female. Males comprise about 40 percent of the teachers represented in the study. Overall, the percentages of female and male new-to-school science teachers included in the study are about equal.

Age. The number of new-to-school science teachers decrease by age of the teacher. Approximately, 1 out of 3 new-to-school teachers in the study are between the ages of 20-29 years. About 1 out of 4 are between the ages of 30-39 years. About 1 out of 8 teachers in the study are 50 years and older.

Teaching experience. A majority, about 60 percent new-to-school science teachers are induction year, within their first three years in the teaching profession.

TABLE 3.1
Characteristics (i.e., degree, gender, age, teaching experience) of new-to-school science teachers identified in the sample (n=63)

	Frequency (n)	Percent (%)	Cumulative (%)
Highest Degree Earned[a]			
Bachelor's	46	73.0	79.3
Master's	10	15.9	96.6
Doctorate	2	3.2	100.0
Gender[b]			
Female	35	55.6	57.4
Male	26	41.3	100.0
Age (Years)[c]			
20-29	22	34.9	37.9
30-39	16	25.4	65.5
40-49	11	17.5	84.5
50-59	6	9.5	94.8
60+	3	4.8	100.0
Teaching Experience (Years)			
Induction (1-3)	40	63.5	63.5
Mid-career (4-7)	10	15.9	79.4
Veteran (8+)	13	20.6	100.0

Note. These data were obtained from the Texas Education Agency's Public Education Information Management System (PEIMS).
[a] PEIMS system missing 5 individuals. [b]PEIMS system missing 2 individuals. [c]PEIMS system missing 5 individuals.

Veteran teachers having 8 or more years of professional experience in teaching comprise 20.0 % of teachers in the study. Mid-career teachers make-up about 15 percent. These percentages with respect to the sample representation suggest that following induction

year teachers, a new-to-school science teacher in Texas is more likely to be veteran than a mid-career teacher.

Table 3.2 shows the distribution of new-to-school science teachers identified in the study by school size and minority student enrollment profiles.

TABLE 3.2
Distribution of new-to-school science teachers identified in the sample (n=63) by school size and minority student enrollment profiles (MSEP)

	Frequency (n)	Percent (%)	Cumulative (%)
School Size (Student enrollment)			
Small (≤ 189)	7	11.1	11.1
Medium (190-899)	22	34.9	46.0
Large (≥ 900)	34	54.0	100.0
Minority student enrollment Profile			
Low (< 50.0%)	35	55.6	55.6
High (≥ 50.0%)	28	44.4	100.0

Note. These data were obtained from the Texas Education Agency's Public Education Information Management System (PEIMS)

Size of school. The number of new-to-school science teachers identified in the study increase with size of school. About 10 percent are teachers in small schools. Over one half of the study's participants (54.0 %) are large school teachers who work at campuses with a student population of 900 or more.

Minority student enrollment. About 3 out of 5 new-to-school teachers identified in the study work at low-minority enrollment schools. Fewer new-to-school teachers work in High-minority enrollment schools.

Data Collection

In the 2007-2008 school year PRISE researchers visited each of the 50 sample schools. Principals at each school (n=50, 100% return rate) were requested to participate in the study and access by PRISE Group to their schools' master schedules and teacher lists. Following their approval, principals completed a field–based semi-structured interview with a PRISE researcher. Master schedules and teacher lists were used to identify teachers who taught high school science courses in sample schools, *including* new-to-school teachers used in my study. New-to-school teacher interviews were audio recorded (when permitted), transcribed, and finally transposed to data charts for analysis (Ivey & Stuessy, 2009). Teacher telephone interviews were used to understand school recruitment practices as perceived by teachers. Additional vdata sources included state level databases, including the Texas Education Agency (TEA) and the Public Education Information Management System (PEIMS); Stuessy, 2009). This data provided information regarding demographics and characteristics of teachers and their schools (e.g., total years of teaching experience, ethnicity, and minority student enrollment profile). These assorted and detailed collection of data were coded and archived in the PRISE Teacher Database.

Data Analysis

Sequential exploratory strategy, a mixed models design, (Creswell, 2003) was used to understand high school science teachers' responses to interview questions about their recruitment experience. See Appendix B for the PRISE New-to-School Teacher Interview Protocol. Specifically, this strategy allowed teachers' responses (qualitative

data) to be generalized to sample schools based on school size and minority student enrollment profiles (MSEP) (qualitative data). A two-phase approach was used for data analysis. In the first phase, new-to-schools teachers' responses to interview questions #1-3 were reduced using the method describe in Chi (1997). Constant comparative analysis was then used to define categories for each question and three scoring rubrics were developed: Teacher Networking rubric, Teacher Interview rubric, and Teacher Realistic Job Preview rubric.

Teacher networking rubric. The Teacher Networking rubric (see Appendices C & D) was used to code teachers' interview responses for question #1, *How did you first find out about your science position?* Inter-rater reliability check was used to verify the consistency of the Teacher Networking rubric. The rater team consisted of 4 persons having experience in the public education system. An inter-rater score of 85.7 was achieved amongst the inter-rater team.

Teacher interview rubric. The Teacher Interview rubric (see Appendices E & F) was used to code teachers' interview responses for question #2, *Thinking about your interview process for this school, with whom did you interview for your current teaching position? How did you first find out about your science position?* Peer review was used to check for consistency within the rubric. Peer review was used to assess the rubrics consistency because of homogeneity in teachers' responses. Homogeneity among teachers responses were first observed in data reduction phase of the analysis.

Teacher realistic job previews rubric. Similarly, peer review was used to check for consistency within the Teacher Realistic Job Previews rubric. See Appendices G and

H. The Teacher Realistic Job Preview rubric corresponds to teacher interview question 3, *What did you do to learn about this school before accepting your current science teaching position?* Categories of responses for this question were predefined and presented to teachers at the time of the interview. Teachers answered either "Yes" or "No" to the category response. However, one category of the Teacher Realistic Job Preview rubric emerged from teachers responses to the interview question. Following the presentation of category responses in which teachers answered as "Yes" or "No," PRISE interviewers asked teachers a single follow-up question, *Is there anything else that you did to learn about this school before accepting your current science teaching position?* A substantial number of teachers reported that they reviewed web-based information. Due to the frequency of the response, it was include as a rubric category.

Teachers' responses to interview questions 1-3 were then scored according to the corresponding rubric. Pre-assigned teacher codes were used to identify individual teachers' responses to questions. Frequency tables showing the categories and counts of teachers' responses were generated (e.g., modal values, means, etc.). The conclusion of the first phase of the data analysis resulted in the transformation of qualitative data (teacher phone interview responses) to quantitative data.

In the second phase of this study's design, the aforementioned quantitative data, was compared to and interrelated to the quantitative data sets: school size (small, medium, and large) and minority student enrollment profiles (MSEP) (low, 0-25% and high, 75-100%). Finally, I interpreted the data for diversity of teacher recruitment experiences. Teachers'experiences were interpreted with regards to school size and

minority enrollment profile. I used Chi-square tests for independence, respectively, to test for associations between groups. Teachers' responses to the interview questions were not used to make predictions, but were used in this analysis to describe the nature of recruitment practices for high school science teachers in Texas.

Results

How New-to-school teachers found out about their science positions

Teacher-to-school match networking practices. Teachers' engagement in networking practices was used to operationalize teacher-to-school match. Table 3.3 displays how new-to-school science teachers in Texas were first made aware of their positions. New-to-school teachers in Texas reported that they first found out about their positions through 1 of 4 Networking practices: (1) attending a job fair, (2) searching on a website, (3) speaking with another person (word-of-mouth), or (4) participating with an alternative certification program. Networking practices include the active and passive recruitment activities of high schools for science teachers. See Richardson and Stuessy (2010) for a complete listing of Networking Practices. Results indicated over one half of new-to-school science teachers in Texas (34 out of 63, 54.0 %) first found out about their positions by word-of-mouth. In most instances, teachers reported they were told by school or district personnel. Less frequently, new-to-school teachers indicated they were informed about their positions while visiting an online website or engaging with an alternative certification program. Less than five percent (3 out of 63, 4.8%) of high school science teachers in Texas first found out about their positions through a means differing from the listed Networking recruitment practices.

TABLE 3.3
Teacher-to-school match Networking practices: teachers' responses regarding how they first found out about their science positions

	Yes		No		
Networking Practice (n=63)	Frequency	Percent (%)	Frequency	Percent (%)	Total (%)
Word-of-Mouth	34	54.0	29	46.0	100.0
Website	11	17.5	52	82.5	100.0
Alternative Certification Program	9	14.3	54	85.7	100.0
Job fair	6	9.5	57	90.5	100.0
Other	3	4.8	60	95.2	100.0

Word-of-mouth informant. Table 3.4 shows a listing of informants identified by new-to-school teachers. A majority of teachers (54.0%, n=34) first found out about their positions by word-of-mouth. High school science teachers identified these individuals as: unidentified school or district personnel (29.4%), teacher (17.6%), principal (11.8%), superintendent (5.9%), non-school or district person (5.9%), curriculum coordinator (1.6%), and human resources personnel (1.6%). Slightly over 20.0% (8 out of 34) teachers did not respond or gave an undeterminable response. Of those teachers of their positions by word-of-mouth, approximately one-fifth (22.2%, n= 14) indicated that the person who informed them was a family member or friend.

TABLE 3.4
Teacher-to-school Match Networking practices: Word-of-mouth informants identified by new-to-school teachers as first telling them about their positions

Informant (n=34)	Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Unidentified school or district Personnel	10	29.4	29.4	29.4
Unknown	8	23.5	23.5	52.9
Teacher	6	17.6	17.6	70.5
Principal	4	11.8	11.8	82.4
Superintendent	2	5.9	5.9	88.2
Non-School or District personnel	2	5.9	5.9	94.1
Human Resources Development	1	2.9	2.9	97.0
Curriculum Coordinator	1	2.9	2.9	100.0

Teacher-to-school match networking practices by school size. Visual comparisons across school size are shown in Table 3.5 for four major categories of teachers' responses with regards to how those teachers first found out about their positions. Results suggest most high school science teachers in Texas first found out about their current positions by word-of-mouth. In particular, approximately 3 out of 4 small school teachers first found out about their positions by word-of-mouth. Additionally, about one out of three medium school teachers heard about their positions by word of mouth. Medium school teachers show the most diversity in the use of networking practices to inform them of their positions.

TABLE 3.5
Teacher-to-school match Networking practices: Teachers' Responses Regarding How They First Found Out About Their Position by School Size

		Size of School				
	All	Small	Medium	Large	Chi-	
	(n=63)	(n=7)	(n=22)	(n=34)	Square`	
Networking Practice	(%)	(%)	(%)	(%)	(d.f.=2)	*p*-level*
Word-of-mouth	54.0	71.4	36.4	61.8	4.436	0.109
Website	17.5	14.3	22.7	14.7	0.651	0.722
Alternative Certification Program	14.3	0.0	27.3	8.8	5.025	0.081
Job fair	9.5	0.0	13.6	8.8	1.188	0.552
Other	4.8	14.3	0.0	5.9	--**	--**

*α= 0.05. **Chi-square was not calculated for the miscellaneous category of Other.

Job fair and alternative certification programs were not identified by small school teachers as ways in which they first found out about their positions. While not meeting the chi-square criterion as a statistically significant difference, one noteworthy difference was observed in the use of an alternative-certification program to first inform teachers of their positions.

Teacher-to-school match networking practices by minority student enrollment profiles (MSEP). Table 3.6 compares schools with low minority and high minority student enrollment profiles (MSEP) with regards to how new-to-school teachers first found out about their current positions. Finding suggested low-MSEP and high-MSEP school teachers found out about their position in much the same ways. Word-of-mouth was the most frequently indicated networking response by both teacher types, 57.1% vs. 51.4%, respectively. Low-MSEP school teachers were more likely than

TABLE 3.6
Teacher-to-school match Networking practices: Teachers' responses regarding how they first found out about their position by minority student enrollment profile (MSEP)

		MSEP			
	All	Low	High		
	(n=63)	(n=35)	(n=28)	Chi-Square	
Networking Practice Sponsor	(%)	(%)	(%)	(d.f.=1)	*p*-level*
Word-of-mouth	54.0	51.4	57.1	0.039	0.843
Website	17.5	20.0	14.3	0.067	0.795
Alternative certification program	14.3	11.4	7.8	0.021	0.886
Job fair	9.5	11.4	7.1	0.131	0.717
Other	4.8	5.7	3.6	--**	--**

*α= 0.05. **Chi-square was not calculated for the miscellaneous category of Other.

high-MSEP school teachers (11.4% vs. 7.1%, respectively) to find out about their position at a job fair. Low-MSEP school teachers showed somewhat more diversity in terms of how they first heard about their positions.

Interview Experiences of New-to-School Teachers

Teacher-to-school match interview practices. Teachers' experiences during the interview process were used to operationalize teacher-to-school match. Interviews support teacher-to-school match by allowing both the hiring committee and the teacher to obtain rich-information about each other. The diversity among groups involved in this process can contribute to a teacher-to-school match. Diverse personnel and other individuals vested in the school bring specific expertise to the interview process. Table 3.7 shows the number of groups represented by persons involved during the recruitment process of new-to-school science teachers in Texas. The value, "number of groups", was calculated by totaling the number of vested groups represented by interviewers. Primarly the vested group was identified by the interviewer's position or title. For example, a

TABLE 3.7
Teacher-to-school match Interview practices: Number of school or district groups represented during the interview process of new-to-school teachers in Texas

Number of School or District Represented Groups	1		2		3		4		5	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
	21	33.3	31	49.2	9	14.3	1	1.6	1	1.6

Note. The value, "number of represented groups", was calculated by totaling the number of vested school or district groups represented by interviewers.

principal and vice-principal involved in the interview process represented the group "principal". If the interviewers included the principal and the vice-principal at the school, the number of interviewers involved in the recruitment process was considered to be one, "principal". If a principal, vice-principal, and student were involved in the interview process, the value for the number of interviewers was calculated as two. The student represented a second vested group, the student body of the school. One half of new-to-school science teachers in Texas indicated that they interviewed with persons from two vested school or district groups. On average, new-to-school teachers in Texas indicated that they interviewed with persons representing a total of 2 vested school or district groups, (average=1.89, mode=2, median=2, range=1-5).

Table 3.8 displays the individuals involved in new-to-school teachers' interviews. These individuals include representatives from human resources, central office, and campus. High school principals are more likely to be involved in the

interview process than any other individual. Approximately 9 out of 10 (93.7%, n=59) teachers indicated they were interviewed by their principal for their current position. Results also show other teachers are sometimes involved in the interview process. Slightly less than half of high school science teachers (46.0%, n=29) indicated that at least one other teacher was involved in their interviews. Superintendents, deans of

TABLE 3.8.
Teacher-to-school Match Interview practices: teachers' responses regarding whom they interviewed with for their teaching position

	Yes		No		
Interviewer (n=63)	Frequency	Percent (%)	Frequency	Percent (%)	Total (%)
Principal	59	93.7	4	6.3	100.0
Teacher	29	46.0	34	54.0	100.0
Superintendent	7	11.1	56	88.9	100.0
Dean of Education/Curr. Coord.	7	11.1	56	88.9	100.0
Athletic Department Personnel	7	11.1	56	88.9	100.0
Human Resources Personnel	5	7.9	58	92.1	100.0
Other	2	3.2	61	96.8	100.0
Counselor	1	1.6	62	98.4	100.0
Student	1	1.6	62	98.4	100.0
No One	1	1.6	62	98.4	100.0
School Board Member	0	0.0	63	100.0	100.0

education/curriculum coordinators, and athletic personnel, such as coaches, were equally likely (11.1%, n=7) to be involved in the interview process. About 1 out of 13 teachers mentioned the involvement of someone from human resources. High school science teachers in Texas did not indicate involvement of a member of the school board in their interview processes.

Teacher-to-school match interview practices by school size. Table 3.9 displays the types of individuals who interviewed with new-to-the school teachers by

size of school. About 9 out of 10 large school teachers and 10 out of 10 small and medium school teachers indicated that their principals were involved during the interview process for their current positions. Approximately, one half of medium and large school teachers reported that another teacher was involved in their interviews. In no instances, did a small school teacher indicate the involvement of another teacher. In fact, small school teachers reported the least amount of diversity among individuals involved in their interview processes.

Large school teachers in Texas reported the greatest amount of diversity among individuals involved in their interview processes. Statistically significant differences were observed for the involvement of the district superintendent and the dean of education in teachers' interviews by size of school. Large school teachers were more likely than small and medium school teachers to indicate that they interviewed with a dean of education. Small school teachers were more likely than both medium and large school teachers to indicate they interviewed with the superintendent of schools. About 7 out of 10 small school teachers reported they interviewed with the superintendent. Fewer than 5.0% of small, medium, and large school teachers indicated a school counselor or a student was involved in their interviews.

TABLE 3.9
Teacher-to-school Match Interview practices: Teachers' responses regarding whom they interviewed with for their teaching position

		Size of School				
	All	Small	Medium	Large	Chi-	
	(n=63)	(n=7)	(n=22)	(n=34)	Square`	
Networking Practice	(%)	(%)	(%)	(%)	(d.f.=2)	*p*-level*
Principal	93.7	100.0	100.0	88.2	3.643	0.162
Teacher	46.0	0.0	54.5	50.0	6.828	0.033
Superintendent	11.1	71.4	9.1	0.0	30.127	**0.000**
Dean of Education/Curr. Coord.	11.1	0.0	0.0	20.6	6.717	**0.035**
Athletic Department Personnel	11.1	0.0	18.2	8.8	2.169	0.338
Human Resources Personnel	7.9	100.0	4.5	11.8	1.632	0.442
Other	3.2	0.0	0.0	5.9	--**	--**
Counselor	1.6	0.0	4.5	0.0	1.894	0.388
Student	1.6	0.0	0.0	2.9	0.867	0.648
No One	1.6	0.0	0.0	2.9	0.867	0.648
School Board Member	0.0	0.0	0.0	0.0	--***	--***

*α= 0.05. **Chi-square was not calculated for the miscellaneous category of Other. ***No statistics are computed because the item is a constant.

Teacher-to-school match interview practices by minority student enrollment profile (MSEP). Table 3.10 shows the involvement of individuals in teachers' interviews by low-MSEP and high-MSEP. An overwhelming majority of low and high-MSEP school teachers reported their principals were involved in their interviews. About 1 out 2 low-MSEP and 1 out of 3 high-MSEP school teachers reported that another teacher was involved in their interviews. High-MSEP school teachers

TABLE 3.10
Teacher-to-school Match Interview practices: Teachers' responses regarding whom they interviewed with for their teaching Position by minority student enrollment profile (MSEP) (n=63)

		MSEP			
Interviewer	All (n=63) (%)	Low (n=35) (%)	High (n=28) (%)	Chi-Square[a] (d.f.=1)	*p*-level*
Principal	93.7	94.3	92.8	0.000	1.000
Teacher	46.0	54.3	35.7	1.477	0.224
Superintendent	11.1	17.1	3.6	1.690	0.194
Dean of Education/Curr. Coord.	11.1	20.0	0.0	4.438	**0.035**
Athletic Department Personnel	11.1	17.1	3.6	1.690	0.194
Human Resources Personnel	7.9	14.3	0.0	2.610	0.106
Other	3.2	5.7	0.0	--**	--**
Counselor	1.6	0.0	3.6	0.013	0.910
Student	1.6	2.9	0.0	0.000	1.000
No One	1.6	0.0	3.6	0.013	0.910
School Board Member	0.0	0.0	0.0	--***	--***

[a] Refers to Continuity Correction.
*$\alpha = 0.05$. **Chi-square was not calculated for the miscellaneous category of Other. ***No statistics are computed because the item is a constant.

showed the least amount of diversity in regards to interviewer diversity. In most instances, these teachers interviewed with principals and/or another teacher. (See the low percentages for individuals involved in high-MSEP school teachers' interviews compared with those of low-MSEP teachers.) Deans of education and curriculum coordinators quite possibly know more about instructional support resources available to teachers and student achievement at their schools than any other individual. Disclosure of such rich-information to teachers during the interview process could help support teacher-to-school match. Statistically significant differences were found between the involvement of a dean of education or curriculum coordinator in teachers' interviews and size of school. Low-MSEP school teachers were more likely than high-MSEP school

teachers to indicate the dean of education or curriculum coordinator was involved in their interviews.

New-to-School Teachers Experiences to Learn about their Positions

Table 3.11shows what new-to-school teachers did to learn more about their positions before accepting them. Approximately 7 out of 10 science teachers (66.7%, n=42) indicated they took a tour of the campus prior to accepting a position. One half of the teachers (50.8%, n=32) indicated they viewed the teaching and laboratory equipment at their schools to learn more about their positions. Slightly less than one half (47.6%, n=30) of new-to-school teachers indicated that they met with other teachers on their campuses prior to accepting their positions. Less than 30.0% of new-to-school teachers reported that they viewed their schools' instructional technologies or reviewed their schools' curriculum scopes and sequences. Fewer than 10.0% of new-to-school teachers in Texas reported they visited online websites to learn about their positions.

TABLE 3.11
Realistic job preview practices: Teachers' responses regarding what they did to learn about their positions

	Yes		No		
Interviewer (n=63)	Frequency	Percent (%)	Frequency	Percent (%)	Total (%)
Toured the campus	42	66.7	21	33.3	100.0
Other: NA	38	60.3	25	39.7	100.0
Viewed teaching and laboratory equipment[a]	32	50.8	26[a]	41.3	100.0
Met with other science teachers	30	47.6	33	52.4	100.0
Viewed instructional Technologies[a]	18	28.6	27	42.9	100.0
Reviewed the curriculum scope and sequence[a]	14	22.2	45	71.4	100.0
Other: Miscellaneous	10	15.9	53	84.1	100.0
Researched web-based Information	6	9.5	57	90.5	100.0

[a] A reply was not received by at least one teacher.

Realistic job preview by school size. Table 3.12 shows the most frequent practices of teachers to learn about their positions by school size. Regarding how they learned about the position, statistically significant differences were found in engagement of large school teachers in realistic job preview practices compared with small and medium school teachers. Large school teachers were less likely than both small and medium school teachers to indicate they took a tour of their campuses or viewed teaching and laboratory equipment at their campuses prior to accepting their positions. Visual comparisons across schools indicated that small and medium school teachers were about 25.0% more likely than large school teachers to view their schools instructional technologies. Overall, medium school teachers in Texas reported the greatest engagement in realistic job preview practices.

TABLE 3.12
Realistic job preview practices: Teachers' responses regarding what they did to learn about their positions by School Size

		Size of School				
	All	Small	Medium	Large	Chi-	
	(n=63)	(n=7)	(n=22)	(n=34)	Square*	
Realistic job preview	(%)	(%)	(%)	(%)	(d.f.=2)	*p*-level*
Toured the campus	66.7	100.0	81.8	50.0	10.023	**0.007**
Viewed teaching and laboratory equipment[a]	50.8	85.7	68.2	32.4	11.499	**0.021**
Met with other science teachers	47.6	14.3	59.1	47.1	4.283	0.117
Viewed instructional technologies[a]	28.6	42.9	40.9	17.6	7.538	0.110
Reviewed the curriculum scope and sequence[a]	22.2	14.3	18.2	26.5	1.626	0.804
Other: Miscellaneous	15.9	14.3	18.2	14.7	--**	--**
Researched web-based Information	9.5	0.0	13.6	8.8	1.188	0.552

[a] A reply was not received by at least one teacher.
*$\alpha = 0.05$. **Chi-square was not calculated for the miscellaneous category of Other.

Realistic job preview by minority student enrollment profile (MSEP). Table 3.13 compares the realistic job preview practices of teachers in low-MSEP and high-MSEP schools. An overwhelming majority of low-MSEP and high-MSEP school teachers indicated that they took a tour of the campus to learn about their position (71.4% and 60.7%, respectively). About one third of high-MSEP school teachers (32.1%) reviewed their school's curriculum scope and sequence. Fewer low-MSEP teachers, 14.3%, reported they viewed their school's curriculum scope and sequence prior to accepting their positions. Nearly equal percentages of low-MSEP and high-MSEP school teachers reported they met with other teachers on campus to learn about their positions (45.7% and 50.0%, respectively). Statistically significant differences were found between low-MSEP and high-MSEP school teachers with regard to their use of

TABLE 3.13

Teachers' responses regarding what they did to learn about their positions before accepting their current science teaching position by Minority Student Enrollment Profile

		MSEP			
Realistic job preview	All (n=63) (%)	Low (n=35) (%)	High (n=28) (%)	Chi-Square (d.f.=1)	*p*-level*
Toured the campus	66.7	71.4	60.7	0.804	0.370
Other: NA	60.3	45.7	78.6	--**	--**
Viewed teaching and laboratory equipment[a]	50.8	54.3	46.4	2.797	0.247
Met with other science teachers	47.6	45.7	50.0	0.115	0.735
Viewed instructional technologies[a]	28.6	40.0	14.3	7.200	**0.027**
Reviewed the curriculum scope and sequence[a]	22.2	14.3	32.1	3.092	0.213
Other: Miscellaneous	15.9	20.0	10.7	--**	--**
Researched web-based Information	9.5	17.1	0.0	5.305	**0.021**

[a] A reply was not received by at least one teacher.
*$\alpha = 0.05$. **Chi-square was not calculated for the miscellaneous category of Other.

online websites. Approximately 1 out of 5 low-MSEP school teachers reported they sought out web-based information to learn about their position before accepting them. Statistically significant differences were also found between low-MSEP and high-MSEP school teachers with regard to their opportunity to view instructional technologies. In no instance, did high-MSEP school teachers report their use of web-based information to learn about their positions. The next section discusses the broader meanings of these findings for stakeholders in education.

Recommendations and Conclusion

This study presents a descriptive synthesis of the recruitment experiences of new-to-school teachers in Texas. New-to-school teachers were asked three questions about their experiences. The first question, *How did you first find out about your science position?,* assessed teachers' engagement in networking practices. A second question, *Thinking about your interview process for this school, with whom did you interview for your current teaching position?,* was used to understand teacher-to-school match. A final question, *What did you do to learn about this school before accepting your current science teaching position?,* determined new-to-school teachers' involvement in realistic job previews. Chi-square tests of independence were used to identify statistically significant differences in teachers' experiences by school size and minority enrollment profiles. Findings from this study confirm that schools are not maximizing valuable resources relating to teacher-to-school match and realistic job previews. Additionally, findings indicated that teachers' recruitment experiences differ by school size and MSEP.

Teacher-to-School Match Network Practices

New-to-school science teachers in Texas frequently indicated they first found out about their positions by the active networking practice "word-of-mouth." In most instances, new-to-school teachers reported they were told about their positions by another school or district employee. This finding suggests teachers serve as recruiters and can be an important "recruitment tool" for addressing teacher shortages at their campuses.

Recommendations. Schools should consider the use of the active networking practice "word-of-mouth" as a means to recruit teachers and address teacher shortage at their campuses. This may be particularly true for medium schools.

Teacher-to-School Match Interview Practices

Interviews are potentially one of the most interactive parts of the recruitment process. Interviews can provide schools and teacher candidates with rich-information about the other (Liu & Johnson, 2006). New-to-school teachers in Texas often engaged in an interview for their positions. However, the diversity of personnel who participated in their interviews was limited. A majority of high school science teachers (93.7%) indicated they interviewed with their school's principal.

Teachers spend more than half their time during the work day teaching their students. While healthy teacher-to-student relations support learning in the classroom, less than 2% of teachers in Texas indicated a student was present for their interview. Students can provide teachers with valuable insights about the student body and day-to-day interactions on their campus. This information may be used by teachers during the recruitment process to support teacher-to-school match. Teachers' interview experiences were found to differ by school size and MSEP. Deans of education and curriculum coordinators can provide teachers with valuable information regarding their schools' curriculum and instructional practices. Low-MSEP school teachers were more likely than high-MSEP school teachers to report that the dean of education/curriculum coordinator was involved in their interviews. Large school teachers were more likely than small and medium school teachers to indicate the involvement of a dean of

education/curriculum coordinator in their interview processes. Small school teachers were more likely than medium and large school teachers to indicate that a district superintendent was involved in their interviews.

Recommendations. High schools in Texas should consider involving diverse individuals in their schools interview practices for new teachers. In particular, schools should consider the involvement of students in their interview practices. Small and medium schools should consider the involvement of their deans of education in the interview process for teachers.

Realistic Job Previews Practices

Campus tours allow teacher candidates to form an impression about the school and may help candidates reach decisions about the suitability of a position to their professional goals and personal preferences. A majority of new-to-school teachers in Texas indicated they took a tour of their campuses prior to accepting their positions. One half of the teachers indicated they viewed teaching and laboratory equipment at their schools. Statistically significant differences were observed between the realistic job preview practices of teachers by size of school and MSEP. Small and medium school teachers were more likely than large school teachers to indicate they took a tour of their campuses and viewed available teaching and laboratory equipment at their campuses prior to accepting their positions. Low-MSEP school teachers were more likely than high-MSEP school teachers to indicate they sought web-based information to learn about their positions.

Recommendations. High school science teachers should consider the use of primary practices used by teachers to learn about their positions before a decision to accept their positions are made. School resources should be focused to support teachers in their engagement in realist job preview practices. Large schools and high-MSEP school teachers should consider the benefits of certain realistic job preview practices

Teacher Recruitment is not a new topic in the field of education. In the wake of national teacher shortages, many research studies have examined the practices of schools to recruit new teachers. Traditional research studies on recruitment have involved questionnaires and interviews directed to school principals and staff members, such as persons in the human resources. While recruitment from the perspective of administrators and HR members is important, it offers only one half of the *recruitment* story. Recruitment as experienced by teachers and shared from the perspectives of teachers represents the other half of the story. Even more intriguing is understanding teacher recruitment from the perspective of teachers who felt inclined to accept their positions.

The goal of this research study was to understand the recruitment experiences of teachers who chose to accept positions at their schools. Special attention was paid to the experiences of teachers in hard-to-staff schools (e.g., small schools, high-minority schools). By emphasizing the prevailing trends in these teachers' experiences, recruitment efforts in hard-to-staff schools are supported. Furthermore, it is hoped that findings from this study will support the recognition of recruitment practices connected with teacher job satisfaction and retention.

Limitations and Delimitations of the Study

These findings contribute to research on recruitment experiences of high school science teachers, but the contributions are subject to certain limitations. First, this study is based on self-reported data. Teachers were asked to comment retrospectively on their recruitment experiences. Recall bias was minimized by asking new-to-school teachers about their recruitment experiences. This study includes only new-to-school teachers who are within their first year of hiring for their current positions. It was assumed that these teachers could reflect with greater accuracy and clarity on their recruitment experiences for their current positions.

Another limitation of the study is that teaching experience, with respect to the number of years in the profession, was not distinguished between new-to-school teachers. Beginning, mid-career, and veteran year teachers were pooled together in the study. Possibly, teachers' responses to more personal questions in the interview such as, "What are the three reasons affecting your decision to accept your current position?," are mitigated by years of teaching experience or age. Thus this analysis may obscure relevant difference between beginning, mid-career, and veteran year teachers.

A third limitation of the study is that several members of the PRISE Research Group conducted teacher interviews. Although the interviewers were from the same research group and received the same training regarding semi-structure interview

techniques, the possibility exists that mannerisms of the interviewers affected teachers' responses to interview questions.

A major strength of this study is the sampling plan. The PRISE sampling plan allows empirical data and results referenced in this study to be generalized to all public high schools in Texas. Additionally, the return rate on the interviews of new-to-school teachers provides a level of confidence that the results of this study are representative of all new-to-school high science teachers in Texas public schools. Another strength of this study is the semi-structured interview technique used to understand teachers' recruitment experiences for their current positions. The interview technique permitted focused, conversational, two-way communication between the interviewer and the teacher. In many instances, teachers were candid with their responses and offered additional information to the interviewer, further explaining their responses to questions. Teachers were also permitted to engage in the interview on their terms (i.e., permission granted for the interview and information gathered during the interview).

CHAPTER IV

NEW-TO-SCHOOL TEACHERS' REASONS FOR DECISIONS TO ACCEPT THEIR CURRENT POSITIONS

In this chapter, I address the overarching question *What are the reasons affecting teachers' decisions to accept their current positions?* School districts across the nation are experiencing difficulties recruiting teachers to fill open positions on their campuses. States and school districts have used a myriad of practices and policies to attract and retain teachers. These practices and policies include progressive local and state advertisement campaigns; focused campus initiatives such as "grow-your-own" emphasizing the development and matriculation of para-professionals into classroom teaching positions; collaborative teacher preparation programs such as school-to-university teacher connections; advanced teacher screening techniques; and non-pecuniary and pecuniary incentives such as signing bonuses; and support for advanced degrees. The PRISE Research Group identified five categories of recruitment practices used by high schools in Texas: Networking, Marketing, Incentives, Teacher Identification and Interviewing. See Appendix A. The use of varied recruitment practices and policies to attract teacher candidates may be especially true for hard-to-staff school types such as urban and/or high minority student enrollment schools and rural schools.

In this study I explored a little understood aspect of teacher recruitment: how employment decisions are made by teachers. Particular interest is shown towards how teachers delineated their decisions to accept their current positions based on school type

(i.e. size and minority student enrollment profile) and multiple selection factors. For example, new-to-school teachers' perceptions were examined and linked those to job choice theories within a conceptual framework in order to understand selection factors affecting teachers' decisions to accept their current positions. This study addresses the following four questions:

(1)What are the science teachers' reasons for their decisions to accept their current positions?

(2) Is there an association between school size (i.e., small, medium, large) and teachers' reasons for accepting their positions?

(3) Is there an association between minority student enrollment profile (i.e., low-MSEP < 50% and high-MSEP $\geq$ 50%) and the reasons indicated by teachers for accepting their positions?

(4) What are the decision factors (objective, subjective, and critical-contact) used by teachers to accept their current positions?

Findings from this study provide support for increasing the relative strength and efficiency of recruitment policies and practices on campuses. This study's findings may also have implications for the development of a model for recruitment to explore school-and-teacher level factors influencing the job satisfaction and retention of teachers at their campuses, in which teachers' reasons for accepting their current positions are identified as a variable or contributing factor. The next section includes a brief literature review of teachers' preferences for job attributes and job choice theory.

Related Literature

Teachers' Preferences for Job Attributes

Teachers are decision makers who are actively engaged in the decision-making process for professional positions. Understanding the reactions of teachers as job candidates to accept or reject open positions on campuses is a question of interest to stakeholders in education. The current literature, however, discussing job selection among teachers and the decision factors used by teachers to make their decisions is limited and inconsistent.

Monetary incentives. Schools offer monetary incentives to teachers for varying reasons. In recruitment, monetary incentives are generally used to attract teacher candidates to open positions on campuses. Monetary incentives may include signing bonuses, benefits programs, graduate work support, and favored position on the salary schedule for re-entrant teachers. Research studies examining the effects of monetary incentive have suggested such incentives have a positive effect on candidates' job-choice. Bradley and Loadman (2005) in their surveyed of 815 urban secondary school teachers to identify factors pertaining to why they teach. While these researchers reported that salary was not as important as other factors, teachers in the study did report higher salary was needed to attract new candidates into the profession. These findings suggest that teachers involved in the study recognized the extrinsic factors of salaries needed for others, but not for themselves (Bradley & Loadman, 2005, p. 18).

Increased salary may benefit recruitment in small schools. Comparison of average salary across school and district types and sizes in 2003-2004 indicated salary

tends to be lowest in both rural and small school types. Salaries for teachers in the smallest were reported at 16.5% less than the national average. Teachers in the small schools were also less likely to be compensated for extracurricular work (Monk, 2007).

Spatial geography. Boyd, Lankford, Loeb, and Wyckoff (2003) suggest that spatial geography is important to teachers' decisions to accept a position. Using data from New York State the researchers found teachers express preferences to take positions close to where they grew-up. According to their study, about sixty-percent (60.8%) of teachers entering public school teaching in New York State from 1999-2002 were found to take positions in locations within 15 miles of their hometown. Approximately twenty-five percent (23.9%) took positions between 15 and 40 miles of their hometowns. These percentages combined suggest a majority of teachers, 84.7%, in New York State entered teaching within 40 miles of their hometown. When the proximity of the school to their hometowns was held constant, teachers were found to prefer areas with characteristics similar to their hometown (Boyd, Lankford, Loeb, and Wyckoff , 2003).

Urban schools, often characterized by high numbers of minority students ,were found to be adversely impacted by teacher tendencies related to spatial geography. Teachers who grew-up in suburban areas were more likely to take positions in their suburban regions, relative to urban and rural areas. This is in contrast to teachers who grew-up in urban areas, who although preferring to teach in urban schools accepted in greater numbers than suburban teachers positions in locations unlike their urban hometowns. Teachers growing-up in rural areas displayed similar behaviors to those

growing up in urban areas. Alternative studies explore teachers' preferences to take positions close to their current homes, over their hometowns. The underlying assumption behind these studies is that teachers have chosen to live in particular areas and explore opportunities for employment based on that residential area (Boyd, Lankford, Loeb, and Wyckoff , 2003).

Psychological factors and subject area. Bradley and Loadman's (2005) survey of 815 urban secondary school teachers reported that more than half of the teachers claimed a desire to teach in an urban setting; in many instances, these teachers indicated aspirations to make a difference in students' lives and society. The subject matter that they teach was also found to be a leading reason for teaching among high school teachers (Bradley & Loadman, 2005).

Guarino, Santibanez and Daley (2006), in their review of recent empirical literature on recruitment discussed findings from Farkas, Johnson, and Foleno (2000). Using national survey data from 660 public school teachers with 5 or fewer years of experience, the authors found that 83.0% of the teachers surveyed felt it was essential a profession involved work that they loved to do; and 96.0% of teachers indicated their current teaching positions had this characteristic (Guarino et al., 2006). Additional studies citing the personal reward derived from the teaching profession can be found in Johnson and Birkeland (2003).

Ethnic demographics. Teachers express concerns about their abilities to connect with students and establish productive relationships. Teachers indicate they experience increased challenges when they do not share characteristics with their students, including

such characteristics as social expectations, race, ethnicity and language (Johnson & Birkeland, 2003). This study suggests that teachers prefer schools for employment based on characteristics they share with the students they will be teaching.

Boyd, Lankford, Loeb, and Wyckoff (2010), using a game-theoretic two-sided matching model and simulated-moments estimates to examine the sorting of teachers across schools. A range of factors affecting the choices of individual teachers and hiring authorities were analyzed. However, the research findings from this study suggested only a small set of factors as influential in teachers' decision making. Specifically, schools were found to prefer teachers having stronger qualifications. Teachers were found to prefer teaching positions in schools that are closer to home, have fewer poor students and for white teachers, have fewer minority students (Boyd et al., 2010, p.26). Hanushey, Kain, and Rivkin (2001) found similar patterns of sorting in their study of teacher mobility and attrition in Texas schools. In selecting news schools, Texas teachers were found to favor student populations of higher-achieving, non-minority, and non-low income student populations.

Job Choice Theory

Young, Rinehart, and Place (1989) describe the teacher as a decision-maker and the teacher-selection process as a consensual activity between teacher candidates and school administrators. By tradition, teachers have not been perceived as decision-makers within the selection process. This sentiment has prevailed, even though teachers are the ones who ultimately choose to agree to accept the positions being offered. Factors affecting teachers' decisions to accept positions demand attention for many reasons. In

particular, these decisions relate to staffing at schools, teachers' job satisfaction and retention at that school. Theories of job choice have been used to understand teachers'

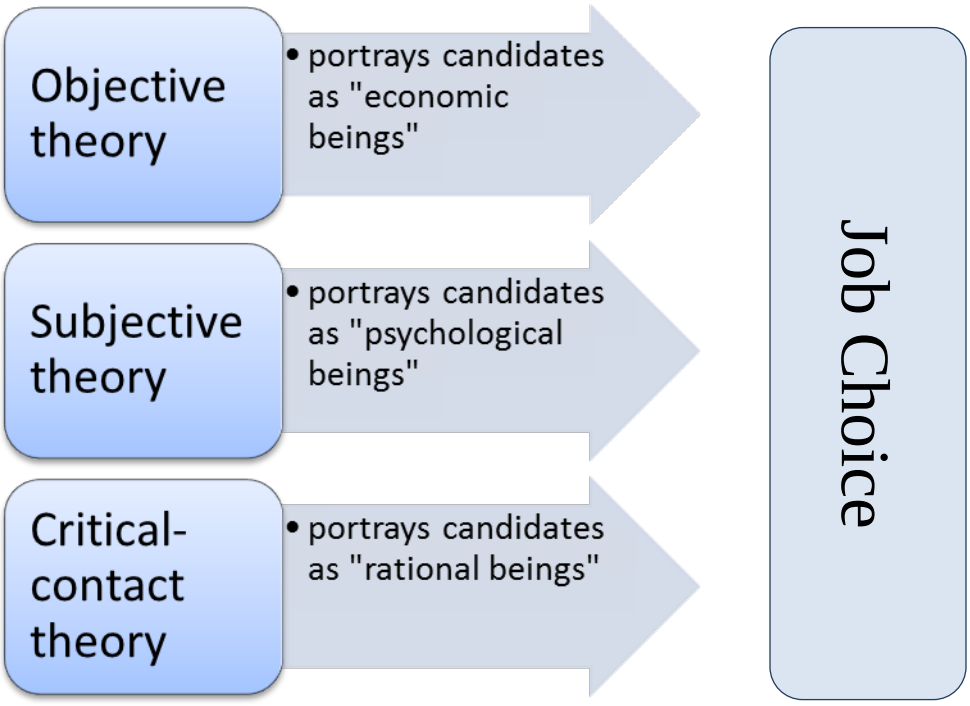

Figure 4.1. Visual representation of three theories of job choice used to understand teachers' decisions for positions.

decisions to accept positions. See Figure 4.1.

Objective theory. Objective theory portrays candidates as economic beings. As economic beings, candidates "seek to maximize their economic status by joining the organization (school) that is perceived as being the most economically competitive" (Young et al., 1989, p. 330). Candidates consider factors such as pay, benefit programs,

location, and opportunities for advancements resulting in later pecuniary rewards in the selection of a position (Behling et al; 1967).

Subjective theory. Subjective theory portrays candidates as psychological beings. As psychological beings, candidates are motivated to accept positions perceived as meeting deep-seated and often unrecognizable psychological needs (Behling et al; 1967). As such, candidates consider aspects of the work environment, including student and faculty disposition and school size when choosing to accept or reject a position.

Critical-contact theory. Critical-contact theory assumes candidates are rational beings with interests in the "work itself." It is also assumed that candidates are unable to make meaningful distinctions on either subjective or objective bases because the amount of contact a candidate has with a hiring organization is limited (Behling et al; 1967). As a result, when choosing to accept a position, candidates consider such external factors as the appearance or behavior of the recruiter, physical facilities, and requirements and expectations associated with the job.

Methods

Sampling Plan and Participants

A modified random stratified sampling plan was used to identify 50 sample schools representative of the 1,333 public schools that offered high school science courses and approximately 10,000 teachers who taught high school science in Texas during the 2007-2008 school year. Sample schools were randomly selected using two explicit stratification variables: (1) school size (small, medium, and large) and (2) student minority enrollment proportion (very low, low, high, and very high). The

University Interscholastic League (U.I.L.) classification system in Texas was used to define stratifications by size and the Texas Education Agency's distinctions were used to define minority enrollment proportions. A third implicit variable, geographic location, was also employed (Bozeman, Stuessy, Hollas, Ivey, Richardson, Spikes, Vasquez & Yoo, 2009). Chi-square analysis was used to verify the validity of the sample as representative of the entire population of schools in Texas (Stuessy, 2009).

Among the original 50 schools selected to participate, a random participation rate of 78% (n=39) was obtained by the PRISE Research Group. Schools choosing not to participate in the study were replaced with schools from the same sampling plan. A 100% modified participation was achieved for sample schools (Bozeman, & Stuessy, 2009).

This study's participants included (n=63) new-to-school teachers. New-to-school teachers were defined by the PRISE Research Group as teachers within their first year of accepting a position at their current school. New-to-school teachers represent one of three teacher types as defined by the PRISE Research Group: novice teachers (1-3 years of teaching experience), mid-career teachers (4-7 years of teaching experiences), and veteran teachers (8 or more years of classroom teaching experience; Stuessy, Bozeman, & Ivey, 2009). A total of 75 new-to-school teachers were identified by the PRISE Research Group. Sixty-three new-to-school science teachers agreed to be interviewed about their recruitment experiences for their current positions, yielding an 84.0% response rate. Interviews were conducted over the telephone by a PRISE researcher. Audio tapes, transcripts, field notes and chart data from these interviews were used in

the study. New-to school teachers were selected for this study because these teachers were within one year of engaging in the recruitment process at their schools. I therefore providing a description of the most current recruitment practices at their schools. It was also believed that, in most cases, new-to-school teachers would be able to recall their recruitment experiences with more detail than teachers who were hired two or more years before. In addition, these teachers shared recruitment experiences most related to the current labor market. Table 4.1 provides demographic information about new-to-school science teachers identified in the sample.

Highest degree earned. Table 4.1 identifies a majority of new-to-school science teachers (73.0%) as holding a Bachelor's degree. Less than 20 percent of teachers hold a Master's degree, and even fewer, about 3 percent, hold a Doctoral degree.

Gender. Slightly over a majority of new-to-school science teachers (55.6%) identified in the study are female. Males comprise about 40 percent of the teachers represented in the study. Overall, the percentages of female and male new-to-school science teachers included in the study are about equal.

Age. The number of new-to-school science teachers decrease by age of the teacher. Approximately, 1 out of 3 new-to-school teachers in the study are between the ages of 20-29 years. About 1 out of 4 are between the ages of 30-39 years. About 1 out of 8 teachers in the study are 50 years and older.

TABLE 4.1
Characteristics (i.e., degree, gender, age, teaching experience) of new-to-school science teachers identified in the sample (n=63)

	Frequency Total	%	Cumulative %
Highest Degree Earned			
Bachelor's	46	73.0	79.3
Master's	10	15.9	96.6
Doctorate	2	3.2	100.0
Unknown	5	7.9	100.0
Gender			
Female	35	55.6	57.4
Male	26	41.3	96.9
Unknown	2	3.1	100.0
Age (Years)[c]			
20-29	22	34.9	34.9
30-39	16	25.4	60.3
40-49	11	17.5	77.8
50-59	6	9.5	87.3
60+	3	4.8	92.1
Unknown	5	7.9	100.0
Teaching Experience (Years)			
Induction (1-3)	40	63.5	63.5
Mid-career (4-7)	10	15.9	79.4
Veteran (8+)	13	20.6	100.0

Note. These data were obtained from the Texas Education Agency's Public Education Information Management System (PEIMS).

Teaching experience. A majority, about 60 percent new-to-school science teachers are in their induction years, i.e., within their first three years in the teaching profession. Refer to Table 4.1. Veteran teachers having 8 or more years of professional experience in teaching comprise 20.0% of teachers in the study. Mid-career teachers make-up the remain 15.0% of teachers included in the study. These percentages with respect to the sample representation suggest that following induction year teachers, a

TABLE 4.2
Distribution of new-to-school science teachers identified in the sample (n=63) by school size and minority student enrollment proportion (MSEP)

	Frequency (n)	Percent (%)	Cumulative (%)
School Size (Student enrollment)			
Small (≤ 189)	7	11.1	11.1
Medium (190-899)	22	34.9	46.0
Large (≥ 900)	34	54.0	100.0
Minority student enrollment proportion			
Low (< 50.0%)	35	55.6	55.6
High (≥ 50.0%)	28	44.4	100.0

Note. These data were obtained from the Texas Education Agency's Public Education Information Management System (PEIMS)

new-to-school science teacher in Texas is more likely to be veteran than a mid-career teacher.

Table 4.2 shows the distribution of new-to-school science teachers identified in the study by school size and minority student enrollment profiles.

Size of school. The number of new-to-school science teachers identified in the study increase with size of school. About 10 percent are small school teachers. Over one half of the study's participants (54.0 %) are large school teachers who work at campuses with a student population of 900 or more.

Minority student enrollment. About 3 out of 5 new-to-school teachers identified in the study work at Low-minority enrollment schools. Fewer new-to-school teachers work in High-minority enrollment schools.

Data Collection

In the 2007-2008 school year PRISE Group researchers visited each of the 50 sample schools. Principals at each school (n=50, 100% return rate) completed a field–based semi-structured interview with a PRISE researcher and approved access by PRISE Group to their schools' master schedules and teacher lists. Master schedules and teacher lists were used to identify teachers who taught high school science courses in each sample school, *including* teachers with the distinction new-to-school who were interviewed in this study.

Telephone interviews were conducted by a PRISE researcher for each new-to-school teachers. These interviews were used to understand teachers' perceptions regarding current school practices and policies at each stage of the TPC. The TPC is "the professional lives of high school science teachers along the continuum of their recruitment, induction, renewal, and [retention] in the teaching profession" (Bozeman, Stuessy, Hollas, Spikes, Richardson, Vasquez, Yoo, & Ivey, 2010, p.7). Only recruitment data was relevant to this study. PRISE researchers audio recorded (when permitted), transcribed, and finally transposed interviews into data charts for analysis (Ivey& Stuessy, 2009). Additional data sources included state databases, including the Texas Education Agency (TEA) and the Public Education Information Management System (PEIMS); Stuessy, 2009). This data provided information regarding demographics and characteristics of teachers and their schools (e.g., total years of teaching experience, ethnicity, and minority student enrollment profile). These data were coded and archived in the PRISE Teacher Database.

Data Analysis

Sequential exploratory strategy, a mixed models design (Creswell, 2003), was used to analyze responses to interview questions given by new-to-school teachers regarding their recruitment experiences at their schools. Specifically, this strategy allowed for teachers' responses (qualitative data) to be generalized to sample schools based on school size and minority student enrollment profiles (qualitative data).

A two-phase approach was used in this study to determine teachers' perceptions' of their recruitment experience, specifically reasons affecting decisions to accept their current positions. In the first phase, new-to-schools teachers' responses to PRISE interview question 4, *What are the top three reasons that affected your decision to accept your current positions?* were reduced and coded for different components of decision making (Chi, 1997).

While teachers were asked for the "top three" reasons that affected their decisions, some teachers only gave one or two reasons while others gave more. In some instances, a teacher indicated a decision to accept a current position was influenced by one or two reasons, and therefore did not offer three reasons. At other times teachers simply indicated more than three reasons.

Constant comparative analysis as described in Goetz and Le Compte (1984) was then used to define categories of responses. Using Goetz and Le Compte's methodology, new-to-school teachers' responses regarding reasons affecting their decisions to accept their current positions were divided into single units of thought, referenced in this study as "individual response statements." A total of 164 individual response statements were

received from the 63 new-to-school teachers participating in the study. Individual response statements were then compared and contrasted between themselves generating "thematic" categories and subcategories. Within this analysis, constant comparative method was used as a constructive as opposed to an enumerative procedure. The conclusion of the analysis yielded twelve categories and thirty-six subcategories of responses. The categories and subcategories were then used to create a scoring rubric, Decision Factors rubric. Inter-rater reliability check was used to verify the consistency of the scoring rubric. An inter-rater score of 85.7 was achieved. See Appendix I for the Decision Factors I rubric used in this study. Teachers' responses to the interview question were then scored according to the Decision Factors rubric. Pre-assigned teacher codes were used to identify individual teachers' responses to questions. Following this qualitative data analysis, frequency tables showing the categories and counts of teachers' responses were generated (e.g., modal values, means, etc.). The conclusion of the first phase of the data analysis resulted in the transformation of qualitative data (teacher interview responses) to quantitative data.

In the second phase of this study's design, the data were compared and interrelated to the quantitative data sets: school size (small, medium, and large) and school minority student enrollment profiles (MSEP; i.e., low-MSEP, < 50.0%, and high-MSEP, $\geq$50.0%). Chi-Square Tests for relatedness were used to evaluate the differences in teachers' responses regarding their recruitment experiences. Finally, results were interrupted to make generalizations about the diversity of teachers' recruitment experiences for their current positions as they relate to school size and percent minority

status. A subsequent analysis of teachers' responses using job choice theory is described in the following paragraph.

In a subsequent stage, a sub-level analysis on teachers' responses to interview question 4 was performed. Teachers' individual response statements (qualitative data) generated during the first phase of the study were transformed to decision factors, also qualitative data. Job Choice theory, specifically objective, subjective, and critical-contact theory, was superimposed on subcategories of the teacher scoring rubric.
See Appendix J for the Decision Factors II rubric. Teacher interview responses were then reviewed using the modified rubric and categorized as either, subjective, objective or critical contact decision factors. Frequency tables based upon the modified rubrics showing the categories and counts of teachers' responses were generated (e.g., Modal values, means). Results of the analyses are described in the following section.

Results

New-To-School Teachers' Reasons for Their Decisions to Accept Their Current Positions

Frequency of teachers' individual response by category and subcategory. Frequency analysis of High school science teachers' responses to the interview question *What are the top three reasons that affected your decision to accept your current position*? resulted in an assortment of individual response statements. High school science teachers' reasons for accepting their positions ranged from geospatial factors (Location) to district size to perceptions conveyed during the recruitment process. Individual response statements were analyzed using the inductive method, constant

comparison, to generate response categories and subcategories. Specifically, twelve categories with 36 subcategories were identified. The major categories identified were : *(1) Location, (2) School Atmosphere and Climate, (3) School Instructional Practice, Organizational Structure, and Demographics, (4) Emotive Factors and General Desire for Change, (5) Connections with the Area, District, or School, (6) Money (7) District, School, and Class Size, (8) Timing, (9) Position involving Coaching, (10) School Infrastructure, (11) Credentials or Endorsements, and (12) School Reputation*. Percentages for individual responses referenced here were calculated using item frequency counts and total item count (n=164).

Arrays of individual response statements were indicated by teachers as affecting their decisions to accept their current positions. Table 4.3. shows the frequencies of teachers' individual responses statements within each category and subcategory. Location and School Instructional Practice, Organizational Structure, and Demographics represented the most frequently mentioned

TABLE 4.3
Frequencies of teachers' individual response statements by category (n=12) and subcategory (n=36) regarding reasons affecting their decision to accept their current positions (Total response statements =164)

	Teachers' individual response statements	
Category and Subcategory	Frequency total	Total % (n = 164 total statements)[a]
Location		
Commute and proximity to home	16	9.8
Location (unspecified)	7	4.3
Proximity to family or friends living in the area	4	2.4
Small town/community	2	1.2
Item response total	**29**	
School Atmosphere and Climate		
Faculty and/or staff disposition	19	11.6
Student disposition	5	3.0
Item response total	**24**	
School Instructional Practice, Organizational Structure and Demographics		
Content	10	6.1
Instructional techniques	6	3.7
School demographics	6	3.7
Number of preparations	3	1.8
Extra-curricular programs (UIL, etc.)	2	1.2
Grade level	2	1.2
Item response total	**29**	

Note. Teachers' individual response statements were clustered into subcategories and then categories. Counts were made.
[a] Percent totals were calculated by taking the subcategory count and dividing by the total number of individual response statements, n = 164.

TABLE 4.3
(Continued)

Category and Subcategory	Teachers' individual response statements: Frequency total	Teachers' individual response statements: Total % (n=164 total statements)[a]
Emotive Factors and General Desire for Change		
Desire for change to teach a new course or subject	7	4.3
Motivation to teach	5	3.0
Motivation to help students	2	1.2
Disappointment or grievance with previous employment or employer	2	1.2
Desire for autonomy in teaching practice	1	0.6
Desire for change to meet new people	1	0.6
Item response total	**18**	
Connections to Area, District, or School		
Children attend or will attend school or a school in the district	4	2.4
Relative or friend works for the school or district	4	2.4
Teacher or spouse attended school	4	2.4
Spouse works for the school or district	3	1.8
Teacher or spouse grew-up in the area	2	1.2
Item response total	**17**	
Money		
Needed a Job	8	4.9
Increased salary	5	3.0
Item response total	**13**	

Note. Teachers' individual response statements were clustered into subcategories and then categories. Counts were made.

[a] Percent totals were calculated by taking the subcategory count and dividing by the total number of individual response statements, n = 164.

TABLE 4.3
*(*Continued)

Category and Subcategory	Teachers' individual response statements: Frequency total	Teachers' individual response statements: Total % (n=164 total statements)[a]
District, School, and Class Size		
School Size	5	3.0
Class Size	2	1.2
District Size	1	0.6
Item response total	**8**	
Timing		
First school to offer job	7	4.3
Item response total	**7**	
Position involved Coaching		
Coaching—non specified promotion	4	2.4
Coaching--- promotion	2	1.2
Item response total	**6**	
School Infrastructure		
Facilities	4	2.4
Technology	2	1.2
Item response total	**6**	
Recognition of Credentials or Endorsements		
Sought-after or viewed accredited during recruitment process	2	1.2
Viewed as lacking credentials and rejected during the recruitment process at another	2	1.2
Item response total	**4**	

Note. Teachers' individual response statements were clustered into subcategories and then categories. Counts were made.

[a] Percent totals were calculated by taking the subcategory count and dividing by the total number of individual response statements, n = 164.

TABLE 4.3
*(*Continued)

Category and Subcategory	Teachers' individual response statements: Frequency total	Teachers' individual response statements: Total % (n=164 total statements)[a]
School Reputation		
School Reputation	3	1.8
Item response total	**3**	
Total	**164**	**100.0**

Note. Teachers' individual response statements were clustered into subcategories and then categories. Counts were made.

[a] Percent totals were calculated by taking the subcategory count and dividing by the total number of individual response statements, n = 164.

response categories. Similarly, the categories displayed the highest frequency (29 out of 164) of individual responses. Slightly fewer individual response statements (24 out of 164) were found within the category School Atmosphere and Climate. However, the reader should note that the single most frequently mentioned subcategory response (19 out of 164, 11.6%) can be found within the category of School Atmosphere and Climate. About 1 out of 10 responses given by teachers for accepting their positions related to the disposition of the faculty and/or staff at their schools. Of the 12 categories, 5 were found to include a minimal number (8 or fewer) of individual response item counts: District, School, and Class Size; Timing; Coaching position; School Infrastructure; Recognition of Credentials or Endorsements District; and School Reputation.

The reader should note the variation of subcategory responses within each category. This suggests that even within a category, teachers in Texas chose to accept their positions for distinct reasons. For example, commute and proximity to home, location (unspecified), proximity to family or friends living in the area, and small town or small community are all reasons indicated by teachers as affecting their decisions to accept their current positions within the single category of Location. The following section briefly discusses subcategory responses within the three most frequently reported categories: (a) Location, (b) School Instructional Practice, Organizational Structure, and (c) Demographics and School Atmosphere and Climate.

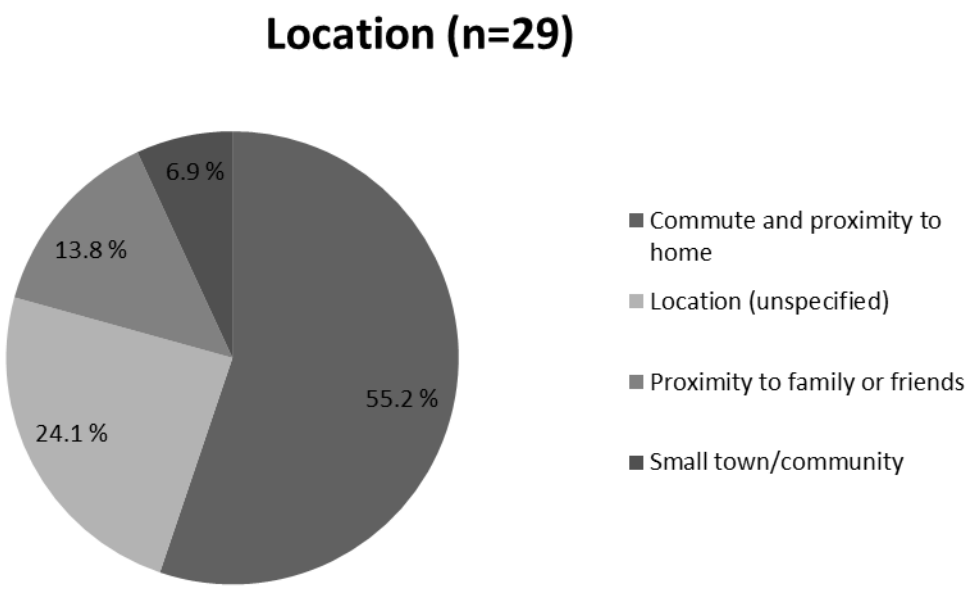

Figure 4.2. Percentages of new-to-school teachers' individual response statements (n=29) regarding the reasons affecting their decisions to accept their current positions within the category Location.

Location. Figure 4.2 displays the distribution of responses given by Texas teachers within the category Location. Location, more than any other category of responses except School was indicated by teachers as influencing their decisions to accept their current positions. Teachers' individual response within this category showed

a relatively moderate amount of diversity, clustering into the following four groupings: commute and proximity to home, Location (undefined attributes), Proximity to family or friends living in the area, and Small town/community location. These findings suggest travel to and from work, such as distance, time, and quality of the drive, is important to Texas teachers. Commute and proximity to home was the most frequently stated response (16 out of 29, 55.2%) within the category Location. However, less frequently (4 out of 29, 13.8%) high school science teachers indicated that the Proximity to family or friends living in the area affected their decisions to accept their current positions. Fewer responses (2 out of 29, 6.9%) were given pertaining to the location of the school within a small town or community as being an influential factor. *Location* (undefined) is a catch all subcategory within the larger category of Location. Individual responses statements within this subcategory lack particular distinction in the aspect of location being referenced by the teacher.

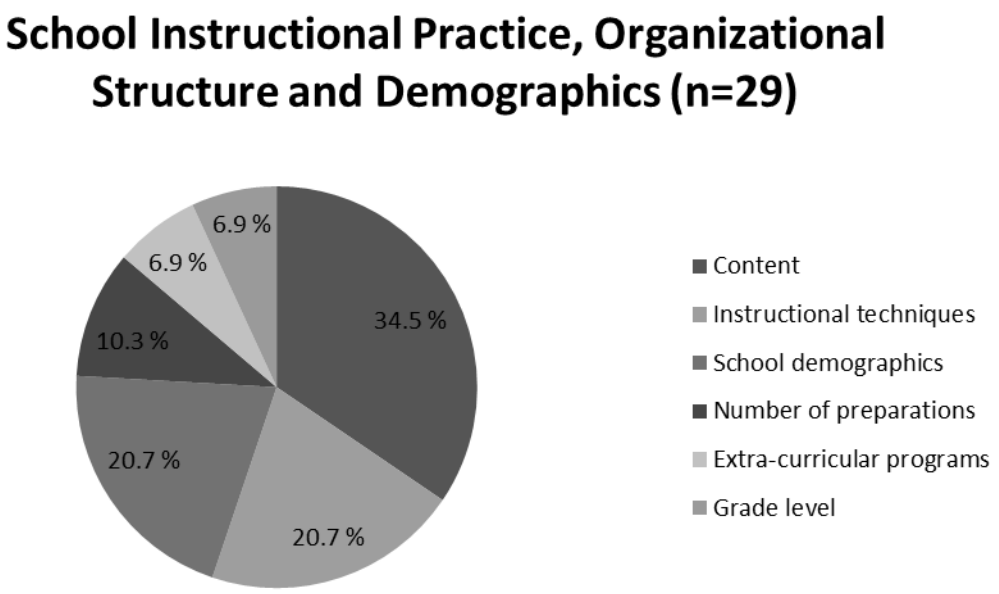

Figure 4.3. Percentages of new-to-school teachers' individual responses statements (n=29) regarding the reasons affecting their decisions to accept their current positions within the category School Instructional Practice, Organizational Structure and Demographics.

School Instructional Practice, Organizational Structure and Demographics.

Figure 4.3 illustrates the distribution of new-to-school teachers' responses within the category School Instructional Practice, Organizational Structure and Demographics. Teachers show the most diversity in responses within this category. Note six subcategories of responses are indicated in the graph above. Teachers reported that information received during their recruitment process about the availability to teach

within a preferred content area positively affected the decision to accept their current positions. The opportunity to teach a particular content was the most frequently (10 out of 29, 34.5%) reported individual response within the category. Schools instructional techniques and demographics were indicated by teachers at equal frequencies (6 out of 29, 20.7%).

How much time beginning teachers should spend preparing for a class has been a question among stakeholders in education, in particular when it considered that beginning teachers can have two or more preparations while trying to balance doing a good job teaching and getting adjusted at a new school. However, new-to-school teachers indicated the number of preparations associated with their positions less frequently as a factor affecting their decisions for their positions than the opportunity to teach a particular content area, at a school using instructional techniques agreeable to their personal styles within a school with preferred demographics.

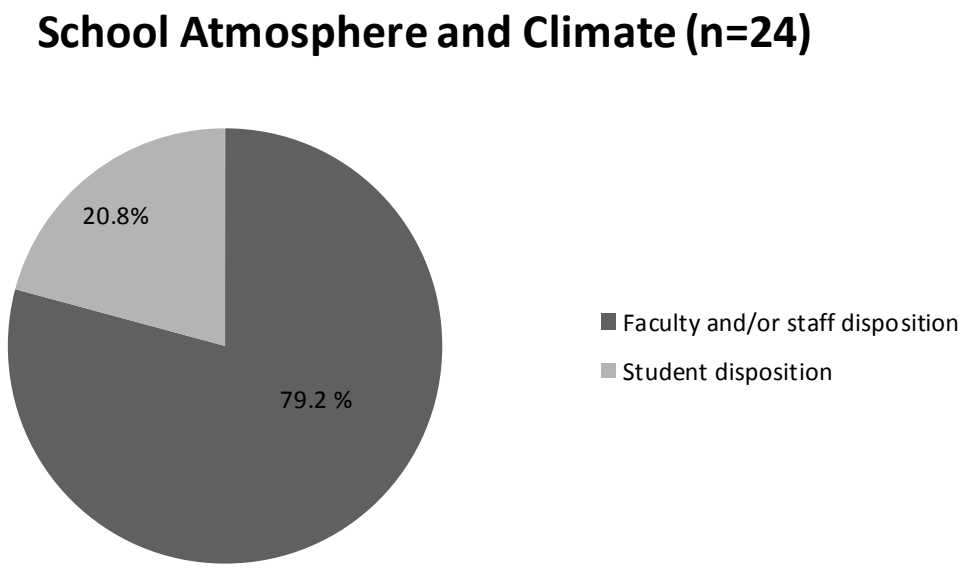

Figure 4.4. Percentages of new-to-school teachers' responses (n=24) regarding the reasons affecting their decisions to accept their current positions within the category School Atmosphere and climate. *Note*: Some teachers reported more than one response within the indicated category.

School Atmosphere and Climate. Figure 4.4 illustrates the distribution of teachers' responses within the category of *School Atmosphere and Climate*. Results suggest teachers considered the atmosphere and climate of their schools, as characterized by the attitudes and dispositions of their peers, other faculty, staff and students attending the school when choosing to accept their positions. Disposition of the faculty and/ or staff was the single most frequently mentioned reason (19 out of 164 total individual response statements) indicated by high school science teachers in Texas as affecting their decisions to accept their current positions. When observed within category, an

overwhelming majority (19 out of 24, 79.2%) of teachers' responses pertained to the disposition of faculty and/or staff as a reason affecting their decisions to accept their current positions. About one-fourth, (5 out of 24, 20.8%) responses pertained to the disposition of students at the campus.

Association between School Size and the Reasons Indicated by Teachers for Accepting Their Positions

Frequency of teachers responding within category by size of school. Table 4.4 indicates the frequency counts of high school science teachers responding within12 categories of reasons indicated by teachers as affecting their decisions to accept their current position by size of school (i.e., small, medium, and large). Visual comparisons across school size showed a trend for several categories. Frequencies of teachers responding within the categories of Location; School Instructional Practice, Organizational Structure, and Demographics; and School Atmosphere and Climate; Timing; Perceptions of Credentials or Endorsements; and School Reputation increased with size of school. Numbers of teachers who indicated their connections with the area, district, or school as a reason affecting their decisions to accept their current positions decreased with size of school. Small school teachers were more likely than teachers in medium and large schools to indicate a prior association with some aspect of the area in which their schools are located or the school itself as a reason affecting their decisions to accept their current positions.

TABLE 4.4
Teachers' responses regarding reasons affecting their decisions to accept their current positions by school size

	Size of School				(n=63)
Category of reasons indicated by teachers	All (n=63) (%)	Small (n=7) (%)	Medium (n=22) (%)	Large (n=34) (%)	Chi-Square (d.f.=2)	*p*-level*
Location	44.4	28.6	36.4	64.7	5.149	0.076
School Atmosphere and Climate	33.3	28.6	36.4	32.4	0.177	0.915
School Instructional Practice, Organizational Structure and Demographics	31.7	14.3	22.7	41.2	3.206	0.201
Emotive Factors and General Desire for Change	27.0	28.6	18.2	32.4	1.372	0.504
Connections to Area, District, or School	23.8	42.9	31.8	14.7	3.731	0.155
Money	20.6	28.6	13.6	23.5	1.101	0.577
District, School, and Class Size	12.7	14.3	22.7	5.9	3.437	0.179
Timing	11.1	0.0	4.5	17.6	3.306	0.191
Position involved Coaching	9.5	28.6	9.1	5.9	3.475	0.176
School Infrastructure	7.9	14.3	4.5	8.8	0.769	0.681
Recognition of Credentials or Endorsements	6.3	0.0	4.5	8.8	0.945	0.623
School Reputation	4.8	0.0	4.5	5.9	0.446	0.800

* $\alpha = 0.05$

Chi-square tests of independence were performed to examine the relationship between the numbers of teachers responding within each category and size of school. Chi-square values indicated the relationship between the numbers of teachers responding within a particular category and size of school is not significant. In other words, science teachers in small, medium, and large schools "reasoned," generally speaking, in much the same way about accepting their current positions.

Frequency of teachers' individual response statements within subcategory by school size. While, there were no statistically significant associatios in terms of numbers of teachers responding to a category by school size, there did appear to be an association between what individual teachers "said" within a category by size of school. Chi-Square analysis on the occurrence of individual response statements by school size revealed statistically significant associations for three statements. Teachers' desire for autonomy (chi square = 8.129, p = 0.017, df=2), and desire to teach a new course (chi square = 6.717, p = 0.035, df=2), both within the category Emotive Factors and Desire for change, were found to be associated with size of school. Teachers in small schools were more likely than teachers in medium and large schools to indicate they accepted their current positions because they desired autonomy in their teaching practices. Teachers in large schools were most likely to indicate they accepted their current positions because of a desire to teach a new course. Finally statistically significant differences (chi square = 8.397, p = 0.015, df=2), between size of school were found in whether teachers considered the availability of a coaching position (promotion unspecified) when accepting their current positions. Teachers in small and medium

schools were more likely than teachers in large schools to indicate they considered this factor during the recruitment process for their positions.

Association Between the Minority Student Enrollment Profile of the School in Which a Teacher Works and the Reasons Indicated by these Teachers as Affecting Their Decisions to Accept Their Current Positions

Frequency of teachers responding within category by MSEP. Table 4.5 indicates the frequency counts of high school science teachers responding within 12 categories indicated by teachers as affecting their decisions to accept their current position by minority student enrollment profile (i.e., low, <50%, and high-MSEP, ≥ 50%). Comparisons between MSEP showed trends. Teachers in High-MSEP schools were more likely than teachers in Low-MSEP schools to have indicated location of the school; monetary benefits; and timing in which the positions was offered as reasons affecting their decisions to accept their current positions. On the other hand, greater numbers of teachers in Low-MSEP schools were more likely to have indicated School Instructional Practice, Organizational Structure, and Demographics; Connections to the Area, District, and School; District, School, and Class size; Coaching position; Credentials and Endorsements; and School Reputation as reasons affecting their decisions to accept their current position. Note that no high-MSEP school teachers indicated the reputation of their schools as a reason affecting their decisions to accept their positions. The numbers of high-MSEP and low-MSEP teachers responding within the categories of Emotive Factors and General Desire for Change (28.6% vs. 25.7%,

respectively); School Atmosphere and Climate (34.3% vs. 32.1%, respectively); and School Infrastructure (8.6% vs. 7.1%) do not appear to differentiate.

TABLE 4.5
Teachers' responses regarding reasons affecting their decisions to accept their current positions by minority student enrollment profile (MSEP) (n=63)

		MSEP			
Category of reasons indicated by teachers	All (n=63) (%)	Low (n=35) (%)	High (n=28) (%)	Chi-Square** (d.f.=1)	*p*-level*
Location	44.4	42.9	46.4	0.001	0.977
School Atmosphere and Climate	33.3	34.3	32.1	0.000	1.000
School Instructional Practice, Organizational Structure and Demographics	31.7	37.1	25.0	0.572	0.449
Emotive Factors and General Desire for Change	27.0	25.7	28.6	0.000	1.000
Connections to Area, District, or School	23.8	25.7	21.4	0.010	0.921
Money	20.6	11.4	32.1	2.909	0.088
District, School, and Class Size	12.7	17.1	7.1	0.646	0.422
Timing	11.1	5.7	17.9	1.256	0.262
Position involved Coaching	9.5	14.3	3.6	1.015	0.314
School Infrastructure	7.9	8.6	7.1	0.000	1.000
Recognition of Credentials or Endorsements	6.3	8.6	3.6	0.083	0.773
School Reputation	4.8	8.6	0	0.984	0.321

*$\alpha = 0.05$ **Continuity Correction

Chi-square tests of independence were performed to examine the association between the numbers of teachers responding within each category and Minority student enrollment profile. Results of the analysis did not suggest statistically significant differences. See Table 4.4. Visual comparisons across MSEP suggest that teachers in High-MSEP school types indicated Money as a reason affecting their decisions to accept their positions more often than teachers in low MSEP schools. Overall, findings suggested that science teachers in low MSEP schools behaved similarly to those in High MSEP schools. Low-MSEP school teachers were as likely to give a response in a category as high-MSEP teachers.

Frequency of individual response statements within subcategory by MSEP. While, there was no statistically significant association in terms of numbers of teachers responding to a category by MSEP, statistical significant differences were seen in terms of what teachers "said" (individual response statements) within a category by low and high-MSEP. Chi-Square analysis revealed statistically significant differences in terms of how teachers "reasoned" about accepting their positions within the category of Money. high-MSEP teachers were more likely than teachers in low-MSEP teachers to say they accepted their current positions because they "needed a job", (chi square = 5.027, p = 0.025, df=1) .

Decision Factors (Objective, Subjective, and Critical contact theory) Science Teachers Use to Accept Their Current Positions?

Teachers' individual response by decision factor. Table 4.6. shows teachers' subcategory responses (n=36) characterized as decision factors (i.e., objective,

subjective, and critical-contact) and ranked by frequency of response (n=164). A subjective factor, faculty and/or staff disposition, represents the single most frequently mentioned response of teachers' for accepting their current positions, 19 of 164, 11.6% . The reader should note the majority of subcategory responses (18 of 36) are characterized as subjective factors. Refer back to Figure 4.4. While, objective factors comprised a low 8 of the 36 decision factors (also shown in Figure 4.4), the objective factor individual response statement, Commute and proximity to home, represented the second most frequently mentioned item (16 of 164, 9.8%), after Faculty and/or staff disposition, as shown in Table 4.5. High school science teachers' in Texas indicated, the content they were teaching, a critical-contact factor as the third most frequently stated reason (10 of 164, 6.1%) affecting their decisions to accept their current positions. The subjective factors: desire for autonomy in teaching practice, desire for change-meet new people, and district size each represent the least frequently mentioned items, 1 of 164, 0.6%).

TABLE 4.6
Frequencies of decision factors (Objective, Subjective, Critical-contact) used by teachers to accept their current positions (n=164)

Decision Factor	Category	Individual response statement	Number	Percent (%)
Subj	SAC	Faculty and/or staff disposition	19	11.6
Obj	LOC	Commute and proximity to home	16	9.8
Crit	IOD	Content	10	6.1
Obj	MON	Needed a Job	8	4.9
Obj	LOC	Location (unspecified)	7	4.3
Subj	EGC	Desire for change to teach a new course or subject	7	4.3
Crit	TIM	First school to offer job	7	4.3
Crit	IOD	Instructional techniques	6	3.7
Subj	IOD	School demographics	6	3.7
Obj	MON	Increased salary	5	3.0
Subj	SAC	Student disposition	5	3.0
Subj	EGC	Motivation to teach	5	3.0
Subj	DSC	School Size	5	3.0
Obj	COP	Coaching—non specified promotion	4	2.4
Obj	LOC	Proximity to family or friends living in the area	4	2.4
Subj	CAD	Children attend or will attend school or a school in the district	4	2.4
Subj	CAD	Relative or friend works for the school or district	4	2.4
Subj	CAD	Teacher or spouse attended school	4	2.4

Crit=Critical-contact Factor; Obj=Objective Factor; Subj=Subjective Factor; CAD=Connections to Area, District, or school; CET=Credentials or Endorsements of the Teacher; COP=Coaching Position; DSC=District, School and Class Size; EGC=Emotive Factors and General Desire for Change; IOD=School Instructional Practice, Organizational Structure and Demographics; LOC-Location; MON=Money; SAC=School Atmosphere and Climate; SCI=School Infrastructure; SCR=School Reputation; TIM=Timing.

TABLE 4.6

(Continued)

Decision Factor	Category	Individual response statement	Number	Percent (%)
Crit	SCI	Facilities	4	2.4
Subj	CAD	Spouse works for the school or district	3	1.8
Subj	SCR	School Reputation	3	1.8
Crit	IOD	Number of preparations	3	1.8
Obj	COP	Coaching--- promotion	2	1.2
Obj	LOC	Small town/community	2	1.2
Subj	EGC	Motivation to help students	2	1.2
Subj	CET	Disappointment of grievance with previous employment or employer	2	1.2
Subj	CAD	Teacher or spouse grew-up in the area	2	1.2
Subj	DSC	Class Size	2	1.2
Crit	SCI	Technology	2	1.2
Crit	CET	Sought-after or viewed accredited during recruitment process	2	1.2
Crit	CET	Viewed as lacking credentials and rejected during the recruitment process at another school	2	1.2
Crit	IOD	Extra-curricular programs (UIL, etc.)	2	1.2
Crit	IOD	Grade level	2	1.2
Subj	EGC	Desire for autonomy in teaching practice	1	0.6
Subj	EGC	Desire for change to meet new people	1	0.6
Subj	DSC	District Size	1	0.6

Crit=Critical-contact Factor; Obj=Objective Factor; Subj=Subjective Factor; CAD=Connections to Area, District, or school; CET=Credentials or Endorsements of the Teacher; COP=Coaching Position; DSC=District, School and Class Size; EGC=Emotive Factors and General Desire for Change; IOD=School Instructional Practice, Organizational Structure and Demographics; LOC-Location; MON=Money; SAC=School Atmosphere and Climate; SCI=School Infrastructure; SCR=School Reputation; TIM=Timing.

Counts of objective, subjective, and critical-contact factors for teachers' subcategory responses. See Figure 4.5. The 63 new-to-school teachers in this study made a total of 164 individual response statements. These statements were grouped into 12 categories and 36 subcategories of responses. Review of subcategories (n=36) according to objective, subjective, and critical contact theory suggested that when viewed as a whole, high school science teachers in Texas used all three decision factors when considering their current positions. Visual comparisons across decision factors (objective, subjective, and critical-contact) are shown for subcategories of responses (n=36). See Figure 4.5. Exactly half, (18 of 36, 50.0 %) of the subcategories of responses reported by teachers' were subjective factors emphasizing non-pecuniary aspects of their schools' work environments.

Critical-contact factors refer to aspects of the "work itself" including responsibilities, requirements and expectation associated with the position, and recruiter-candidate interactions. Approximately one-third (10 of 36, 27.8 %) of the individual responses statements were critical-contact factors. Objective factors pertaining to monetary benefits (e.g. salary, signing bonus) and location represented (8 of 36, 22.0%) of the subcategories of responses describing reasons influencing high school science teachers' decisions to accept their current positions. The next section discusses the broader meanings of these findings for stakeholders in education.

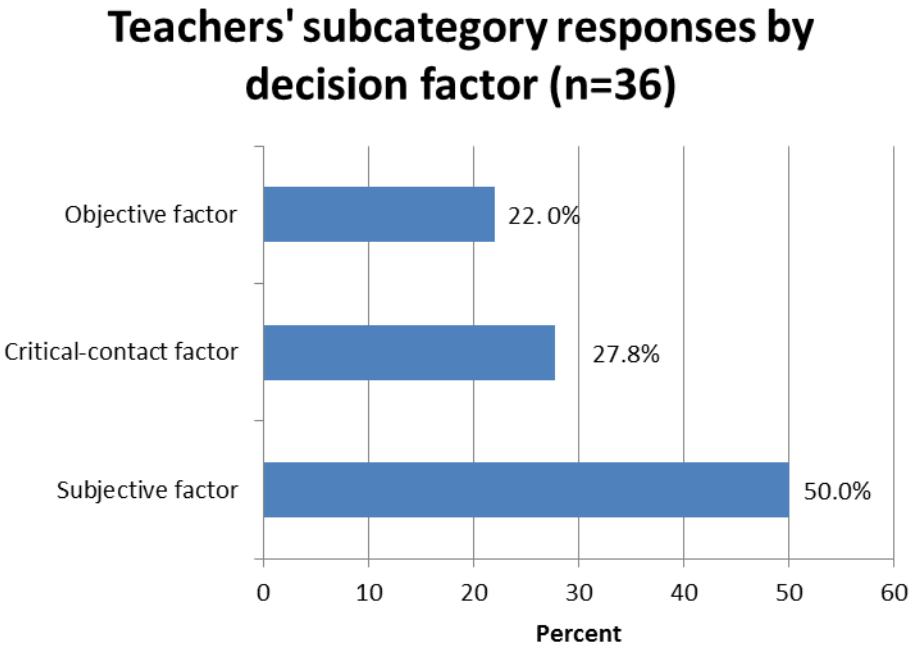

Figure 4.5 Percentages of decision factors (objective, subjective, and critical-contact) are shown by subcategories of individual response statements (n=36).

Recommendations and Conclusion

This study presents a descriptive synthesis and analytical review of the reasons indicated by high school science teachers in Texas as affecting their decisions to accept their current positions. Research findings from this study suggest that teachers are decision-makers and consider a number of factors during their recruitment process.

Reasons Science Teachers State as Affecting Their Decisions to Accept Their Current Positions

High school science teachers in Texas, when asked about the reasons affecting their decisions to accept their current positions, indicated 12 major categories and 36

subcategories of responses. The 12 categories were: (*1) Location, (2) School Atmosphere and Climate, (3) School Instructional Practice, Organizational Structure, and Demographics, (4) Emotive Factors and General Desire for Change, (5) Connections with the Area, District, or School, (6) Money (7) District, School, and Class Size, (8) Timing, (9) Position involving Coaching, (10) School Infrastructure, (11) Credentials or Endorsements, and (12) School Reputatio*n. Analysis of subcategories of responses within the major category of Location revealed teachers most frequently considered the commute and proximity of the school from home before choosing to accept the position. This suggest that the travel experience to and from work, such as distance, time, and quality of the drive, is important to Texas teachers, even more important than other Location factors such as: proximity of the school to family (extended) and friends, small town/community location of the school and location (undefined attributes). Teachers also considered the Atmosphere and Climate of their schools. One third (21 out of 63, 33.3%) of high school science teachers in Texas considered at least one reason relating to the Atmosphere and Climate of their schools before choosing to accept their positions. The individual response statement Faculty and/or staff disposition, in the category School Atmosphere and Climate, represented the single most frequent individual response (19 out of 164) of high school science teachers for accepting their current positions. Teachers indicated at lesser frequencies that they were affected by factors relating to money (13 out of 63, 20.6%). This result was surprising. Even fewer teachers indicated the reputations of their schools (3 out of 63, 4.8%) as a reason affecting their decisions to accept their current positions.

Recommendations. Based on these findings I recommend that stakeholders in education and policy makers in Texas consider the twelve categories of reasons indicated by teachers for accepting their positions when redesigning recruitment practices and policies at their campuses. This study and others confirm that teachers prefer to teach in the areas in which they live or in areas most similar to the one they grew up in. Given the strong preferences for teaching close to home, schools should consider local recruitment strategies. Local recruitment, in particular, may address shortages of teachers at hard-to-staff campus types such as campuses having high numbers of minority student enrollment and located in geographically isolated regions. Aggressive community-based recruitment programs involving collaborations with high schools may help address teacher shortages at campuses showing the greatest need for ethnically representative and committed teachers. Teacher candidates are sensitive to the temperament of their schools environment, in particular, the disposition of the faculty and staff, and use this factor in their considerations to accept a position. Schools should explore means to boast professional morale at their campuses, foster collegiality and maintain congenial work environments. Schools actively involved in recruitment may also want to consider policy that would entail the designation and training of especially congenial faculty and or staff members for participation in their schools' recruitment practices. These individuals should be encouraged to engage with teacher candidates, sharing with them the schools' vision and salient aspects of the work environment. High school science teachers in Texas showed a strong preference toward aspects of their schools' location as a reason affecting their decisions to accept their current positions.

Association between School Size and the Reasons Indicated by Teachers for Accepting their positions

Chi-square tests of independence indicated no statistically significant differences between the numbers of small, medium, and large school teachers' responses within any category. However, statistically significant differences were found in what teachers "said," individual response statements, within these categories based on school size. Teachers in small schools were more likely than teachers in medium and large schools to indicate they accepted their current positions because they desired autonomy in their teaching practices. Teachers in large size schools were most likely to indicate they accepted their current positions because of a desire to teach a new course. Teachers in small and medium schools were more likely than teachers in large schools to indicate they considered as a reason affecting their decisions to accept their current positions the availability of a coaching position (promotion unspecified).

Recommendations. Small schools should consider placing emphasis on their allowance of autonomy in instructional practices as an attractant for new teachers during the recruitment process. Large schools may consider the desire of some teacher candidates to "teach a new position" and use this as an advantage or leverage point during the recruitment process. Small and medium schools should consider as an recruitment asset the connection of a coaching assignment with a science position. As such these school types should take special measures to advertise the involvement of a coaching assignment as a means to make the position more attractive to potential candidates, as long as the candidate meets all qualifications for the position This strategy

may be particularly important for small or medium School competing in close proximity to one another for a limited pool of teachers.

Association Between the Minority Student Enrollment Profile of the School in Which a Teacher Works and the Reasons Indicated by these Teachers as Affecting Their Decisions to Accept Their Current Positions

Low-MSEP teachers and high-MSEP school teachers "reasoned" in much the same way about accepting their current positions. For example, low-MSEP teachers were as likely as high-MSEP teachers to give a response within one of 12 category of reasons affecting their decisions to accept their current positions. When individual response statements within the aforementioned category were examined using chi square test of independence, low and high-MSEP school teachers were found to differ in frequency of response regarding their perspectives of monetary benefits as reasons affecting their decisions to accept their current positions. High-MSEP teachers were more likely than teachers in low-MSEP teachers to say they accepted their current positions because they "needed a job."

Recommendations. High-MSEP schools should consider that teachers "reason" about accepting a position in much the same way. To some degree this raises competition between high-MSEP and low-MSEP schools, as teachers consider the same factors as attracting or influencing their decisions to accept a position. As such, to remain competitive with low-MSEP schools, I recommend that high-MSEP schools redesign recruitment practices and policies to include multiple strategies relating to *(1) Location, (2) School Atmosphere and Climate, (3) School Instructional Practice,*

Organizational Structure, and Demographics, (4) Emotive Factors and General Desire for Change, (5) Connections with the Area, District, or School, (6) Money (7) District, School, and Class Size, (8) Timing, (9) Position involving Coaching, (10) School Infrastructure, (11) Credentials or Endorsements, and (12) School Reputation. In particular, high-MSEP schools should consider findings of this study supporting the disposition of faculty and staff and commute and proximity of the school to teachers' homes as two major influencers to their candidates decisions to accepting a position at their schools. To remain competitive, High MSEP schools should take measure to build and maintain a positive faculty and staff climate and engage in community recruitment practices.

Decision Factors (Objective, Subjective, and Critical Contact Theory) Science Teachers Use to Accept Their Current Positions

Job choice theory (objective, subjective, and critical contact) provided a practical means for understanding teachers' "reasoning" for accepting their current positions. Teachers' reasons for accepting their positions was found to be complex. As a whole, high school science teachers in Texas were found to be influenced by factors of each theory (i.e. objective, subjective and critical-contact factors). Pounder & Merrill (2001) discussed this phenomenon as an "integrated approach to job theory", in which candidates are influenced by factors associated with each theory. Pounder and Merrill (2001) assert, when considered, positions include a diversity of attributes associated with each theory and are thus perceived by candidates as such. However, a majority of the decision factors (18 of 36 , 50.0%) were subjective factors, emphasizing aspects of the

work environment. This suggests that teachers seek positions in schools which, as far as they can tell, provide the kind of work environment most compatible with their psychological needs. Critical-contact factors comprised (10 of 36, 27.8%) of teachers' subcategories of responses. About twenty percent (8 of 36, 22.2%) of the individual response statements were objective factors, pertaining to pecuniary aspects associated with the position.

Recommendation. I recommend that schools increase the relative strength of their recruitment approaches by considering attributes of their schools in each of three domains, i.e., objective, subjective, and critical-contact, as they prepare to interact with candidates. While multiple factors were found to influence teachers' decisions to accept their positions, results confirm that subjective factors comprise most of the reasons indicated by high school science teachers in Texas for accepting their current positions. As such, schools should provide teacher candidates with information about relative aspects of their schools work environment and the purposes they seek to fulfill as a school and district. Schools should apply available resources on aspects of the internal work environment at the local building level, such as faculty and staff disposition including fostering positive attitudes and collegiality. While schools may currently discuss such matters, this study confirms that they should be brought to the forefront of their schools' recruitment practices and combined with critical-contact and objective factors when trying to attract high school science teachers to their schools.

Texas high school science teachers are decision makers actively "reasoning" about aspects of open positions. Given the findings presented in this study, high school

in Texas are presented with what may represent a new recruitment challenge. To maintain fully staffed schools and meet the highest quality of public education as defined by the State stakeholders and policy makers in education will need to ensure that new recruitment policy is tailored to the particular needs and decision factors affecting high school science teachers' decisions to accept an open position. While such considerations may involve the augmentation, or in some instance the redesign, of school recruitment programs, the benefit to schools in terms reducing teacher shortages at campuses may outweigh the costs of change.

Limitations and Delimitations of the Study

These findings contribute to research on the "reasoning" of high school science teachers for their current positions. However, certain limitations apply to this study. New-to-school teacher interviews were conducted by eight interviewers. It could be that some of the mannerisms of the interviewer affected teachers' responses to interview questions. This limitation was attempted to be minimized by subjecting the interviewers to multiple common training sessions lead by distinguished qualitative researchers. Interviewers were given opportunities to practice their interviewing skills as well as develop advanced skills for minimizing the effect of the researcher (interviewer) in qualitative research settings.

A second limitation of the study refers to the existing literature base on teachers' preferences for job attributes. Findings from empirical studies on this topic are inconsistent. The inconsistence in findings is presumably due to differences in methodological factors of the study including sample population of teachers (e.g.,

experience, geographic location), data collection procedures and other extraneous factors such as job market characteristics at the time in which a study was conducted. This study attempts to mitigate compounding inconsistence among the existing literature on teachers' decision factor and preferences' for job attributes. As an exploratory rather than an explanatory research design, findings presented in the study, as well as its methodology, may be viewed as a "search" for best practice. Future researchers in the area of teachers' decision factors and preferences for job attributes may find the research topology presented here as providing significant insights to the design of their research study and/ interpretation of their research results. Furthermore, special care has been in this study to define the research methodology used to obtain the afore mentioned results, including distinction of the sampling plan and presentation of generalizability to new-to-school public high school science teachers in Texas.

A major strength of this study is the sampling plan. The PRISE sampling plan allows empirical data and results referenced in this study to be generalized to all public high schools in Texas. Additionally, the return rate on the interviews of new-to-school teachers provides a level of confidence that the results of this study are representative of all new-to-school high science teachers in Texas public schools. Another strength of this study is the semi-structured interview technique used to understand teachers' recruitment experiences for their current positions. The interview technique permitted focused, conversational, two-way communication between the interviewer and the teacher. In many instances teachers were candid with their responses and offered additional information to the interviewer further explaining their responses to questions. Still

strength of this study is the identification of factors used to operationalize the three theories of job choice. Often factors relating to job choice theory have been defined apriori. Teacher participants in the study are then asked to “imagine” themselves as a candidate and rank each factor according to its value in accepting the proposed position. My study permitted teachers to explain reasons affecting their decisions to accept their current positions in their own words. Furthermore, the influence of the factors is deemed to be accurate and relevant as teachers involved in this study did indeed choose to accept a position at their schools. Job choice theory was then applied, posteriori, to understand the nature of teachers’ individual response statements. The association of these factors by teacher type (i.e., beginning, mid-career, and veteran) will be explored in future studies, to test for hierarchical values associated with each theory of job choice.

CHAPTER V

HIGHLY SATISFIED NEW-TO-SCHOOL TEACHERS' RECRUITMENT EXPERIENCES AND REASONS FOR ACCEPTING THEIR POSITIONS

The aim of this study was to gain familiarity with the experiences and reasoning behaviors of teachers. In this chapter I address two overarching questions: What are the recruitment experiences of highly satisfied teachers? What are the reasons affecting highly satisfied teachers' decisions to accept their current positions? Particular interest is shown toward teachers within the first stage of the high school science teacher professional continuum (TPC): recruitment, who showed particular satisfaction with their positions and were subsequently more likely to be retained through the following school year. See Figure 5.1. The experiences of highly dissatisfied teachers are also discussed in this study, but in less detail. The recruitment experiences and decision factors of highly dissatisfied teachers were only referenced as a means to identify recruitment activities with potential association to teacher job satisfaction and teacher retention.

My proposed recruitment model, Modified Recruitment Practices (MRP), will be introduced in this chapter. Components of the model, *Teacher-to-school matches* and *Realistic job previews* (Chapter III) and *Decision factors* (Chapter IV), were referenced in previous chapters as conceptual frameworks used to guide my inquiry process and organize understanding with regard to the varied recruitment experiences of public high

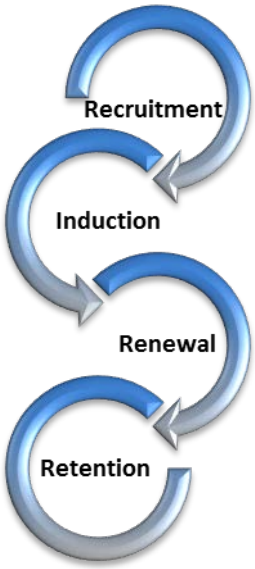

Figure 5.1. Schematic depicting stages of the Teacher Professional Continuum. Recruitment marks a teacher's entrance into the TPC. Following initial recruitment, the teachers progresses through subsequent stages (i.e., induction, renewal, and retention) over the duration of her professional career.

school science teachers in Texas. Each of the models' three components are applied here in a single study to delineate differences in recruitment experiences of highly satisfied and highly dissatisfied new-to-school teachers. Modified Recruitment Practices is a progressive recruitment model that assumes teachers as decision makers actively involved in the recruitment processes. The underlying assumption is that teachers who are particularly active in the recruitment process will enter their positions with a balanced view of their job responsibilities and the school climate. As such, they will experience greater job satisfaction and remain in their positions. This study proposes the following research question: What are the differences in highly satisfied teachers' and

highly dissatisfied teachers' engagement with Modified Recruitment Practices? Findings presented in this exploratory study have implications for future study's assessments of the associations between variables unique to recruitment process and teacher job satisfaction and teacher retention. The next section includes a brief literature review of Teacher to school match, Realistic job previews, and Job-choice theory .

Related Literature

The purpose of this review of the literature is to discuss traditional recruitment theory and provide stakeholders in education with an initial understanding of an alternative model of recruitment practice. Progressive models of recruitment may help to support teacher job satisfaction and teacher retention and may also better enable high school principals to meet staffing demands and address teacher shortages at their campuses. The section below will discuss traditional recruitment theory and problems associated with traditional recruitment theory.

The Problem with Traditional Recruitment Theory

Researchers in education (e.g., Liu & Johnson, 2006; Winter, Ronau, & Munoz, 2004) have suggested that recruitment practices for teachers have not been as effective in today's labor market because the theoretical approach to recruitment is flawed. The traditional theoretical approach to recruitment perpetuates recruitment as marketing theory in which organizations present themselves to applicants in the most favorable way. This approach poses several problems. First, teacher candidates are not provided by hiring organizations with all the information necessary for them to make an informed decision about the schools fit with their particular needs and preferences. The second

problem with traditional recruitment theory is that it assumes that only the hiring organization fulfills the role of "evaluator". In effect, prospective teachers also evaluate. The flaws of traditional recruitment theory have implications for teacher job satisfaction and teacher retention at campuses. The next sections provide a brief description of progressive elements associated with recruitment: teacher-to-school match, decision factors, and realistic job previews. See Chapter II for a complete description.

Teacher-to-School Match

Liu and Johnson (2006) asserted the importance of considering whether hiring practices used by schools are "effectively matching new teachers to schools and positions" (p. 325). The authors suggested that "good matches" between teachers and their schools' positions are important for two reasons: (1) a good match can influence teacher effectiveness, and (2) a match between a new teacher and her position can relate to her satisfaction and retention on the job (Liu & Johnson, 2006). Kardos, Johnson, Peske, Kauffman, and Liu (2001) suggest teachers who are satisfied in their positions are a benefit to schools. Satisfied teachers contribute to the professional culture of the schools (Kardos et al., 2001).

Well-formatted interviews can allow teachers and hiring committees to gather rich-information about one another necessary to assess whether a match has been made. O'Nell et al. (2001) recommend that interview meetings occur on site in a private location. The authors also recommend the involvement of personnel and individuals having experience in the work setting. Specifically, others besides administrators should be involved in the hiring (interview) process (O'Nell et al., 2001).

Job Choice Theory

Job choice theory as operationally defined in this study refers to the "decision factors" of teachers. Traditionally, teachers have not been perceived as decision-makers within the selection process, even though teachers are the ones who ultimately choose to agree to accept the positions being offered. Factors affecting teachers' decisions to accept positions demand attention for many reasons. In particular, these decisions relate to staffing at schools, teachers' job satisfaction and their ultimate retention at that school. Theories of job choice have been used to understand teachers' decisions to accept positions. See Figure 5.2.

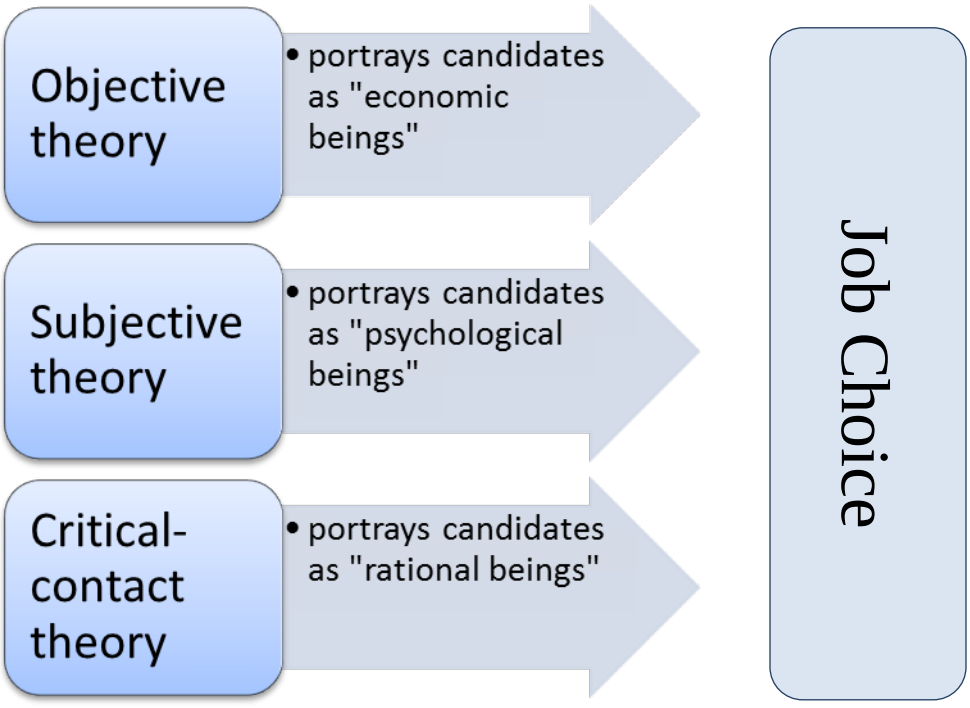

Figure 5.2. Visual representation of three theories of job choice used to understand teachers' decisions for positions.

Objective theory. Objective theory portrays candidates as economic beings. Candidates consider factors such as pay, benefit programs, location, and opportunities for advancements resulting in later pecuniary rewards in the selection of a position (Behling et al., 1967).

Subjective theory. Subjective theory portrays candidates as psychological beings (Young et al., 1989). Candidates consider aspects of the work environment, including student and faculty disposition and school size when choosing to accept or reject a position

Critical-contact theory. Critical-contact theory assumes candidates are rational beings with interests in the "work itself." Candidates consider such external factors as the appearance or behavior of the recruiter, physical facilities, and requirements and expectations associated with the job (Young et al., 1989).

Realistic Job Previews

Breaugh and Starke (2000) describe recruitment as a complex process and suggests the process involves the interaction of multiple variables. Realistic job previews (RJP) may represent one such variable. RJP refers to "the presentation by an organization of both favorable and unfavorable job-related information to job candidates" (Phillips, 1998, p. 673). Time challenges associated with a position, complex employee-client interactions, and limited organizational resources are examples of unfavorable job-related information hiring organizations may elect to share with candidates. It is the expectation of the hiring organization that the early disclosure of this

information would bring about greater attraction to the position, retention and job satisfaction once the candidate is hired than reporting exclusively positive messages.

A school's failure to provide an accurate portrayal of the school environment to candidates may contribute to the candidate's holding inaccurate job expectations. Wanous (1992) in a review of RJP studies indicated that new employees often report experiencing unmet expectations. RJP may be especially important in teacher recruitment, where teacher candidates may not have information about the climate and culture of the school and other job related responsibilities. Nine types or formats for RJP have been defined within the field of human service: structured observation, meetings with current workers, pre-applicant screening, videotapes, print media, web-based multi-media, group session, internship, and hybrid methods (O'Nell et al., 2001).

Methods

PRISE Sampling Plan and Participants

A modified random stratified sampling plan was used to identify 50 sample schools representative of the 1,333 public schools that offered high school science courses and approximately 10,000 teachers who taught high school science in Texas during the 2007-2008 school year. Sample schools were randomly selected using two explicit stratification variables: (1) school size (small, medium, and large) and (2) student minority enrollment proportion (very low, low, high, and very high). The University Interscholastic League (U.I.L.) classification system in Texas was used to define stratifications by size and the Texas Education Agency's distinctions were used to define minority enrollment proportions. A third implicit variable, geographic location,

was also employed (Bozeman, Stuessy, Hollas, Ivey, Richardson, Spikes, Vasquez & Yoo, 2009). Chi-square analysis was used to verify the validity of the sample as representative of the entire population of schools in Texas (Stuessy, 2009).

Among the original 50 schools selected to participate, a random participation rate of 78% (n=39) was obtained by the PRISE Research Group. Schools choosing not to participate in the study were replaced with schools from the same sampling plan. A 100% participation rate (including replacements) was achieved for sample schools (Bozeman, & Stuessy, 2009).

The PRISE study's participants included (n=63) new-to-school teachers. New-to-school teachers were defined by the PRISE Research Group as teachers within their first year of accepting a position at their current school and represent a subset of the 385 high school science teachers in the study. New-to-school teachers represent one of three teacher types as defined by the PRISE Research Group: novice teachers (1-3 years of teaching experience), mid-career teachers (4-7 years of teaching experiences), and veteran teachers (8 or more years of classroom teaching experience; Stuessy, Bozeman, & Ivey, 2009). A total of 75 new-to-school teachers were identified by the PRISE Research Group. Sixty-three new-to-school science teachers agreed to be interviewed about their recruitment experiences for their current positions, yielding an 84.0% response rate. Interviews were conducted over the telephone by a PRISE researcher. Audio tapes, transcripts, field notes and chart data from these interviews were used in the study.

The present study. For the purpose of this study, only interview data from highly satisfied new-to-school teachers or highly dissatisfied new-to-school teachers was analyzed. This qualitative study includes highly satisfied (n=16) and highly dissatisfied (n=14) new-to-school teachers. Highly satisfied and highly dissatisfied new-to-school teachers represent a subset of all new-to-school teachers (n=63).

Selection for highly satisfied and highly dissatisfied new-to-school teachers. Data from a subset of all PRISE new-to-school teachers (n=63) were selected for this study. Specifically, 16 highly satisfied new-to-school teachers and 14 highly dissatisfied teachers were chosen for the study. Highly satisfied new-to-school teachers were identified by assessing the mean job satisfaction score for all teachers in the PRISE database (n=385).

Calculation for teacher job satisfaction. Teacher job satisfaction scores were assigned based on teachers' responses to 14 questions on the Texas Poll of Secondary Science Teachers about their satisfaction with various aspects of their professional work environment (Bozeman & Stuessy, 2009, p. 3). Questions pertained to the following work environment elements: (a) autonomy and recognition, (b) occupational choice, (c) science lab facilities and equipment, (d) personal safety, (e) collegiality and cooperation among teachers, (f) administrative communication and teaching assignment, (g) professional development support-general and science-related, (h) student-centered focus on academics, (i) student-cenetered focus on careers and informal science activates. Teachers responded to questions pertaining to the afore mentioned elements as very dissatisfied, dissatisfied, satisfied, or very satisfied. Teachers' job satisfaction

scores (n=385) retained a mean score of 42, with a standard deviation of 6.5. Reference Bozeman and Stuessy (2009) for addition information regarding the Texas Poll and teacher job satisfaction. A copy of the Texas Poll can be retrieved at http://prise.tamu.edu .

The mean job satisfaction score of 42 was then used to the identify teachers in the 1st quartile and 4th quartile rank scores for job satisfaction for inclusion in the study. The mean job satisfaction score for all teachers (n=385) was used to identify quartile ranks because it was assumed that there was no single mean for subgroups of teachers. It was assumed that the mean of any subgroup was not statistically different from the larger subgroup. This was felt to be particularly true of new-to-school teachers who represent 3 teacher groups: beginning, mid-career and veteran teachers. The same groups are identified in the larger sample of teachers (n=385).

New-to-school teacher demographics. Table 5.1 shows the demographic profiles of new-to-school teachers grouped by job satisfaction levels: highly satisfied (n=16) and highly dissatisfied (n-=14).

Highest degree earned. See Table 5.1. Approximately 3 out of 5 highly satisfied and 1 out of 2 highly dissatisfied new-to-school teachers hold Bachelor's degrees. Slightly more highly dissatisfied teachers (28.6%) than highly satisfied teachers (25.0%) hold Master's degrees. Two highly dissatisfied teachers hold a Doctorate's degree.

Gender. A majority of the sample are female. Women involved in the study outnumber men involved in the study at a proportion of about 2 to 1. About 60.0% of

highly satisfied new-to-school teachers are female. A similar percentage of highly dissatisfied teachers are female.

Age. About 1 out of 3 highly satisfied and 1 out 5 highly dissatisfied new-to-school teachers are between the ages of 20-29 years. About 12.0% or less of highly satisfied new-to-school teachers are 40 years or older. On average, highly dissatisfied new-to-school teachers are older than their counterparts.

Ethnicity. Approximately 60.0% of highly satisfied and highly dissatisfied new-to-school teachers identified in the study are White. About 20.0% of highly satisfied and 30.0% of highly dissatisfied teachers are Hispanic American. Fewer percentages of Asian/Pacific Islanders and African American teachers were identified in the study.

Teaching Experience. A majority of highly satisfied (62.5%) and highly dissatisfied (71.4%) new-to-school science teachers are induction year, within their first three years in the teaching profession. Approximately 1 out of 8 highly satisfied and 1 out of 5 highly dissatisfied new-to-school teachers are mid-career teachers. Veteran teachers having 8 or more years of professional experience in teaching. Twenty-five percent of highly satisfied teachers and about 7.0% of highly dissatisfied teachers have eight or more years of teaching experience. These percentages with respect to the sample representation suggest that following induction year teachers, a majority of highly satisfied new-to-school science teacher in Texas are veteran year teachers.

TABLE 5.1
Characteristics (i.e., degree, gender, age, teaching experience) of highly satisfied and highly dissatisfied new-to-school science teachers

	New-to-School Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Highest Degree Earned[a]				
Bachelor's	10	62.5	7	50.0
Master's	4	25.0	4	28.6
Doctorate	0	0.0	2	14.3
Unknown	2	12.5	1	7.1
Gender[b]				
Female	10	62.4	9	64.3
Male	5	31.3	5	35.7
Unknown	1	6.3	0	0.0
Age (Years)[c]				
20-29	6	37.4	3	21.4
30-39	3	18.8	4	28.6
40-49	2	12.5	3	21.4
50-59	2	12.5	3	21.4
60+	1	6.3	0	0.0
Unknown	2	12.5	1	7.2
Ethnicity				
American Indian	0	0.0	0	0.0
Asian/Pacific Islander	1	6.3	1	7.1
African American	0	0.0	1	7.1
Hispanic American	3	18.8	4	28.7
White	10	62.4	8	57.1
Unknown	2	12.5	0	0.0
Teaching Experience (Years)				
Induction (1-3)	10	62.5	10	71.4
Mid-career (4-7)	2	12.5	3	21.4
Veteran (8+)	4	25.0	1	7.2

Note. These data were obtained from the Texas Education Agency's Public Education Information Management System (PEIMS).
[a] PEIMS system missing 5 individuals. [b]PEIMS system missing 2 individuals. [c]PEIMS system missing 5 individuals.

New-to-school teacher demographics. Table 5.2 shows the retention rates of highly satisfied and highly dissatisfied new-to-school teachers. Highly satisfied new-to-

school teachers are more likely to be retained in their positions than highly dissatisfied new-to-school teachers. Highly dissatisfied new-to-school teachers are nearly 20.0% less likely to be retained than highly satisfied teachers.

TABLE 5.2
Retention rates of new-to-school teachers grouped by job satisfaction levels

	Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
	Frequency	%	Frequency	%
Retention rate	12	75.0	8	57.1

Note. Teacher retention was calculated by comparing school master schedules for two school years. The names of science teachers retained from the 2007-2008 school year to the 2008-2009 school year would appear on both master schedules. Reference Stuessy, Bozeman and Ivey (2009) for addition information regarding teacher retention rates.

Data Collection

In the 2007-2008 school year PRISE Group researchers visited each of the 50 sample schools. Principals at each school (n=50, 100% return rate) completed a field–based semi-structured interview with a PRISE researcher and approved access by PRISE Group to their schools' master schedules and teacher lists. Master schedules and teacher lists were used to identify teachers who taught high school science courses in each sample school, *including* teachers with the distinction new-to-school who were interviewed used in this study.

Telephone interviews were conducted by a PRISE researcher for each new-to school teachers. These interviews were used to understand teachers' perceptions regarding current school practices and policies at each stage of the TPC. The TPC is "the professional lives of high school science teachers along the continuum of their recruitment, induction, renewal, and [retention] in the teaching profession" (Stuessy et al., 2010, p.7). Only recruitment data was relevant to this study. PRISE researchers audio recorded (when permitted), transcribed, and finally transposed interviews into data charts for analysis (Ivey& Stuessy, 2009). Additional data sources included state databases, including the Texas Education Agency (TEA) and the Public Education Information Management System (PEIMS); Stuessy, 2009). This data provided information regarding demographics and characteristics of teachers and their schools (e.g., total years of teaching experience, ethnicity, and minority student enrollment profile). These data were coded and archived in the PRISE Teacher Database.

Data Analysis

The decision to utilize an exploratory research design in this study draws on the need to look for patterns and gain understanding about the recruitment experiences of a unique subset of teachers, highly satisfied new-to-school teachers. Specifically, an exploratory qualitative design was used to analyze highly satisfied and highly dissatisfied new-to-school teachers responses to interview questions about their recruitment experiences, including the reasons for accepting positions.

Teacher networking rubric. The Teacher Networking rubric (See Appendices C & D) was used to code teachers' interview responses for question #1, *How did you first find out about your science position?* Inter-rater reliability check was used to verify the consistency of the Teacher Networking rubric. The rater team consisted of 4 persons having experience in the public education system. An inter-rater score of 85.7 was achieved amongst the inter-rater team.

Teacher interview rubric. The Teacher Interview rubric (See Appendices E & F) was used to code teachers' interview responses for question #2, *Thinking about your interview process for this school, with whom did you interview with for your current teaching position? How did you first find out about your science position?* Peer review was used to check for consistency within the rubric. Peer review was used to assess the rubrics consistency because of homogeneity in teachers' responses. Homogeneity among teachers responses were first observed in data reduction phase of the analysis.

Teacher realistic job previews rubric. Similarly, peer review was used to check for consistency within the Teacher Realistic Job Previews rubric. See Appendices G and H. The Teacher Realistic Job Preview rubric corresponds to teacher interview question #3, *What did you do to learn about this school before accepting your current science teaching position?* Categories of responses for this question were predefined and presented to teachers at the time of the interview. Teachers answered either "Yes" or "No" to the category response. However, one category of the Teacher Realistic Job Preview rubric emerged from teachers responses to the interview question. Following the presentation of category responses in which teachers answered as "Yes" or "No",

PRISE interviewers asked teachers a single follow-up question, *Is there anything else that you did to learn about this school before accepting your current science teaching position.* A substantial number of teachers reported that the reviewed web-based information. Due to the frequency of the response, it was include as a rubric category.

Teachers' responses to interview questions 1-3 were then scored according to the corresponding rubric. Pre-assigned teacher codes were used to identify individual teachers' responses to questions. Frequency tables showing the categories and counts of teachers' responses were generated (e.g., Modal values, means, etc.). The conclusion of the first phase of the data analysis resulted in the transformation of qualitative data (teacher phone interview responses) to quantitative data.

Decision factor rubric. The Decision Factor Rubric generated in the analysis process of new-to-school teachers' responses to interview question 4, *What are the top three reasons that affected your decision to accept your current positions?* was used here to analyze responses of highly satisfied and highly dissatisfied new-to-school teachers to question 4. (Reference Chapter IV). A summary of the process used to create the Decision Factor Rubric is included here for convenience.

Using Goetz and Le Compte's constant comparative methodology, new-to-school teachers' responses regarding reasons affecting their decisions to accept their current positions were divided into single units of thought, referenced in this study as "individual response statements." A total of 164 individual response statements were received from the 63 new-to-school teachers participating in the study. Individual response statements were then compared and contrasted between themselves generating

"thematic" categories and subcategories. Within this analysis, constant comparative method was used as a constructive as opposed to an enumerative procedure. The conclusion of the analysis yielded twelve categories and thirty-six subcategories of responses. The categories and subcategories were then used to create a scoring rubric. Inter-rater reliability check was used to verify the consistency of the scoring rubric. An inter-rater score of 85.7 was achieved. See Appendix 4 for the Scoring Rubric used in this study. Teachers' responses to interview question # 4 were then scored according to the Decision Factors I rubric. See Appendix I. Pre-assigned teacher codes were used to identify individual teachers' responses to questions. Following this qualitative data analysis frequency tables showing the categories and counts of teachers' responses were generated (e.g., modal values, means, etc.).

Finally, I interpreted results to make generalizations about the diversity of teachers' recruitment experiences for their current positions as they relate to school size and percent minority status. Teachers' responses to the interview questions were not used to make predictions. They were used instead to describe the nature of recruitment practices for high school science teachers in Texas. Results of the analyses are described in the following section.

Job Satisfaction

The MetLife Survey of The American Teacher: Teachers, Parents and The Economy in a study of more than 1000 American school teachers found that after a slight increase teacher job satisfaction had dropped. In 2006, 56.0% of teachers and in 2009, 62.0%, of teachers reported they were very satisfied with their jobs. In 2011, only

44.0% of teachers indicated they were very satisfied with their jobs. This represents the lowest levels of teacher job satisfaction in more than 20 years (MetLife 2011). Understanding teacher satisfaction levels may have important implications for policy reform with regards to student achievement and teacher retention.

Johnson, Kraft and Papay (2012) using findings from their empirical study of teachers in Massachusetts suggest a link between teacher satisfaction and student achievement growth. The factors found to be most important to teacher job satisfaction were "the ones that shape the social context of teaching and learning" (Johnson et al., 2012, p. 27). Specifically, collegial relationships, administrative leadership, and positive school culture were found to be predictors of teacher job satisfaction. The authors went on to suggest an association between teacher job satisfaction and student achievement. Teachers, who were provided with a supportive context in which they could work, and thus were satisfied with their positions, were found to have improved student achievement.

Ladd (2009), in a quantitative study using survey data from K-12 teachers in North Carolina, reported similar findings. Teachers' perceptions of their working conditions were found to be predictive of student achievement. Students of teachers who perceived their working environments in a positive light were found to have students who performed better in reading and math. Additionally, Ladd found very strong correlation between working conditions and teacher's stated intentions to remain in or leave their schools. Several national studies prior to 2009 confirmed the relationship between teacher job satisfaction and teacher retention.

The MetLife Survey of the American Teacher: Expectations and Experiences (2006) reported on a number of factors contributing to teacher job satisfaction (e.g. working conditions, salary). Working conditions, specifically principal leadership, was found to contribute to teacher job satisfaction. The study also confirmed that teacher job satisfaction was a significant predictor of teachers' intention to leave the profession (MetLife 2011).

Stockard and Lehman (2004) used data from two panel studies: the 1993 to 1995 nationwide Schools and Staffing Survey and the Teacher Follow-up Survey, as well as a 1998-1999 survey conducted in one western state to examine factors possibly influencing teacher job satisfaction and teacher retention. Factors related to demographic characteristics, work assignment, social support, school management and effectiveness were explored. Social support and school management were found to be the most important influences on teacher job satisfaction. Furthermore, the most important influence on retention decisions was found to be teacher job satisfaction. See Erick 2002; Ingersoll, 2000, 2001, 2006; and Stuessy, 2007 for additional studies suggesting a positive association between teacher job satisfaction and teacher retention.

Bozeman and Stuessy (2009) suggest that understanding teacher satisfaction and perception may assist policy makers to develop initiatives supporting teachers' levels of satisfaction with their working environments and make predictions regarding the likeliness of a sustained teacher workforce. A brief review of the literature suggests that studies examining post-hire factors influencing job satisfaction are relatively common. However, little is known about the effects of pre-hire experiences, such as recruitment,

on teacher job satisfaction. Understanding the effects of pre-hire experience on teacher job satisfaction is relevant to educational stakeholders as teachers levels of satisfaction relate to student achievement and teacher retention at campuses.

Results

Differences in Highly Satisfied Teachers' and Highly Dissatisfied Teachers' Engagement with Modified Recruitment Practices

Comparison of teacher-to-school match networking practices for highly satisfied and highly dissatisfied teachers. Table 5.3 displays a comparison of highly satisfied and highly dissatisfied new to school teachers' responses regarding how they first found out about their positions. Both highly satisfied and highly dissatisfied teachers were informed about their positions through word-of-mouth more than any other recruitment practice (i.e. alternative certification program, job fair, website). However, highly satisfied teachers were 30.0% more likely than highly dissatisfied teachers to have found out about their positions by word-of mouth. Slightly more than 10.0% of highly satisfied teachers indicated that they first found out about their positions through an alternative certification program. More than 20% of dissatisfied teachers reported that they found out about their positions through an alternative certification program.

TABLE 5.3
Comparison of highly satisfied and highly dissatisfied new-to-school teachers' teacher-to-school match network practices: Responses regarding how they first found out about their science position

	Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
Networking Practice	Frequency	%	Frequency	%
Word-of-mouth	12	75.00	6	43.0
Alternative-certification program	2	12.50	3	21.4
Job fair	1	6.25	1	7.1
Website	1	6.25	3	21.4
Other	0	0.00	1	7.1

Comparison of teacher-to-school match interview practices for highly satisfied and highly dissatisfied teachers. Teachers' experiences during the interview process were used to operationalize teacher-to-school match. Interviews support teacher-to-school match by allowing both the hiring committee and the teacher to obtain rich-information about each other. Diversity among interviewers are essential to establishing a good match. Table 5.4 shows the number of school or district groups represented by persons involved during the recruitment process of new-to-school science teachers. The value, "number of represented groups", was calculated by totaling the number of vested groups represented by interviewers. Primary the vested group was identified by the interviewer's position or title. Findings indicate highly satisfied new-to-school teachers were two times more likely than highly dissatisfied new-to-school teachers to meet with interviewers representing two school or district groups. On average highly satisfied new-to-school teachers in Texas interviewed with one more individual during the recruitment

process for their positions than did highly dissatisfied teachers, (average=2, mode=2, median=2, range=1-3, vs. average 1.6, mode=1, median=1, range=1-3, respectively).

TABLE 5.4
Comparison of highly satisfied and highly dissatisfied new-to-school teachers' teacher-to-school match interview practices: Number of school or district groups represented during the interview process of new-to-school teachers

	Number of School or District Represented Groups					
	1		2		3	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Highly Satisfied Teachers (n=16)	3	18.75	10	62.50	3	18.75
Highly Dissatisfied Teachers (n=14)	8	57.10	4	28.60	2	14.30

Note. The value, "number of represented groups", was calculated by totaling the number of vested school or district groups represented by interviewers.

Comparison of teacher-to-school match interview practices for highly satisfied and highly dissatisfied teachers. See Table 5.5. Highly satisfied new-to-school teachers were about 15.0% more likely than dissatisfied teachers to indicate that another teacher was involved during their interviews' and about 25.0% more likely to indicate that a district superintendent was involved during their interview for their current positions. Findings indicated that three school and district individuals frequently engaged with highly satisfied new-to-school teachers: the school principal, another teacher, and the district superintendent. Highly satisfied new-to-school teachers were more likely to have interviewed with another teacher and the superintendent, in addition to the school principal, than highly dissatisfied new-to-school teachers. In no instance

did a highly satisfied or highly dissatisfied new-to-school teacher indicate the involvement of a counselor or a member of the school board in their interview process.

TABLE 5.5
Comparison of highly satisfied and highly dissatisfied new-to-school teachers' teacher-to-school match interview practices: Responses regarding whom they interviewed with for their teaching positions

	Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
Interviewer	Frequency	Percent (%)	Frequency	Percent (%)
Principal	16	100.0	14	100.0
Teacher	8	50.0	5	35.7
Superintendent	4	24.0	0	0.0
Human resources personnel	2	12.5	1	7.1
Dean of education/curriculum Coordinator	2	12.5	0	0.0
School board member	0	0.0	0	0.0
Athletic director/Coach	0	0.0	1	7.1
Counselor	0	0.0	0	0.0
Student	0	0.0	1	7.1
Other	0	0.0	0	0.0
No individual	0	0.0	0	0.0

Comparison of realistic job preview practices for highly satisfied and highly dissatisfied teachers. Table 5.6 displays a comparison of highly satisfied and highly dissatisfied new to school teachers' responses regarding what they did to learn about their positions before accepting them. This question relates to new-to-school teachers' engagement in realistic job previews. Highly satisfied teachers were nearly 40.0% more likely than highly dissatisfied teachers to have taken a tour of their campuses before

TABLE 5.6
Comparison of highly satisfied and highly dissatisfied new-to-school teachers' realistic job preview practices: Responses regarding what they did to learn about their positions

	Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
Realistic job preview activity	Frequency	%	Frequency	%
Viewed instructional technologies	14	87.3	10	71.4
Toured the campus	13	81.3	5	35.7
Viewed teaching and laboratory Equipment	13	81.3	4	28.6
Met with other science teachers	9	56.3	5	35.7
Reviewed the curriculum scope and sequence	4	25.0	0	0.0
Researched web-based information	2	12.5	1	7.1

accept their science positions. Additionally, highly satisfied teachers were about 50.0% more likely than highly dissatisfied teachers to have viewed teaching and laboratory equipment at their campuses prior to a decision to accept their positions. Only 25.0% of highly satisfied teachers reported that they reviewed the curriculum scope and sequence associated with their teaching assignment prior to accepting their assignments, while no highly dissatisfied teachers report having reviewed their schools' curriculum scope and sequence.

Comparison of decision factors for highly satisfied and highly dissatisfied teachers. Table 5.7 shows the number of highly satisfied and highly dissatisfied new to

school teachers responding to each of 12 categories of reasons identified by teachers as affecting their decisions to accept their current positions. Approximately one half of highly satisfied teachers indicated reasons relating to their schools' instructional practices, organizational structure and demographics as reasons affecting their decisions to accept their positions. On the other hand, one half of highly dissatisfied teachers reported reasons relating to the location of their schools as affecting their decisions to accept their current positions. Nearly 20.0% of highly satisfied teachers indicated factors relating to the size of the district, school, or class affected their decisions to accept their positions. This was not a consideration of highly dissatisfied teachers. The timing in which a position was offered was not a reason for accepting a position, as reported by highly satisfied teachers. The timing in which a job was offered was indicated by some highly dissatisfied teachers as reasons they accepted their positions. The next section discusses the broader meanings of these findings for stakeholders in education.

TABLE 5.7

Comparison of the Number of Highly Satisfied and Highly Dissatisfied New-to-School Teachers' Decision Factors: Responses within Twelve Major Categories of Reasons Identified as Affecting Their Decisions to Accept Their Current Positions

	Teachers			
	Highly Satisfied (n=16)		Highly Dissatisfied (n=14)	
Category of reason	Frequency	Percent (%)	Frequency	Percent (%)
School Instructional Practice, Organizational Structure and Demographics	7	43.8	5	35.7
Location	6	37.5	7	50.0
School Atmosphere and Climate	6	37.5	4	28.6
Emotive Factors and General Desire for Change	5	31.3	4	28.6
Money	4	25.0	4	28.6
District, School, and Class Size	3	18.8	0	0.0
Connections to Area, District, or School	2	12.5	3	21.4
Position involved Coaching	2	12.5	0	0.0
School Infrastructure	1	6.3	1	7.1
Recognition of Credentials or Endorsements	1		1	
School Reputation	1	6.3	1	7.1
Timing	0	0.0	2	14.3

Note. Teachers could respond in one or more category.

Summary of participation in recruitment experiences. Figure 5.3 displays percentages of participation in recruitment experiences of new-to-school science teachers. The radial graph displays holistic profiles of highly satisfied and highly dissatisfied new-to-school teachers. Twenty-two values were used to draw the profiles. Each value corresponds to one of three categories of recruitment experiences, as defined by the Modified Recruitment Practices model: teacher-to-school match (TSM), decision factors (JCT), and realistic job previews (RJP). Visual comparison suggests that highly satisfied and highly dissatisfied teachers share much of the same experiences with regards to their engagement in teacher-to-school match activities. Also, highly satisfied and highly dissatisfied teachers share somewhat similar reasons for accepting positions. However, highly satisfied teachers were more likely than highly dissatisfied teachers to indicate school structure (i.e., instructional practice, organizational structure, and demographics) as a reason for accepting their positions. Comparison of highly satisfied and highly dissatisfied teachers' experiences with realistic job previews shows the greatest percentage of difference. (Note the pattern of radial graph reflecting teachers' participation in realistic job preview activities.) Differences were found to be greatest for the two groups in whether they toured their campuses and viewed teaching and laboratory equipment at their campuses before accepting a position.

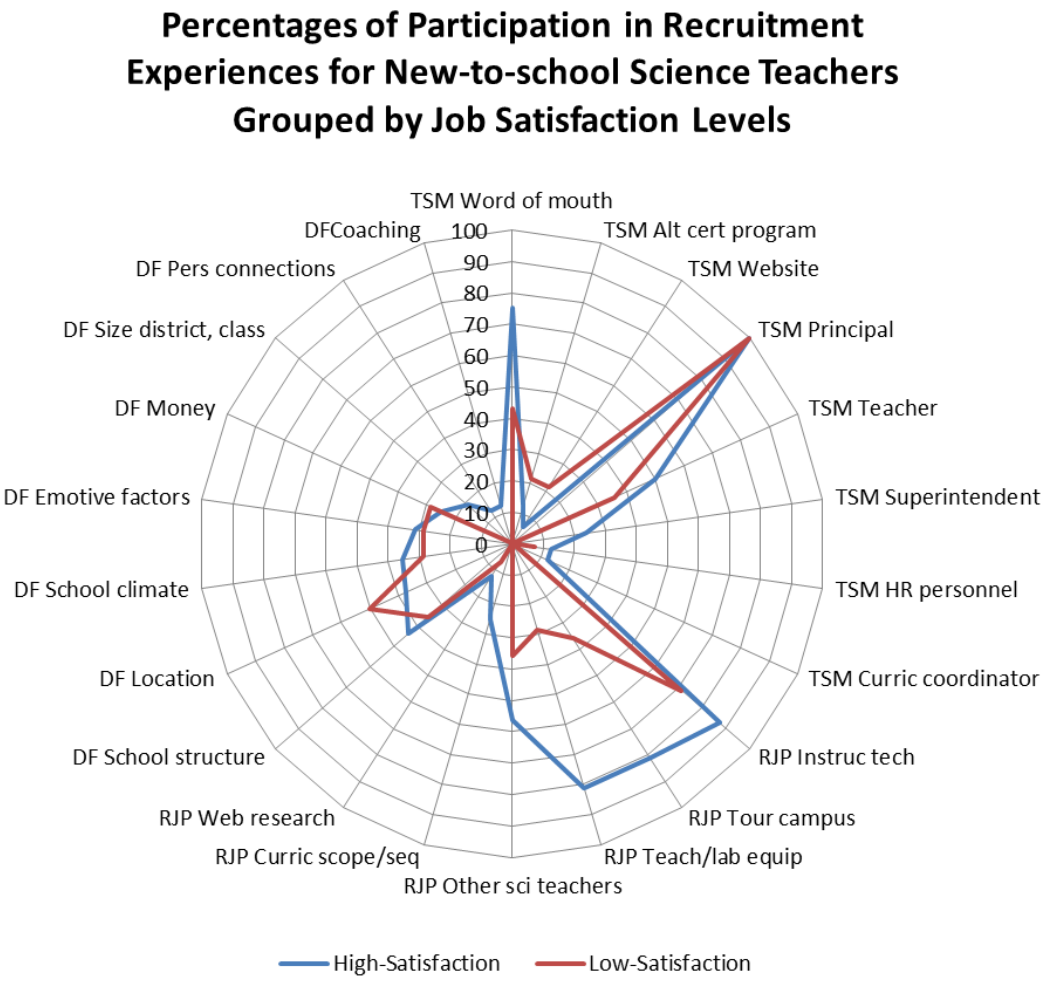

Figure 5.3. Percentages of participation in recruitment experiences for two groups of new-to- school science teachers differing in levels of satisfaction with their current teaching positions. Teachers' responses are grouped into those for teachers with high levels of satisfaction (n= 16) and low levels of satisfaction (n=14) with their current teaching positions. Three categories of recruitment experiences, as defined by the Modified Recruitment Practices model, are compared: (1) Teacher-to-school match (TSM), (2) Realistic job preview experiences (RJP), and Decision Factors (DF). Percentages over 10% are included for teachers' responses regarding their recruitment experiences.

Recommendations and Conclusion

This study presents a descriptive synthesis of the recruitment experiences of highly satisfied and highly dissatisfied new-to-school teachers. A proposed recruitment model, Modified Recruitment Practices, is used to examine the experiences of these teachers as they relate to (1) teacher-to-school match, (2) job-choice theory, and (3) realistic job-previews. Research findings from this study suggest that highly satisfied teachers experience recruitment somewhat differently than highly dissatisfied teachers. In addition, these two teacher groups were found to have different reasons for accepting their positions.

Teacher-to-School Match Network Practices

Highly satisfied teachers were 30.0% more likely than highly dissatisfied teachers to have found out about their positions by word-of mouth. This suggests that word-of-mouth may be a particularly effective recruitment practices as it relates to teacher job satisfaction. While this study does not attempt to explain why word-of-mouth is a particularly effective recruitment strategy and how it fosters job satisfactions (these are marketing research questions), it could be the strategy allows teacher candidates to receive realistic information about the job positions. Prospective teachers who assume the job position is not a good fit with some aspect of their personality or work environment preferences, would self-select out of the recruitment process. Those interested in the position who feels the position would be a good fit with their personality, or work environment preferences would continue in the recruitment process and presumably be satisfied in the position.

Recommendations. Administrators should consider the benefit of the Active Networking Practice, Word-of-mouth, to teacher recruitment at their campuses. Teachers should recognize that they very likely represent their schools most effective recruitment tools.

Teacher-to-School Match Interview Practices

Interviews can potentially be one of the most interactive parts of the recruitment process. Interviews can provide teachers with rich-information about the school necessary to ensure a teacher-to-school match. Likewise, school officials benefit from the interview process. Interviews can help school representatives to analyze the nature and ability of the teacher through the questions asked to the teacher. This process can help establish a successful teacher-to-school match. Each interviewer involved in the recruitment process holds a particular level of expertise. For example, curriculum coordinators know much about their schools' content material, instructional strategies, and student achievement. Likewise, teachers within the department can provide interviewees with valuable information regarding the culture of the school. Presumably, during the interview process, prospective teachers would be able to query their interviewers and receive expert information about the position, thus supporting a successful teacher-to-school match. The greater the diversity in roles held by the interviewing panel, the richer the information provided about the position. Highly satisfied new-to-school teachers in Texas interviewed with one more individual during the recruitment process than highly dissatisfied teachers. It could be that the more diverse interviewing panel provided these teachers with information necessary to support

a successful teacher-to-school match (and thus teacher job satisfaction.) Furthermore, the high school principal (or assistant principal) was involved in the interview process of new-to-school teachers. While this suggests the value of the principals' attendance during new-hire interviews, as perceived by members of the interview panel, findings presented here do not suggest that principals' involvement in the interview process supports the job satisfaction of teachers' at her campus.

Findings suggest that three school and district individuals frequently engage with highly satisfied new-to-school teachers: the school principal, another teacher, and the district superintendent. Highly satisfied new-to-school teachers were more likely to have interviewed with these individuals, in addition to the school principal, than highly dissatisfied new-to-school teachers. As such, teachers at the school and the superintendent of the district may represent key interviewers. New-to-school teachers who indicated having interviewed with these school and district individuals also reported being highly satisfied in their new positions.

Recommendation. Administrators should consider the benefits of the involvement of diverse personnel in the interview process for new teachers as a means to support teacher-to-school matches and, potentially, teacher job satisfaction and teacher retention at their campuses.

Realistic Job Previews Practices

The strong contrast found in the comparisons of highly satisfied and highly dissatisfied teachers' engagement in realistic job previews may suggest that these factors are correlated with teacher job satisfaction and thus teacher retention at campuses. In this

exploratory study, direct correlations and associations between teachers' activities and job satisfaction and retention are not made. It is the goal of this study, however, to note extreme contrast in the recruitment activities of highly satisfied and highly dissatisfied teachers. The activities may serve as launch points for future studies exploring the correlation of certain recruitment activities with teacher job satisfaction and teacher retention.

Recommendations. Administrators should consider that certain realistic job previews such as campus tours may support teacher job satisfaction at their campuses.

Decision Factors

Findings presented in this study suggest that highly satisfied and highly dissatisfied teachers have fundamentally different reasons for accepting their positions. Approximately one half of all highly satisfied teachers identified their schools' instructional practices, organizational structure and demographics as reasons affecting their decisions to accept their positions. One half of highly dissatisfied teachers indicated that they accepted their positions for a reason related to the location of the school. It could be that factors relating to the instructional practices, organizational structure and demographics of a school are more relevant to teachers' satisfaction in their positions than location of the school. Highly satisfied teachers also indicated that factors relating to the size of the district, school, or class affected their decisions to accept their positions. This was not a consideration of highly dissatisfied teachers. Some highly satisfied teachers reported that the timing in which their position was offered affected their decisions to accept their positions. It could be that highly satisfied teachers

considered the match between duties and responsibilities of their positions and the work environment and their personal preferences before accepting a positions. Highly dissatisfied teachers considered factors indirectly related to their duties as a teacher or their work environment, such as the location of the school and the timing in which the position was offered. It could be that these factors do not support teacher job satisfaction in a position.

Recommendations. Administrators should consider that teachers accept positions for various reasons. These reasons may affect teacher job satisfaction and teacher retention. It is suggested that new recruits who indicate accepting their positions for factors relating to instructional practices, organizational structure and demographics of a school are more likely to be highly satisfied in their assignments.

Modified Recruitment Practices Model

The successful identification of distinct recruitment experiences between highly satisfied and highly dissatisfied teachers may also support the usefulness of the Modified Recruitment Practices model as a means to conceptualize teacher experiences within the first stage of the TPC as well as to evaluate the extent of those experiences as they relate to the job satisfactions and retention of teachers once they are hired. With further development, the model may also serve as a predictor of teacher job satisfaction. Additionally, the MRP model may serve as an instructional framework for teacher preparation programs. As with other school-based experiences such as first day practices, teacher parent meeting, etc., preservice teachers must be advised on how to best engage in the recruitment process. While this model promises diverse utility, further

tests of the model are needed. This model provides an outline of the considerations for preservice teachers: (1) teacher-to-school match (2) decision factor, and (3) realistic job previews. Considering such factors may support their job satisfaction and retention once hired.

The aim of this study was to gain familiarity with the experiences of teachers within the first stage of the high school science teacher professional continuum (TPC), recruitment, (Figure 5.1) who showed particular satisfaction with their positions. These teachers' experiences with recruitment were compared to the experiences if highly dissatisfied teachers. Comparative analysis of these two teacher types allowed the identification of recruitment factors possibly associated with teacher job satisfaction and teacher retention. As an exploratory study, findings presented here can be used to support future researchers in the design of experiments assessing for recruitment factors associated with post hire outcomes such as job satisfaction and retention.

Limitations and Delimitations of the Study

These findings contribute to research on the "reasoning" of high school science teachers for their current positions. However, certain limitations apply to this study. First, this study is based on self-reported data. Teachers were asked to comment retrospectively on their recruitment experiences. Recall bias was minimized by asking new-to-school teachers about their recruitment experiences. This study includes only new-to-school teachers who are within their first year of hiring for their current positions. It was assumed that these teachers could reflect with greater accuracy and clarity on their recruitment experiences for their current positions.

A second limitation of the study is that new-to-school teacher interviews were conducted by multiple interviewers. There were 8 interviewers in total. It could be that some of the mannerisms of the interviewer affected teachers' responses to interview questions. This limitation was attempted to be minimized by subjecting the interviewers to multiple common training sessions lead by distinguished qualitative researchers. Interviewers were given opportunities to practice their interviewing skills as well as develop advanced skills for minimizing the effect of the researcher (interviewer) in qualitative research settings.

A third limitation of the study refers to the existing literature base on teachers' preferences for job attributes. Findings from empirical studies on this topic are inconsistent. The inconsistence in findings is presumably due to differences in methodological factors of the study including sample population of teachers (e.g., experience, geographic location), data collection procedures and other extraneous factors such as job market characteristics at the time in which a study was conducted. This study attempts to mitigate compounding inconsistence among the existing literature on teachers' decision factor and preferences' for job attributes. As an exploratory rather than an explanatory research design, findings presented in the study, as well as its methodology may be viewed as a "search" for best practice. Future researchers in the area of teachers' decision factors and preferences for job attributes may find the research topology presented here as providing significant insights to the design of their research study and/ interpretation of their research results. Furthermore, special care has been taken in this study to define the research methodology used to obtain the afore

mentioned results, including distinction of the sampling plan and presentation of generalizable to new-to-school public high school science teachers in Texas.

A fourth limitation of the study is that a direct connection between teacher job satisfaction and teacher retention is not presented. While some statistical references are made, additional research supporting the connection between teacher job satisfaction and teacher retention is needed.

A major strength of this study is the sampling plan. The PRISE sampling plan allows empirical data and results referenced in this study to be generalized to all public high schools in Texas. Additionally, the return rate on the interviews of new-to-school teachers provides a level of confidence that the results of this study are representative of all new-to-school high science teachers in Texas public schools. Another strength of this study is the semi-structured interview technique used to understand teachers' recruitment experiences for their current positions. The interview technique permitted focused, conversational, two-way communication between the interviewer and the teacher. In many instances teachers were candid with their responses and offered additional information to the interviewer further explaining their responses to questions. Teachers were also permitted to engage in the interview on their terms (i.e., permission granted for the interview and information gathered during the interview).

CHAPTER VI

CONCLUSIONS

My research on the recruitment experiences of new-to-school science teachers was completed in collaboration with the PRISE Research Group at Texas A&M University. The research goal of PRISE is to provide the State of Texas and the nation with research findings leading to the development of "an articulated and coherent system of policies and practices to improve factors associated with the teacher professional continuum for science teachers" (PRISE, n.d.). Initiated in 2006, the Research Group proposed to answer three essential policy research questions about the teacher professional continuum of science teachers in Texas high schools: Where are we? Where do we want to go? How do we get there? Issues investigated by and findings of the Research Group confirmed the need for further research focused on single stages of the teacher professional continuum in order to understand the challenges to teacher job satisfaction and retention.

My research contributed to the PRISE Research Agenda by examining the broader recruitment context, mainly the recruitment experiences of new-to-school teachers as perceived by the teachers themselves. New-to-school science teachers (n=63) represent a subset of the 385 teachers surveyed in the PRISE Research Project. Within one year of being hired and engaging in the recruitment process at their schools, these teachers provided a detailed description of their experiences, including an account of the most current recruitment practices and policies at their schools. The mixed-method

studies in Chapters III, IV, and the qualitative study in Chapter V places recruitment in a broader context, perspectives of the teacher, and directs attention towards new questions relating to recruitment as a leveraging factor for teacher job satisfaction and teacher retention. In this chapter I summarize the findings from the afore mentioned studies and link them with research findings from previous empirical studies (see Chapter II). I then suggest action points to school practitioners and state policy makers with regards to progressive recruitment practices and policies.

Research Summary

Teachers' Networking, Interview, and Realistic Job Preview Experiences

This research describes the major recruitment activities of new-to-school science teachers for their current positions. A conceptual framework emphasizing (1) teacher-to-school match, (2) decision factors, and (3) realistic job preview, was used to guide the inquiry. Specifically, new-to-schools teachers' experiences with regards to their involvement in networking practices, interview practices, and realistic job activities at schools during their recruitment process were analyzed. Findings from this study confirm that schools are not maximizing valuable resources relating to teacher-to-school match and realistic job previews. New-to-school science teachers in Texas indicated most frequently that they first found out about the opening for their current positions by the active networking practice "word-of-mouth." In most instances, teachers indicated that they were told about their positions by an individual from the school or district. Additionally, new-to-school science teachers indicated collaboration with alternative certification programs and exploration of district and school sponsored web-based

resources as a means for finding out about their positions. When the use of networking practices were examined by school-level factors including school size and minority student enrollment profiles (MSEP), I noted various trends in the experiences of teachers suggesting that school types by size and MSEP show distinction among their recruitment practices.

Teacher interviews can provide teachers and school hiring committees with valuable information about each other. The exchange of rich-information between teachers and hiring committees can support successful teacher-to-school matches. High school science teachers in Texas often engaged in an interview for their positions, but with limited diversity in personnel. This suggests prospective teachers can be provided with more information than they are now receiving in the interview process. Likewise, the hiring group also misses out on the rich-information possible with a more diverse group of interviewers. Monotypic interview sessions may be less supportive of teacher-to-school matches. An overwhelming majority of new-to-school science teachers indicated they interviewed with the school principal for their current positions. Fewer teachers indicated the involvement of other expert personnel during the interview process for their positions. This was found to be particularly true for some teacher types. For example, small school teachers were less likely than both medium and large schools teachers to report that another teacher was involved in the interview process. Curriculum coordinators who support teachers in instruction and oversee school-wide testing were less likely to have participated in the interview sessions of small and medium school teachers than large school teachers. The differences among these groups of teachers were

significant. Curriculum coordinators were also less likely to have participated in the interview sessions of high-MSEP school teachers compared to low-MSEP teachers.

Realistic job previews allow teachers engaged in the recruitment process to gain a balanced picture of the work environment prior to accepting a position at a school. New-to-school science teachers in Texas indicated their involvement in six practices to learn about their positions: campus tours; meetings with other science teachers; previews of teaching and laboratory equipment; curriculum scope and sequence; available instructional technologies; and web-based searches. Over half of new-to-school teachers indicated they took a tour of their campuses and viewed the available teaching and laboratory equipment associated with their assignments before accepting a position. However, these practices were found to be less common among certain teacher types. Statistically significant differences were found between the experiences of small, medium and large School teachers and high-MSEP and low-MSEP teachers. Large school teachers were least likely to indicate they engaged in realistic job previews including campus tours and previews of teaching and laboratory equipment. High-MSEP teachers were less likely than low-MSEP teachers to have previewed supporting instructional technologies and search a website for information regarding the school or district prior to accepting their positions. Findings reported in this study support understanding regarding the recruitment experiences of new-to-school teachers who chose to accept their current positions. By emphasizing prevailing trends in teachers' experiences and assessing for statistically significant differences between teacher types,

suggestions could be made to principals faced with the challenge of recruitment in hard-to-staff school types.

Teachers' Reasons for Decisions to Accept Their Positions

This research describes new-to-school teachers' reasons for accepting their current positions. Findings from this study suggest that teachers share in common twelve categories of reasons for accepting their positions. Teachers consider the disposition of faculty and staff at the campus, and commute to and from work, including proximity of the school to their homes, when choosing to accept a position. Monetary incentives were indicated by only a few Texas teachers as a reason affecting their decisions to accept a position, the response was infrequent. High-MSEP teachers, however, were more likely than low-MSEP teachers to say they accepted their current positions because they needed a job. Additional significant differences in teachers' responses were noted by school type. Small school teachers were more likely than teachers in medium and large school types to indicate they accepted their current positions because they desired autonomy in their teaching practices. Teachers in large schools were most likely to indicate they accepted their current positions because they desired to teach a new course.

New-to-school science teachers in Texas gave a total of 164 individual response statements regarding reasons for accepting their positions. Analysis of their responses using job-choice theory suggested that high school science teachers were influenced by aspects of the work environment to accept their positions. Subjective factors were mentioned more frequently than both critical-contact and objective factors by new-to-school teachers as reasons affecting their decisions to accept their positions. Teachers

considered non-pecuniary aspects of the work environment, such as the disposition of the faculty, advantages associated with working with their spouse or in the school their children attend, and opportunity to help the student body of the school. This study presented a descriptive synthesis and analytical review of the reasons indicated by high school science teachers in Texas as affecting their decisions to accept their current positions. Research findings from this study suggest teachers are decision-makers and consider a number of factors during their recruitment process. Additionally, findings suggest teachers have distinct reasons for accepting positions associated with size of school and MSEP.

Highly Satisfied Teachers' Recruitment Experiences and Reasons for Decisions to Accept Positions

This research compares the recruitment experiences of highly satisfied and highly dissatisfied new-to-school teachers' recruitment experiences and reasons for accepting their positions. The study also proposes a model for teacher recruitment, Modified Recruit Practices. Components of the model include (1) teacher-to-school match, (2) decision factors, and (3) realistic job-previews. Networking practices represent the most common way new-to-school teachers were first informed about their positions. Three out of four new-to-school teachers found out about their positions by word-of-mouth. Highly satisfied teachers were nearly two times more likely than highly dissatisfied teachers to have found out about their positions by word-of-mouth. This suggests word-of-mouth is a particularly effective recruitment strategy. Furthermore, this strategy may support teacher job satisfaction and thus teacher retention.

Interviews provide opportunity for school hiring committees and teacher recruits to gather rich-information about one another. This information helps to support a successful teacher-to-school match. The inclusion of diverse interviewers is essential to this process. On average highly satisfied new-to-school teachers in Texas were found to have interviewed with one more individual during the recruitment process for their positions than did highly dissatisfied teachers. Most frequently teachers indicated that their principal was involved in the interview process. Highly satisfied teachers were more likely than highly dissatisfied teachers to indicate that another teacher was involved in their interviews.

Realistic job previews provide new-to-school teachers with a balanced view of the work environment, including job responsibilities and climate at the school, before a decision is made to accept a position. Highly satisfied teachers were more likely than highly dissatisfied teachers to have taken a tour of their campuses, viewed teaching and laboratory equipment, and reviewed the curriculum scope and sequence associated with their teaching assignment prior to accepting their positions.

Highly satisfied and highly dissatisfied new to school teachers accept their positions for different reasons. One half of highly satisfied teachers indicated reasons relating to their schools' instructional practices, organizational structure and demographics as reasons affecting their decisions to accept their positions. Conversely, one half of highly dissatisfied teachers reported reasons relating to the location of their schools as affecting their decisions to accept their current positions. Highly satisfied teachers indicated that factors relating to the size of the district, school, or class affected

their decisions to accept their positions. This was not a consideration of highly dissatisfied teachers. Highly dissatisfied teachers indicated the location of the school and timing in which the job was offered as reasons affecting their decision to accept their positions. The distinctions observed between the recruitment experiences of highly satisfied and highly dissatisfied teachers provides initial support for the Modified Recruitment Practices model as an assessment of the recruitment process. The following section will discuss connections and contributions of findings presented in the three studies to existing literature on teacher recruitment.

Connections and Contributions to the Literature

This study originated from concerns about the lack of empirical literature supporting understanding of teachers' recruitment experiences for their current positions, and job-choice theory as a means to conceive teachers' reasons for accepting positions. The dissertation study also sought to characterize recruitment practices associated with job satisfaction. This section discusses the connection and contributions of findings presented in Chapters III, IV, and V to the existing literature on teacher recruitment. Reference Chapter II for a review of the existing literature on teacher recruitment.

Recruitment Practices in Texas

The PRISE Research Group, using interview data from a statewide representative sample of public high school science principals in Texas, identified five major recruitment categories and sub-categories of practices used by Texas schools to recruit science teachers: (1) Networking, (2) Marketing, (3) Incentives, (4) Teacher Identification, and (5) Interviewing. The research group found that Networking practices

such as: attending job fairs outside the district (56%), posting on district and or school website (54%), advertising by word-of-mouth (52%), posting open positions on a Regional Education Service Center (ESC) website (48%), represented the most frequently mentioned category of recruitment practices by principals. Findings from this dissertation, as reported from the perspectives of new-to-school teachers in Texas, confirm the usefulness of Networking Practices during the recruitment process. Over half (54.0%) of the new-to-school teachers in Texas reported that that they first found out about their positions by word-of-mouth, a Networking Practice.

Interview Practices Supporting Teacher-to-School Match

Liu and Johnson (2006) asserted that it is important to consider whether hiring practices used by schools are "effectively matching new teachers to schools and positions" (p. 325). Teacher interviews can represent one of the most informative phases of the recruitment process. A well-organized interview can provide teachers and school hiring committees with valuable information about one another. The exchange of rich-information between teachers and hiring committees can support successful teacher-to-school matches. Diverse interviewers (i.e. principals, teachers, coordinators of curriculum), because of their particular expertise, afford rich-information to teachers about the positions. Liu and Johnson (2006) reasoned that the teacher's professional preparation, interests and preferences that "match" the position being hired for affects her levels of satisfaction and ultimate decisions to leave or remain as a teacher at the school or even to remain in the profession. Findings from this study provide empirical

data supporting the authors' claim. Highly satisfied new-to-school teachers on average interviewed with one more school personnel than did highly dissatisfied teachers.

Additionally, findings from this study suggest that teachers in Texas experience similar interview practices to teachers in California, Florida, Massachusetts, and Michigan. While diverse individuals could be involved with the interview process of new-to-school teachers', most frequently teachers indicated that they interviewed with their schools' principal for their current positions. A similar trend was observed among teachers in California, Florida, Massachusetts, and Michigan. See Liu and Jonson, 2006. Furthermore, the interview process was found to be a common aspect of the recruitment process for each of these states.

Recruitment Practices and Selection of Teacher Types

Goldhaber and Player (2005) and Torres and associates (2004) considered the purposeful use of recruitment incentives. They viewed recruitment incentives as practical ways for schools to recruit toward a specific demand for teachers and to build a teacher faculty mirroring the student body of the school. Findings presented in this dissertation confirm that types of teachers express very distinct reasons for accepting their positions. Small school teachers were more likely than Medium and Large school teachers to indicate the opportunity to engage in autonomous teaching practices as a reason for accepting their current positions. Large school teachers were attracted to their positions for the opportunity it gave to teach a new course. High-MSEP teachers were more likely than low-MSEP teachers to have reported they accepted their positions

because they needed a job. This is a monetary incentive and thus an objective decision factor with regard to job choice.

Traditional Recruitment Theory

Stakeholders in education (e.g., Liu & Johnson, 2006; Winter, Ronau, & Munoz, 2004) have suggested that recruitment practices for teachers have not been as effective in today's labor market because the theoretical approach to recruitment is flawed. This study proposes an alternative perspective of recruitment theory where as teachers are decision-makers actively involved in the recruitment process. The conceptual framework and proposed model for teacher recruitment presented in this study emphasize (1) teacher-to-school match. (2) job choice theory and (3) realistic job previews as means for stakeholders in education to understanding the recruitment experiences of teachers and decisions factors teachers use to accept positions. Furthermore, empirical findings related to the three tenets of the recruitment model, Modified Recruitment Practices (MRP), may serve as ground-breaking research for future studies defining probable connections between teachers' recruitment experiences and job satisfaction.

Theories of Job Choice

Behling et al., (1968) conceived three theories of job choice: objective theory, subjective theory, and critical-contact theory. Initial studies of these theories were performed in industrial settings. Findings from this study suggest that job choice theory can be applied within smaller organizational settings, such as public schools, to understand teachers' reasons for accepting one position over any number of competing

positions. Teachers' reasons for accepting positions are personal. As personal perspectives, when teachers are asked about the reasons for accepting their positions, their responses often differ from teacher to teacher. Results from this study suggest that job choice theory can be used to concisely categorize and thus understand diverse responses of teachers. A total of 164 individual item statements were indicated by 63 new-to-school teachers in Texas as reasons for accepting their positions. The application of job choice theory revealed the following: One half of new-to-school teachers in Texas accepted their positions based on subjective factors, emphasizing aspects of the work environment. Fewer teachers accepted their positions for critical-contact factors emphasizing aspects of the work itself and objective factors, pertaining to pecuniary aspects associated with the position, (27.8% vs. 22.2%, respectively).

Realistic Job Previews

Realistic job previews (RJP), presents candidates with both favorable and unfavorable job-related information (Phillips, 1998, p. 673). A school's failure to provide an accurate portrayal of the school environment to candidates may contribute to the candidate's holding inaccurate job expectations. Findings from this study suggest that teachers' engagement in realistic job preview activities such as touring the campus, viewing teaching and laboratory equipment, and reviewing the curriculum scope and sequence may help support teacher job satisfaction and teacher retention.

The next section takes a step back and attempts to observe the studies in Chapters III, IV, and V as one study of teacher recruitment experiences and decision factors in order to derive broader contexts of meaning for teacher recruitment programs at Texas

high schools. Action points will also be defined for educational policymakers and vested individuals in teacher preparation programs.

Action Points for Stakeholders in Education

The state of Texas reflects the teacher shortages experienced by the rest of the United States. Increases in student enrollments and the number of teachers retiring were once thought to be the cause of teacher shortages. These factors alone, however, cannot account for the currently elevated turnover rates of teachers. Recent research findings indicate that teacher shortages in public schools are the result of large numbers of teachers leaving the profession for reasons other than retirement (Ingersoll, 2001). Hard-to-staff school types who by tradition experience difficulty in recruiting and retaining teachers are particularly vulnerable to teacher shortages at their campuses.

Small schools and high minority enrollment profile schools, often characterized as hard-to-staff schools, can experience multiple factors compounding staffing difficulties at their campus (e.g., geographic isolation, high poverty levels and lower teacher salaries). While the reasons for staffing difficulties can vary, the results are relatively stable: high turnover rates among teachers, high percentages of relatively new teachers, dwindling professional culture, and lowered student achievement scores.

Modified Recruitment Practices which emphasize teacher-to-school match, realistic job previews and teacher decision factors may represent a first line of defense against teacher shortages on campus. Modified recruitment practices which recognize the teacher as a decision maker during the recruitment process may prove particularly effective for teacher recruitment at hard-to-staff school types. Collectively combined, the

studies in Chapters III, IV, and V provide stakeholders in education with action points regarding the design and facilitation of teacher recruitment programs in Texas.

Action Points for Administrators in all Schools

Realistic job previews was found to be the most influential variable to teacher job satisfaction. Administrators are encouraged to adopt recruitment practices that include realistic job previews. In particular, administrators are encouraged to establish practices supporting tours of campus and previews of teaching and laboratory equipment for prospective candidates. Although this effective strategy may involve significant changes in schools recruitment programs, the benefit of reducing teacher shortages at campuses may outweigh the cost of change. Furthermore, administrators are encouraged to develop policies that include expert personnel, a part from the school administration, in the teacher recruitment process. These individuals should take an active role in sharing about open positions on campus as well as interviewing with teacher candidates.

Word-of-mouth was found to be the most frequently mentioned active networking strategy in Texas. Administrators are encouraged to use word-of-mouth as a recruitment strategy for new teachers. High school teachers should take the lead in advertising by word-of-mouth open positions at their campuses. In addition, schools may benefit from local and collaborative recruitment strategies.

Teachers are decision makers. Administrators are encouraged to consider Texas teachers reasons for accepting their positions. Teachers indicated 12 reasons affecting their decision to accept their positions: *(1) School Atmosphere Climate, (2) Location, (3) School Instructional Practice, Organizational Structure, and Demographics, (4) Emotive*

Factors and General Desire for Change, (5) Connections with the Area, District, or School, (6) Money (7) District, School, and Class Size, (8) Timing, (9) Position involving Coaching, (10) School Infrastructure, (11) Credentials or Endorsements, and (12) School Reputation. These reasons may affect teacher job satisfaction and teacher retention. It is suggested that new recruits who indicate accepting their positions for factors relating to instructional practices, organizational structure and demographics of a school are more likely to be highly satisfied in their assignments.

Administrators should increase the relative strength of their recruitment approaches by considering attributes of their schools in each of three domains, i.e., objective, subjective, and critical-contact, as they prepare to interact with candidates. Subjective factors comprise most of the reasons indicated by high school science teachers in Texas for accepting their current positions. As such, administrators should provide teacher candidates with information about their schools' work environment and their purposes (mission statement) as a public school. Administrators should apply available resources for the development of the internal work environment, such as faculty and staff disposition. Active strategies should be applied that foster positive attitudes and collegiality among the faculty and staff.

Action Points for Administrators in Small, Medium, and Large Schools

Teachers accept their positions for diverse reasons. During the recruitment process for teachers, administrators in small schools should place emphasis on existing practices supporting the autonomy of teachers during instruction. As a means to attract

prospective candidates administrators in large schools should emphasize the opportunity to teach a new subject when engaging with teacher candidates.

Administrators in small and medium schools should consider the connection of a coaching assignment with a science position as a recruitment asset. As such, small and medium schools should take special measures to advertise the involvement of a coaching assignment and science teaching assignment. Furthermore, administrators in small and medium schools should consider the involvement of their deans of education in the interview process for teachers.

Action Points for Administrators in High Minority Enrollment Schools

The diversity of personnel who participate in interviews with prospective candidates is limited. To ensure prospective teachers are provided with rich-information supporting teacher-to-school match and teachers' subsequent satisfaction in their positions, high-minority enrollment schools should consider involving expert personnel and vested individuals including curriculum coordinators, teachers, and students in the interviews for new teachers.

Administrators in high minority enrollment schools should consider that teachers "reason" about accepting a position in much the same way. To remain competitive with low minority enrollment schools, administrators should organize the redesign of recruitment practices and policies to include multiple strategies relating to *(1) Location, (2) School Atmosphere and Climate, (3) School Instructional Practice, Organizational Structure, and Demographics, (4) Emotive Factors and General Desire for Change, (5) Connections with the Area, District, or School, (6) Money (7) District, School, and Class*

Size, (8) Timing, (9) Position involving Coaching, (10) School Infrastructure, (11) Credentials or Endorsements, and (12) School Reputation. In particular, administrators should consider findings of this study supporting the disposition of faculty and staff and commute and proximity of the school to teachers' homes as two major influencers to their candidates' decisions to accepting a position at their schools. To remain competitive, administrators in high minority enrollment schools should take measures to build and maintain a positive faculty and staff climate and engage in community recruitment practices.

Action Points for Supervisors of Teacher Preparation Programs

Preservice teacher preparation is multifaceted. Supervisors of teacher preparation programs are encouraged to prepare preservice teachers for their recruitment processes. Recruitment marks teachers' entrance into the Teacher Professional Continuum. Supervisors are encouraged to expose preservice teachers to non-traditional approached to recruitment including the Modified Recruitment Model, that is (1) teacher-to-school match, (2) decision factors, and (3) realistic job previews. In the long run, the engagement of teacher preparation programs in such practices may support teacher job satisfaction and lower teacher shortages at campuses. Supervisors of teacher preparation programs should also encourage preservice teachers to consider their "reasoning" for accepting a position. It is very likely that such "reasoning" is related to aspects of the school including size-of-school and minority student enrollment profile, and post-hire outcome variables including job satisfaction.

The body of work presented in this dissertation accomplished several things with regards to high school science teacher recruitment in Texas: (1) Provided an alternative means for understanding the recruitment experiences and decision factors of high school science teachers for classroom positions. (2)Disclosed differences in the recruitment experiences and reasons for accepting position among high school science teachers associated with minority student enrollment proportions and size of the school. (3) Characterized the recruitment experiences, reasons for accepting positions, and decision factors of high school science teachers potentially associated with teacher job satisfaction. (4) Provided initial validation of the Modified Recruitment Practices model. Overall, the dissertation is intended to contribute to the understanding of teachers' recruitment experiences for their current positions, schools' recruitment practices for teachers' and how job-choice decisions are made by teachers during the recruiting process. It is hoped that the development of such understand will help stakeholders in education to develop practical policy alternatives reducing teacher shortages, and supporting teacher job satisfaction and teacher retention .

Future Study

The research findings presented in this dissertation provide a basis for future study in the relationship between teachers' recruitment experience and post-hire outcomes. In particular, correlation studies are needed to assess the strength of the relationship between teacher job satisfaction and retention and reasons indicated by teachers for accepting their positions (i.e. instructional practices, location, district size, and timing in which positions was offered). Future study is needed to derive a measure

for quantifying the level of teachers' involvement in (1) teacher-to-school match, (2) decision factors, and (3) realistic job preview. Quantifying components of the model may enable it to be used as a predictive measure for teacher job satisfaction and retention

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APPENDIX A

PRISE RUBRIC FOR RECRUITMENT PRACTICES

Rubric for Recruitment Practices Including Weights[1] and Frequencies of Occurrence[2]

Networking															
Active Networking (3)												Passive Networking (1)			
Using word of mouth (3)[1]	Searching websites advertising teachers' availability (1)	Contacting science teachers from other schools (3)	Networking with administrators (1)	Participating in district-level job fairs (2)	Attending job fairs outside the district (4)	Contacting colleges of education (3)	Contacting alternative certification programs (4)	"Growing your own" from community (2)	Searching district databases for availability(2)	Collaborating with teacher preparation institutions or alternative certification programs (4)	Making out-of-state contacts (1)	Using print media to advertise vacancies (2)	Posting on district school website (3)	Posting vacancies on ESC/regional website (3)	Posting vacancies on external professional websites (1)
26	3	9	10	7	28	23	12	5	5	13	1	11	27	24	11

Marketing Related to School and Community												Incentives					
School				School Science Resources						Community							
School size (2)	Class size (2)	Academic reputation (4)	Opportunity to coach (1)	Diversity in science courses (1)	Collegial/family work environment (4)	Professional development opportunities (1)	New teacher support (2)	Administrative support (3)	Dynamic science dept.(2)	Science facilities/ laboratories (4)	Technology/supplies/ budget (3)	Access to informal science resources (1)	Community resources (2)	Environment and/or geography (4)	Local economics (3)	Competitive salaries (6)	Science signing bonus (4)	Science specific stipends (5)	Bonuses other than hiring (1)	Financial assistance for certification process (1)	Living expenses (6)
2	2	4	4	1	4	1	2	3	2	4	3	1	2	4	3	6	4	5	1	1	6

Teacher Identification												Interviewing									
Certification			PCK			Personal					Fit	Pre-	Actors							On-site	
Certified (2)	Composite science certification (1)	Subject specific certification (1)	Knowledge of subject (3)	Science pedagogy (3)	Classroom management (1)	Knowledge of students (3)	Retired teacher (1)	Years of teaching (1)	Work experiences (2)	Personality; e.g., team player, hard worker (3)	Desire to teach students (2)	School community fit (3)	Local community fit (2)	Timing (3)	Screening tests (1)	Principal (3)	School committee (2)	Science teacher (3)	Non-science teacher (2)	Science dept head (2)	Non-science dept. head (1)	Involvement of HR (1)	Visit classrooms (1)	Meet with other science teachers (3)
21	13	9	22	11	8	14	1	7	14	30	15	9	10	4	2	15	3	4	1	6	1	8	1	2

[1]Weights appear in parentheses after sub-categories and strategies; [2]Frequencies appear in the same column with the strategy

APPENDIX B

PRISE NEW-TO-SCHOOL TEACHER INTERVIEW PROTOCOL

Program, Practices, and Policies
Telephone Interview
Teachers New to School

1. How did you first find out about your science position?

2. Thinking about your interview process for this school, with whom did you interview with for your current teaching position?

3. What did you do to learn about this school before accepting your current science teaching position? Did you do any of the following? Yes/No Responses
    i. Tour the campus
    ii. Meet other science teachers on campus
    iii. View available teaching and laboratory equipment
    iv. Review the curriculum scope and sequence for your teaching assignment
    v. View available instructional technologies
    vi. Other

4. What are the top three reasons that affected your decision to accept your current position?

5. Overall, do you feel that you received a rich and accurate description of your work environment when you were hired for this teaching position?

6. At this school, have you participated in any programs, seminars, or meetings at your school that were designed for beginning teachers?

7. At this school, have your participated in any programs, seminars, or meetings at your school that were designed for beginning science teachers?

8. Were you assigned a mentor because you were new to this school?
    a. If yes, does this mentor also teach science?
    b. What does this mentor do to help you?

9. Has the administration ever asked about your about your experiences as a new teacher at this school?

10. Has the administration ever asked your opinions about how to make new teachers' experiences at this school better?

11. If the administration of this school were to ask you what three things were the best supports for you as a teacher new to this school what would you tell them?

12. If the administration were to ask you how to improve the induction program at this school for teachers new to the school, what three things would you recommend?

APPENDIX C

NETWORKING RUBRIC

Teacher Code: R: P.C.:

Q 1. How did you first find out about your science position?

	Involvement of Alternative Cert. Prog.	Alternative Certification Sponsor	Job Fair	Job Fair Sponsor	Website	Website Spons0r	Word of Mouth	Who first told/ approached you? Identified as:	Family Member or Friend	Teacher working status when heard about Position	Other
	0=NO	0=N/A	0=NO	0=N/A	0=NO	0=N/A	0=NO	0=N/A	0=N/A	0=Unknown	0=NO
	1=YES	1=Unknown Sponser	1=YES	1=Unknown Sponser	1=YES	1=Unknown Sponser	1=YES	1= Unknown	1=NO	1=Teacher or Substitute Teacher	1=YES
		2=School or District		2=School or District		2=School or District		2= Non-K-12 School/District Personnel	2=YES	2=Teacher Intern	
		3= Regional Service Center		3= Regional Service Center		3= Regional Service Center		3=School Board Member		3=Other	
		4=University Sponser		4=University Sponser		4=University Sponser		4=Human Resources Personnel			
		5=State Sponser		5=State Sponser		5=State Sponser		5=Superintendent			
								6=Dean of Education/Curriculum Coordinator			
								7=Principal/Vice Principal			
								8=Counselor			
								9=Athletic Personnel			
								10=Teacher			
								11=Unidentified K-12 School or District Personnel			

APPENDIX D

CODEBOOK FOR NEW-TO-SCHOOL TEACHER INTERVIEW: NETWORKING PRACTICES

Codebook for New-to-School and Beginning Teacher Interviews -Q1: How did you first find out about your teaching position?

Full Variable name	SPSS variable name	SPSS variable label	Coding instructions
Teacher Code	Tc	Teacher Code	Teacher identification number
Involvement of Alternative Certification Program	Altcert	Alternative Certification Program	0=no, 1=yes
Alternative Certification Program Sponsor	Saltcert	Alternative Certification Program Sponsor	0=N/A, 1=unknown, 2=school or district, 3=regional service center, 4=university, 5=state
Job Fair	Jobfair	Job Fair	0=no, 1=yes
Job Fair Sponsor	Sjobfair	Job Fair Sponsor	0=N/A, 1=unknown, 2=school or district, 3=regional service center, 4=university, 5=state
Website	Website	Website	0=no, 1=yes
Website Sponsor	Swebsite	Website Sponsor	0=N/A, 1=unknown, 2=school or district, 3=regional service center, 4=university, 5=state

Full Variable name	SPSS variable name	SPSS Variable label	Coding instructions
Word of Mouth	Wom	Word of mouth	0=no, 1=yes
Word of Mouth Initiator	Iwom	Word of Mouth Initiator	0=N/A, 1=unknown, 2=non-K-12 school personnel, 3= school board member, 4=human resources personnel, 5= superintendent, 6=dean of education/curriculum coordinator, 7=principal/vice-principal, 8=school counselor, 9=athletic personnel, 10=teacher, 11=unidentified k-12 school or district personnel
Family member or Friend	Fmf	Family member or Friend	0=N/A, 1=no, 2=yes
Teacher working status (at the time of hearing about the position)[a]	Tws	Teacher working status	0=unknown, 1=teacher or substitute, 2=teacher intern, 3=other
Other	Oth	Other	0=no, 1=yes

Note. N/A=Not applicable and only applies if "No" was selected in the immediately preceding column listing a recruitment practice. Unknown=indeterminable from existing data. The answer may be indeterminable in that the audio is difficult to hear; field notes or ineligible, or transcript data does not exist. The code "unknown "may also be given if: (1) several individuals referenced by the teacher in the interview and those persons roles or activities are indeterminable, and (2) no person was mentioned. [a]TEACHER WORKING STATUS" CATEGORY SHOULD BE CODED AS: 0=UNKNOWN, 1=TEACHER OR SUBSTITUTE, 2=TEACHER INTERN, OR 3=OTHER.

APPENDIX E

INTERVIEW RUBRIC

Teacher Code: R: P.C.

Q 2. Thinking about your interview process for this school, with whom did you interview with for your current position?

	School Board Member	Human Resources Personnel	Super-intendent	Dean of Education/ Curriculum Coordinator	Principal/Vice-Principal	School Counselor	Athletic Personnel	Teacher	Student	No One	Other
	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO
	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES

APPENDIX F

CODEBOOK FOR NEW-TO-SCHOOL TEACHER INTERVIEW: INTERVIEW PRACTICES

Codebook for New-to-School and Beginning Teacher Interviews -Q2: Thinking about your interview process for this school, with whom did you interview with for your current position?

Full Variable Name	SPSS variable name	SPSS variable label	Coding instructions
Teacher Code	tc	Teacher Code	Teacher identification number
School Board Member	sbm	School Board Member	0=no, 1=yes
Human Resources Personnel	hr	Human Resources Personnel	0=no, 1=yes
Superintendent	supr	Superintendent	0=no, 1=yes
Dean of Education/Curriculum Coordinator	dean	Dean of Education_Curriculum Coordinator	0=no, 1=yes
Principal/Vice-Principal	prin	Principal_Vice-Principal	0=no, 1=yes
School Counselor	coun	Counselor	0=no, 1=yes
Athletic Personnel	athl	Athletic Personnel	0=no, 1=yes
Teacher	tchr	Teacher	0=no, 1=yes
Student	stud	Student	0=no, 1=yes
No One	no	No One	0=no, 1=yes
Other	oth2	Other	0=no, 1=yes

APPENDIX G

REALISTIC JOB PREVIEWS RUBRIC

Teacher Code: R: P.C.:

Q 3. What did you do to learn about this school before accepting your current science teaching position? Did you do any of the following? Yes/No Responses

	Tour the campus	Meet other science teachers on campus	View available teaching and laboratory equipment	Review the curriculum scope and sequence for your teaching assignment	View available instructional technologies	Other: Review web-based information about the school or district	Other: Misc. mentioned	Other: No response/Not asked
	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO	0=NO
	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES	1=YES
	3=NR/NA	3=NR/NA	3=NR/NA	3=NR/NA	3=NR/NA	Notes:	Notes:	Notes:

APPENDIX H

CODEBOOK FOR NEW-TO-SCHOOL TEACHER INTERVIEW: REALISTIC JOB PREVIEW PRACTICES

Codebook for New-to-School and Beginning Teacher Interviews -Q3: What did you do to learn about this school before accepting your current science teaching position? Did you do any of the following? Yes/No Responses

Full Variable Name	SPSS variable name	SPSS variable label	Coding instructions
Teacher Code	tc	Teacher Code	Teacher identification number
Tour the campus	tcamp	Tour campus	0=no, 1=yes, 2=NR/NA
Meet other science teachers	scitchr	Meet science teachers	0=no, 1=yes, 2=NR/NA
View available teaching and laboratory equipment	tleqip	Teaching and lab equipment	0=no, 1=yes, 2=NR/NA
Review the curriculum scope and sequence for your teaching assignment	scoseq	Scope and sequence	0=no, 1=yes, 2=NR/NA
View available instructional technologies	itech	Instructional technologies	0=no, 1=yes, 2=NR/NA
Other: Review web-based information about the school or district	winfo	Web-based information	0=no, 1=yes, 2=NR/NA
Other: Misc. mentioned	othm	Other: Misc	0=no, 1=yes
Other: No response/ Not asked	othnr	Other NR/NA	0=no, 1=yes

APPENDIX I

DECISION FACTORS RUBRIC

Teacher Code: Data File: Audio/Transcript or Data Chart Other:

Q4. What are the top three reasons that affected your decision to accept your current position?

Timing	Location				District, School, and Class Size			School Reputation	School Atmosphere and Climate		School Infrastructure		School Instructional Practice, Organizational Structure, and Demographics					
First school to offer job	Location (other)	Proximity to family or friends living in the area	Commute and proximity to home	Small town/community	Class size	School size	District size	School reputation (academic performance, conservative values etc.; does not include a reference to faculty, staff, or student demeanor)	Student demeanor	Faculty and/or staff demeanor	Facilities	Technology	School demographics	Number of preparations	Content	Grade level	Extra-curricular programs (UIL, etc.)	Instructional techniques

	Connections to Area, District, or School					Emotive Factors and General Desire for Change					Coaching Position		Money		Credentials or endorsements of the teacher	
	Teacher or spouse grew-up in the area	Teacher or spouse attended school	Relative or friend works for the school or district	Spouse works for the school or district	Children attend or will attend school or a school in the district	Expressed disappointment or grievance with previous employment or employer	Expressed desire for change-teach a new course or new subject area (branch-out in professional practice)	Expressed desire for change-meet new people	Desire for autonomy in teaching practice	Motivation to "help" students (expressed sentiments for students or student type)	Motivation to Teach (expressed sentiments for the profession in general)	Coaching position-promotion	Coaching position-non-specified promotion	Needed a job (no mention of increased salary or increased pay)	Increased salary (mention higher salary; increased pay)	Lacked credentials and rejected during the hiring process by other schools (perception as expressed by the teacher)	Sought after or viewed accredited during the interview/hiring process (perception as expressed by the teacher)

APPENDIX J

DECISION FACTORS RUBRIC II

Timing	Location				District, School, and Class Size			School Reputation	School Atmosphere and Climate		School Infrastructure		School Instructional Practice, Organizational Structure, and Demographics					
First school to offer job	Location (unspecified)	Proximity to family or friends living in the area	Commute and proximity to home	Small town/community	Class size	School size	District size	School reputation (academic performance, conservative values etc.; does not include a reference to faculty, staff, or student demeanor)	Student demeanor	Faculty and/or staff demeanor	Facilities	Technology	School demographics	Number of preparations	Content	Grade level	Extra-curricular programs (UIL, etc.)	Instructional techniques
Crit	Obj	Obj	Obj	Obj	Subj	Subj	Subj	Subj	Subj	Subj	Crit	Crit	Subj	Crit	Crit	Crit	Crit	Crit

	Connections to Area, District, or School					Emotive Factors and General Desire for Change						Coaching Position		Money		Credentials or endorsements of the teacher	
	Teacher or spouse grew-up in the area	Teacher or spouse attended school	Relative or friend works for the school or district	Spouse works for the school or district	Children attend or will attend school or a school in the district	Expressed disappointment or grievance with previous employment or employer	Expressed desire for change-teach a new course or new subject area (branch-out in professional practice)	Expressed desire for change-meet new people	Desire for autonomy in teaching practice	Motivation to "help" students (expressed sentiments for students or student type)	Motivation to Teach (expressed sentiments for the profession in general)	Coaching position-promotion	Coaching position-non- specified promotion	Needed a job (no mention of increased salary or increased pay)	Increased salary (mention higher salary; increased pay)	Sought after or viewed accredited during the interview/hiring process (perception as expressed by the teacher)	Lacked credentials and rejected during the hiring process by other schools (perception as expressed by the teacher)
	Subj	Subj	Subj	Subj	Subj	Subj	Subj	Subj	Subj	Subj	Subj	Obj	Obj	Obj	Obj	Crit	Crit

VITA

Rasheedah Kay Richardson received her Bachelor of Arts degree in biology in 2002, and Masters of Education degree in curriculum and instruction in 2004 from Texas A&M University. In 2012, she received her Doctor of Philosophy in curriculum and instruction, with an emphasis in science education, from Texas A&M University. Her research interests include K-12 and higher education policy issues and teacher training.

Rasheedah Richardson has been involved in several years of program management and policy research in science education in Texas. She has served as a public school consultant addressing issues of student learning and achievement in the classroom. She has also contributed to a number of programs with a teaching and learning emphasis. Her diverse teaching experience, spanning over a decade, has helped her to develop a pedagogical approach that allows her to relate to and engage learners of various demographic backgrounds and intellectual experiences.

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