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# Factors affecting retention of veteran classroom teachers: A Q -method study

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2009

ABSTRACT


Factors Affecting Retention of Veteran Classroom Teachers: A Q-Method Study

by

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M.S., NOVA University, 1993
B.A., Brigham Young University, 1989



Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
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ABSTRACT

Teacher attrition compromises efforts to provide a quality teacher in every classroom, and attrition brings high financial and organizational costs to school districts. Yet, there are few studies on retention of veteran teachers. Within a framework of economic, organization, and attrition theories, the purpose of this study was to provide a clearer focus on factors that contribute to the retention of veteran teachers using Q-methodology. The independent variables were 49 participants from a large school district in the southwest United States. The dependent variable was the Q-sample of multiple factors. Using previous literature, a concourse was developed. The P-sample of veteran teachers sorted various retention perception statements into categories of *most definitely influencing* to *most definitely not influencing* their retention. Factor analysis including varimax rotation was completed. Four factors emerged defining groups of teachers and what influences retention: empowerment with emotional support, family lifestyle with intellectual growth, family lifestyle with serving students, serving students with physical support. Interfactor retention elements that positively or negatively affected retention included standardized testing, time challenges, administrator, empowerment, family lifestyle, serving students, adequate facilities and materials, and intellectual enjoyment. Recommendations for action included modifying standardized testing; providing supports for time, family lifestyle, and disadvantaged students; encouraging empowerment through a supportive administrator; and implementing further research clarifying veteran teacher retention. Positive social change may occur if local, district, state, and national policies address retention factors to provide better retention of teachers for increased stability and student learning with decreased financial and emotional costs.

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DEDICATION

This dissertation is dedicated to my loving, eternal family who support my

passionate teaching service and perpetual learning desires.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Background of the Problem

The National Commission on Teaching and America's Future (NCTAF) has repeatedly asked for a quality teacher in every child's classroom across the United States (NCTAF, 1996, 2003). Feistritzer and Haar (2005) found that "forty percent of the current public school teaching force expects not to be teaching" by 2010 (p. 1). Thus, the realization of having a quality teacher may be denied many because of high teacher attrition. Attrition, or its antonym retention, is a multifaceted staffing issue created when teachers move from classrooms to other educational positions, from school to school, or from district to district (Ingersoll, 2001). In addition, teachers leave education temporarily for personal reasons or permanently for other careers and retirement. Thus, many classrooms have a figurative revolving door that contributes to an inconsistent learning environment for students in the classroom (Cochran-Smith, 2004a; Guarino, Santibanez, & Daley, 2006; Hanushek, Kain, & Rivkin, 2004a, 2004b; Ingersoll, 2001, 2002b, 2004; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Shockley, Guglielmino, & Watlington, 2006; Stinebrickner, 2002). Turnover is higher at schools with low-income, low-achieving, and high minority student populations, causing greater instability and less learning where experienced teachers are most needed (Alt & Henke, 2007; Barnes, Crowe, & Schaefer, 2007; Cochran-Smith, 2004b; Guarino et al.; Hanushek, Kain, & Rivkin, 2001; Hanushek et al., 2004a; Ingersoll, 2002a; Loeb, Darling-Hammond, & Luczak, 2005; Loeb & Reininger, 2004; NCTAF, 2003, 2007; Nieto, 2003; Olsen &

Anderson, 2007; Shockley et al., 2006; T. M. Smith & Ingersoll, 2004; Zeichner, 2003;

Zimpher & Howey, 2005).

In addition to the educational disadvantage of attrition for students, other

economic and social issues elevate attrition costs to extremely high levels. Districts must

fund recruitment, hiring, induction, and mentoring costs for each new teacher as well as

severance and school climate costs for each departing teacher. Shockley et al. (2006)

reported a $4.9 billion annual cost nationally because of attrition. The NCTAF (2007)

placed that annual cost at $7.3 billion nationally. School districts and taxpayers shoulder

the financial burden of attrition. Students, staffs, and communities carry the emotional

and educational burden of attrition (Barnes et al., 2007; Darling-Hammond, 2003;

Ingersoll, 2001; Milanowski & Odden, 2007; Shockley et al.).

Ingersoll (2001) noted that the basis of school staffing issues was not a teacher

shortage but the revolving door image of teacher movement and proposed that

organizational issues were possibly at fault. Lankford, Loeb, and Wycoff (2002) focused

on attributes and distribution of teachers affecting attrition. Guarino et al. (2006)

identified a need for empirical studies on retaining veteran teachers. M. B. Allen (2005)

noted most scientific studies on teacher retention were from the 1970s and 1980s, when

the student population and the culture of education were different than in the post-2001

climate. Boyd, Lankford, Loeb, and Wyckoff (2003) suggested conducting more studies

on teacher retention that include factors such as high school residence because teachers

tend to teach in a community similar to their high school community. Earley and Ross

(2006) called for studies that include school climate factors as well as which factors

influenced decisions to remain in teaching. Marston, Brunetti, and Courtney (2004) and Marston, Courtney, and Brunetti (2006) suggested future research studies should include other states, urban contexts, and middle school teachers to present a broader picture of job satisfaction among teachers in terms of professional, practical, and social factors. Additional studies outlined similar issues and are detailed in chapter 2 of this study.

The NCTAF (2003) stated that teacher retention must be addressed immediately because school staffing is at a crisis level. Therefore, it is important that researchers discover why veteran teachers remain in the classroom. With this information, local, state, and federal efforts could be expanded to enhance preservice education, recruitment efforts, ongoing support, and retention of quality teachers for every child across the United States.

<div align="center">Problem Statement</div>

Many efforts to decrease attrition that have been directed toward novice educators in their first few years of teaching through induction and mentoring programs have yielded positive results in novice teacher retention (Ash, 2007; Bickmore, Bickmore, & Hart, 2005: CoBabe, 2002; Cohen, 2005; Darling-Hammond, 2003; Doyle, 2004; Ingersoll, 2003a; Ingersoll & Kralik, 2004; Ingwalson, 2006; Kelley, 2004; Kern, 2004; Moir, 2003, 2006; Portner, 2005; Shockley et al., 2006; Smith & Ingersoll, 2004; Wong, 2004). However, less effort is directed toward retention of veteran teachers (Robbins-LaVicka, 2007). This is unfortunate because the longer a teacher is satisfied with his or her position, the more likely the teacher will remain in the classroom and the more effective that teacher will become (Cochran-Smith, 2004b; NCTAF, 2007; Wiegand,

2003). The focus of this Q-method study was to gain a greater understanding of why veteran teachers remain in the classroom through analyzing the significance of personal and structural factor statements reported by veteran teachers. Q-method is a way to quantify subjective data.

## Purpose of the Study

The purpose of this Q-methodology study was to increase understanding of personal and structural retention factors of veteran teachers in a large public school district in the southwestern region of the United States. The specific factors that constituted the concourse theoretical design included the following:

1. *Personal factors* including serving students, fitting lifestyle, and professional fulfillment

2. *Structural factors* including physical, emotional, and systemic structures

With an increased understanding of what factors veteran teachers state impact teacher retention, local, state, and federal efforts can be increased in preservice education, recruitment ideas, and retention plans for increased veteran teacher retention and decreased financial and emotional burdens. In addition, since there is little research on veteran teacher retention, the study can be used for defining further possible research efforts into veteran teacher retention.

## Theoretical Perspective

Two theories that guided this study were general economics including supply, demand, surpluses, and shortages as well as organizational effectiveness. In addition, the

factors selected to guide the study came from the preservice, recruitment, attrition, and retention literature.

*Economic Theory*

General economic theory provides an understanding of how "individuals make choices given what they care about and the constraints they face in terms of monetary resources, time and information" (Loeb & Reininger, 2004, p. i). With this general perspective in place, a more detailed look can occur for how specific economic labor theory of supply and demand applies to teachers. The economic labor theory of supply in educational terms is the number of "qualified individuals willing to teach at a given level of overall compensation" (Guarino et al., 2006, p. 174). Overall compensation includes wages, service, school climate, system, empowerment, intellectual, and personal factors such as student behavior, class size, school culture, facilities, and leadership as well as placement in schools similar to those teachers attended as students. Economic theory asks what influences teachers to decide whether to teach and where to teach (Loeb & Reininger). The economic labor theory of demand is "the number of teaching positions offered at a given level of overall compensation" (Guarino et al., p. 174). In educational retention terms, working within the general economic theory, teachers will remain if the overall compensation is favorable enough for them to do so, given all other options available as noted by Guarino et al.

> These elements of attractiveness are the policy levers that can be manipulated at the school, district, or state levels to bring supply in line with demand. The demand for teachers is driven by student enrollments, class-size targets, teaching-load norms, and budgetary constraints. (p. 175)

Thus, favorable overall compensation factors, when determined, can be manipulated for teacher retention. Compensation factors are typically manipulated by decision makers.

Loeb and Reininger (2004) explained there are many decision makers involved at all levels of the educational system, each with a unique focus for decision making. The levels include school, district, state, and national, and within each level are a variety of stakeholders such as teachers, parents, administrators, school board members, governors, legislators, and voters. In economic theory, all of these members may have individual focuses, such as a legislator being reelected, and shared focuses, such as providing a quality teacher for each student, yet many stakeholders' choices may affect teacher retention. For example, if decision makers in districts select placement options for teachers without considering teacher preferences, attrition may result. These decision makers would be the individuals who manipulate the economic climate for teacher retention.

Not only do decision makers provide favorable overall compensation factors, but general economic labor market theory describes how surpluses and shortages affect labor markets. Surpluses occur when supply is greater than demand. In education, surpluses occur when there are many qualified teachers and few open teaching positions. Shortages in economic theory labor markets occur when demand is greater than supply. In education, shortages occur when there are few teachers available for many open teaching positions. In addition, the education labor market is nested in a larger economic labor market for all other occupations that may require similar qualifications or skills (Guarino

et al., 2006; Ingersoll, 2003a). Shortages in the teacher market were partially attributed to teacher retirements and increased student enrollments. Researchers suggested increased recruitment incentives and teacher preparation programs to meet the perceived demand for teachers (Darling-Hammond & Sykes, 2003; Earley & Ross, 2006). Yet, Ingersoll (2001, 2002b, 2003a) indicated that teacher shortage was not the issue. A revolving door of teachers leaving, moving, and reentering the teaching profession was the issue. Schools suffering the most from moving, or migration, are those with students who are low income, low achieving, and high minority (Alt & Henke, 2007; Barnes et al., 2007; Cochran-Smith, 2004a; Guarino et al.; Hanushek et al., 2001, 2004a, 2004b; Ingersoll, 2002b; Loeb et al., 2005; Loeb & Reininger, 2004; NCTAF, 2003; Nieto, 2003, Olsen & Anderson, 2007; Shockley et al., 2006; Smith & Ingersoll, 2004; Zeichner, 2003; Zimpher & Howey, 2005). Consequently, the issue, from an economic perspective, is not a shortage of teachers, but retention of teachers where schools need to create attractive enough working conditions for teachers to remain (Cochran-Smith, 2004b; Guarino et al.; Hanushek et al., 2004a, 2004b; Ingersoll, 2002b, 2003a; Loeb et al.; Loeb & Reininger; NCTAF, 2003).

*Organizational Theory*

With a retention focus to limit the revolving door effect, Ingersoll (2002b, 2003a) suggested a return to an organizational perspective. Ingersoll (2002b) noted,

> Three related premises lie behind this perspective: (a) employee turnover is important because of its link to the performance and effectiveness of organizations; (b) fully understanding turnover requires examining it at the level of the organization; (c) turnover is affected by the character and conditions of the organizations within which employees work. (p. 19)

When using an organizational theoretical perspective, a closer look at the school climate is warranted. If there are high rates of turnover at the school level where "commitment, continuity, and cohesion among employees" is especially important, then there may be underlying school climate problems that need to be addressed more so than a shortage of teachers (Ingersoll, 2002b, p. 19). This study involved understanding veteran teachers' subjective perceptions of attractive factors leading to retention using the orderly empirical exploration of Q-methodology (Stephenson, 1953). Personal factors such as serving students, fitting lifestyle, and professional fulfillment and structural factors such as physical structures, emotional structures, and systemic structures may provide relationships that determine the most economically advantageous choice for teachers. And, those factors may provide relationships that determine a healthy and sustainable organization.  If both economical and organizational factors are addressed, then greater retention of teachers may follow.

<div align="center">Limitations of the Study</div>

A limitation of the study included the choice of using the Q-methodology paradigm over other quantitative and qualitative choices. A quantitative design presents numerical data without necessarily "understanding how individuals make sense of their everyday lives," as found in qualitative studies (Hatch, 2002, p. 6). A qualitative design presents more subjective information in a less traditional or quantifiable format (Creswell, 2003). Q-methodology provides a mix of quantitative and qualitative paradigms. "The qualitative methods of Q-methodology allow participants to express their subjective opinions and the quantitative methods of Q-methodology use factor

analytic data-reduction and induction to provide insights into opinion formation as well as to generate testable hypotheses" (Valenta & Wigger, 1997, p. 502). Yet, a pure qualitative format might provide more in depth analysis of the person factor, and a quantitative format might provide more generalizability than the Q-methodology format. Specifically, Q-methodology provides a more exploratory method for understanding groups of participants subjective opinions, therefore, generalizations to a population are rare (Valenta & Wigger). However, exploring factors veteran teachers use to explain their retention through the Q-method can reveal significant data to be further evaluated either by qualitative or quantitative methods (Valenta & Wigger; Watts & Stenner, 2005).

<div align="center">Delimitations of the Study</div>

The creation of the concourse and Q-sample were delimitations of the study. Because retention is a multifaceted theme, many other factors and levels may be part of a teacher's choice to remain at or leave a school or district, yet the study was confined to only two factors and three levels within each of those factors. In addition, the study was confined to classroom teachers hired between 1998 and 2002 at one large school district in the southwestern United States.

The school district in the study serves 308,783 students at 337 schools (*History of the CCSD Police Department*, n.d.) and contains a diverse student body and teaching force. The larger economy surrounding the district has a high tourism focus and continual population growth. Therefore, the district requires intensive recruitment procedures to draw teachers from across the nation and relies on many teachers moving to the area to staff numerous schools. Thus, a district that relies more on local applicants and has less

economic growth in the community may not have similar results. The study included only

49 teachers who had taught over 5 years. Additionally, it considered only teachers in a

classroom setting and was therefore meant only to explore personal and structural factors

in this and similar settings. Teachers included those who had taught in kindergarten

through twelfth grade for over five years in the classroom and in the present district.

<div align="center">Assumptions of the Study</div>

The study involved creating a Q-sample, those subjective statements

representative of universal ideas of agreement or disagreement among veteran teachers

for remaining in the teaching field. The assumption that such a sample could be created

was reasonable since there were many journal articles and research studies indicating

possible reasons for attrition. Although the literature was scant on reasons for retention,

the attrition opposites for retention can be reasonably assumed.

An assumption of the study was that the Q-sample statements were written clearly

and succinctly and provided a general idea of universal statements that may or may not

influence veteran teacher retention. This was a reasonable assumption because a pilot was

employed in which teachers could offer suggestions for wording improvement and

universality of statements. Since the study involved a Q-sort, an assumption of the study

was the honest ranking of Q-statements from participants. Because anonymity was

preserved, this assumption was likely to be true.

The study also involved gathering demographic data from the participants to

compare loaded groupings further and to ensure that participants were veteran teachers.

Thus, an assumption was that the participants provided accurate demographic

information, including year hired in the district. This was also a reasonable assumption due to anonymity preservation.

<div align="center">Definition of Terms</div>

The following terms specific to this study are here defined:

*Attrition*: The process of teachers leaving the occupation of teaching (Ingersoll, 2002b).

*Concourse*: A collection of subjective statements that "comprehensively represent the discussion about a particular topic in the participants' own words and language" (Valenta & Wigger, 1997, p. 502). A concourse can also include artwork, objects, behaviors, photographs, traits, cartoons, and other items (McKeown & Thomas, 1988; Stephenson, 1953; Thompson, 1998; Watts & Stenner, 2005); also known as the Q-sample.

*Costs*: Financial expenses of district, state, and federal agencies and the public tax dollars that fund expenses based on teacher turnover. The financial expenses include recruitment, hiring, training, and separation. Costs also include teaching quality, effectiveness, diminished student achievement (NCTAF, 2007), and, from an organizational perspective, disruption in school cohesion and performance (Ingersoll, 2003a).

*Experienced teacher*: A teacher who has taught more than 3 to 5 years (Edwards, 2003; Wiegand, 2003); also known as a veteran teacher.

*Leavers*: Teachers who "left the [teaching] profession" (Marvel et al., 2007, p. 3).

*Migration*: Moving "to a different school" (Marvel et al., p. 3) and moving to other educational positions as leaders on an upward career path (Cochran-Smith, 2004b).

*Movers*: "The movement of teachers from school to school and district to district as a result of voluntary and involuntary transfers" (Johnson & Birkeland, 2003, p. 582).

*Novice*: "Beginning teachers" (Herrington, Herrington, Kervin, & Ferry, 2006, p. 120).

*Out-of-field*: "Teachers assigned to teach subjects for which they have little preparation, education, or background" (Ingersoll, 2008, p. 369).

*P-sample*: The participants performing the Q-sort who become the independent variables. The P-sample may be convenient or theoretically structured depending on the purpose of the study, yet participants should be those who are conversant with the topic (McKeown & Thomas, 1988); also known as Person-sample or P-set.

*Q-sort*: The forced normal frequency distribution ranking or scoring of items in the Q-sample by participants. The participants quantify the statements by ranking "them, relative to one another" (Stephenson, 1953, p. 19).

*Revolving door*: The movement of teachers in and out of schools as well as between schools.  "This revolving door is a major factor behind school staffing problems" (Ingersoll, 2003a, p. 11).

*School climate factors*: Factors that have to do with physical facilities and materials, administration, colleague interaction, learning environment, parent support, and student characteristics; "teachers' feelings about administrative support, resources for

teaching" (Cochran-Smith, 2004b, p. 9), "school facilities that are clean and well maintained, safe, and have adequate materials and workspaces" (Edwards, 2003, p. 104).

*Teacher turnover rate*: "The number of teachers per year who move from one teaching job to another or leave teaching altogether" (Cochran-Smith, 2004a, p. 388).

<div align="center">Nature of the Study</div>

The Q-method study provided an increased understanding of what veteran teachers indicated was most significant in teacher retention between personal and structural factors using Q-sort and factor analysis. Q-methodology was used to study subjective concepts empirically. McKeown and Thomas (1988) described the Q-methodology as one which "embraces a distinctive orientation toward the systematic study of human subjectivity" (p. 9). Indeed, Stephenson (1953) stated, "All subjective behavior, hitherto regarded as *in esse* arbitrary and unscientific, is capable of study with full scientific sanction, satisfying every rule and procedure of scientific method" (p. 25, italics in original). In addition to providing an empirical method for this study, Q-methodology placed the subjective ideas into groupings. These groupings demonstrate the families of factors "preferred by the participant group" (Watts & Stenner, 2005, p. 70).

In Q-methodology, a concourse of universal statements is defined then refined by a pilot study. Those statements are then Q-sorted by individuals. The participant Q-sorts are entered into a statistical analysis software program where the persons are correlated and factored (S. R. Brown, 1996; McKeown & Thomas, 1988; Stephenson, 1953; Watts & Stenner, 2005). Although Stephenson and McKeown and Thomas suggested the

statements can come from any universal arena-such as the media, photographs, newspapers, or letters- research literature was used in this study to compile the universal statements for the concourse. The Q-sample was designed in this structured way to avoid weaknesses found in unstructured sampling and "promote theory testing by incorporating hypothetical considerations into the sample" (McKeown & Thomas, p. 28).

The Q-sample consisted of 36 statements correlating personal and structural factors. The levels included serving students, fitting lifestyle, and professional fulfillment correlated with physical structures, emotional structures, and systemic structures. The p-sample included 49 veteran classroom teachers working in kindergarten through 12th grade from a large public school district in the southwestern region of the United States. Since people are the variables in Q-methodology, a smaller number of participants was warranted (McKeown & Thomas, 1988).

Once the concourse and pilot was completed, participants performed a forced distribution Q-sort individually by rank ordering a set of statements from *most definitely does not influence my decision to remain teaching* to *most definitely does influence my decision to remain teaching*. In this way, the participants chose what was meaningful for them (Watts & Stenner, 2005). In addition, the participants compared each Q-sample statement with all other statements and the conditions of instruction in order to determine which of those presented were more or less valuable than the others (Stephenson, 1953).

At a secure location, data was entered into a statistical analysis program, double-checked for accuracy, and compared using factor analysis. The N Q-sorts as variables were then correlated through factor analysis resulting in a correlation matrix. The

"resulting factors represent points of view, and the association of each respondent with each point of view is indicated by the magnitude of his or her *loading* on that factor" (McKeown & Thomas, p. 13, italics in original). The standard for deciding which factors were used for interpretation was "to select only those factors with an eigenvalue in excess of 1.00" (Watts & Stenner, 2005, p. 81). Another "standard requirement is that an interpretable Q methodological factor must ordinarily have at least two Q sorts that load significantly upon it alone" (Watts & Stenner, p. 81). Using the eigenvalues greater than 1.00 and the factor exemplars with multiple loading, a factor array was created and interpretation of the data was presented by "referring to demographic correlates of the respondents … and, more importantly, to the *factor scores* for each factor" (McKeown & Thomas, p. 18, italics in original). Finally, the summation of each finding is discussed in chapter 4 to increase understanding of the factors veteran teachers use to explain their retention.

<div align="center">Implications for Social Change</div>

All results will be disseminated to the district and other interested parties with recommendations for further action and research. The implications for positive social change include possible improved preservice and recruiting information to initially attain teachers who may be more likely to remain teaching. District financial burdens will be lessened when teachers are retained. Improved school stability and increased student learning will result with less attrition of teachers. Preservice institutions, local, district, regional, state, and national policy makers may be able to use the information to create policies directed toward increasing veteran teacher retention.

Research Questions

The main research question for the study was as follows: What factors do veteran teachers use to explain their retention? The sub-questions were as follows:

1.  What effect do personal factor levels such as serving students, fitting lifestyle, and professional fulfillment have on teacher retention?

2.  What effect do structural factor levels such as physical, emotional, and systemic structures have on teacher retention?

These research questions drove the Q-method study to gain an increased understanding of the possible relationships between veteran teacher retention and the various factors.

Significance of the Study

The NCTAF (2003) noted the United States had a school staffing crisis and wanted retention improved 50% by 2006 to provide a quality teacher in every child's classroom. Although 2006 has passed, this ideal has yet to be realized. Teacher attrition is getting worse, not better, particularly at schools that need quality teachers most. Although a few studies address attrition and retention relating to personal and structural factors, placement problems, induction and mentoring, school climate, and financial compensation, most are not current. There are also few rigorous studies and few studies that relate factors to each other to determine relationships between various factors and teacher retention.

The Q-methodology study provided empirical data regarding veteran teacher retention in a large southwestern school district and the participant reported relationships

between factors for greater understanding of why veteran teachers remain. With this information, site administrators, school districts, state agencies, universities, and national agencies may gain additional information to inform and improve practices, policies, and actions for better preservice, recruitment, and retention of quality teachers and thus what every child in the nation deserves—an equitable and superior education.

## Summary

The NCTAF has repeatedly asked for a quality teacher in every child's classroom across the United States. Yet, the realization of quality teachers is denied many because of high teacher attrition. Turnover is higher at schools with low-income, low-achieving, and high-minority students, exacerbating an already difficult situation. Attrition brings high financial costs to the taxpayers and high emotional and educational costs to school climates and students. Historically, novice teachers have the highest attrition; thus, there has been much focus on retention efforts for inexperienced teachers, specifically through induction and mentoring, with some success. However, little focus has been placed on veteran teachers and why they stay. This is unfortunate because the longer a teacher is satisfied with a position, the more likely the teacher will remain in the classroom and the more effective that teacher will be. Requests for current, rigorous studies are present throughout the recruitment and retention literature. Thus, it is imperative that reasons veteran teachers remain teaching be discovered through research.

The purpose of the Q-methodology study was to gain greater understanding of why veteran teachers remain in the classroom through analyzing the significance of personal and structural factor statements as reported by veteran teachers in a large school

district in the southwestern region of the United States. General economic theory of supply, demand, surpluses, and shortages as well as organizational theory of healthy working climates are the two theoretical perspectives that were used in this study, causing a closer look at ways to make a long-term teaching profession attractive and ways to create school organizations that are healthy and sustainable for the teachers within.

The P-sample that constituted the independent variable included 49 veteran teachers from kindergarten through 12th grades selected through a single-stage, random sampling technique with stratification of dates teachers were hired and other demographic factors to ensure veteran status and diversity. The dependent variable was a Q-sample of 36 universal statements created from preservice, recruitment, and retention literature with personal and structural intersecting factors. Personal levels included serving students, fitting lifestyle, and professional fulfillment. Structural factors included physical, emotional, and systemic structures. A pilot study of the statements ensured universality and clarity of the Q-sample. After the pilot study, Q-sorts took place. Data was entered into a statistical analysis package and factor analysis occurred. Those factors which gained an eigenvalue greater than one and multiple loadings were further evaluated and discussed.

Results will be disseminated to the district and other interested parties with recommendations for further action and research. Implications for positive social change include improved preservice, recruitment, and retention efforts.  Positive social change may also be realized with improved policies from site administrators, district, state, and

federal agencies for ensuring quality teachers in every classroom.  Retention efforts may then provide school stability and increased student learning.

Chapter 2 contains a review of the literature on school staffing issues from economic theory and organizational theory perspectives.  Economic theory states that teachers seek the most favorable positions based on personal and market preferences.  Organizational theory states that teachers are retained if the school climate is healthy.  Teachers moving into the system, out of the system, and from school to school is discussed along with teacher distribution issues including the challenges of staffing schools with disadvantaged students.  The high economic costs of teacher turnover are explained, ranging from $4,366 to $17,872 per leaving teacher.  In addition, the high organizational costs of teacher attrition are discussed including decreased teacher quality, decreased student achievement, debilitation of learning communities, and stymied school reform efforts. Reasons for retaining veteran teachers are reviewed and research studies that focus on retention of veteran teachers are analyzed.  Finally, chapter 2 contains a discussion of literature focused on areas that teachers might designate as important in their retention. The general categories discussed include demographic, preservice, service, school climate, system, personal, and empowerment and intellectual factors.

CHAPTER 2: LITERATURE REVIEW

Chapter 2 summarizes the theoretical and empirical studies that provide the background necessary for creating the concourse of factors related to teacher retention. Valenta and Wigger (1997) stated, "The goal in instrument development is to comprehensively represent the discussion about a particular topic in the participants' own words and language" (p. 502). In order to develop a comprehensive concourse instrument, chapter 2 provides numerous veteran teacher retention ideas, for example, demographic, preservice, service, school climate, system, empowerment, intellectual, and personal factors. Demographic factors include age, gender, race and ethnicity, and location where the teacher attended high school. Preservice factors include the teacher's initial desire to go into teaching, level of education, preservice exam score, GPA, and education to teaching route. Service factors include emotional connections through serving society, seeing young people learn and grow, and providing equity; placement connections through teaching the subject and working with young people; and initial support connections through induction and mentoring. School climate factors include physical facilities and materials, administration, colleague interaction, learning environment, parent support, and student characteristics. System factors include policies, accountability, expectations, financial compensation, and respect and professionalism. Empowerment and intellectual factors include decision making and efficacy, autonomy, career advancement, and differentiated professional development. Personal factors include recognition, time, and lifestyle. These ideas, drawn from the literature, constitute a complex theoretical concourse. "From the concourse, a subset of statements is selected

to form the Q-sample: the group of statements to be rank-ordered by the test subjects"
(Valenta & Wigger, p. 502). From this concourse, the factors used in designing the Q-sample were personal and structural. Personal factors were grouped into the following
levels: serving students, fitting lifestyle, and professional fulfillment. Structural factors
were grouped into the following levels: physical, emotional, and systemic.

The strategies used for searching the literature included accessing databases,
exploring reference lists, and reviewing professional reference books. Using the ERIC
database through EBSCOhost, key words such as attrition, retention, veteran, novice,
experienced, inexperienced, and teachers were used in a general search of literature from
2000 to 2009. Using reference lists from the journal articles that came up, specific key
words were entered into ERIC to find research and articles directly. Also, SAGE and
dissertation databases were accessed using either the same key words in general requests
or specific key words in particular requests. Professional reference books were searched
in an effort to define concepts that came up in the journals, dissertations, and research
articles. Finally, the Internet was searched for specific articles not located on databases.

The review of the literature begins with articles that outline specific school
staffing issues through an economic and organizational perspective as well as retention of
both novice and veteran teachers. Current literature directly related to veteran teacher
retention is then reviewed. Finally, specific retention factors are discussed, including
demographic, preservice, service, school climate, system, empowerment, intellectual, and
personal factors. The chapter closes with a summary of key issues.

School Staffing Issues

Hargreaves (2003) noted, "One of the most serious crises and challenges facing the public-school system and the teaching profession is the mass exodus from teaching related to the demographic turnover of teachers in the profession" (p. 121). These school staffing challenges include economic issues and organizational issues.

*Economics and Organizations*

Ingersoll (2002b, 2003a) described school staffing issues as difficulties in retaining teachers due to a revolving door where teachers move through the system at alarming rates. The movements included teachers leaving the education field, migrating to other schools, shifting to other districts, and advancing to other positions in the field. Ingersoll's (2002b, 2003a) view was unique to prior researchers who stated that school staffing issues were because of teacher shortages in the education economic labor market. The shortages were determined to be based on high teacher retirements, fewer candidates, and an increase in student enrollment (Earley & Ross, 2006; Ingwalson, 2006; Johnson & Birkeland, 2003; Miller, 2002; Wiegand, 2003). Guarino et al. (2006) explained the economic theoretical perspective driving teacher turnover. Teachers seek the most favorable positions based upon personal and market preferences. "Individuals will become or remain teachers if teaching represents the most attractive activity to pursue among all activities available to them" (p. 175).

Ingersoll (2002b, 2003a) countered there was not a teacher shortage due to an insufficient supply of teachers in the economic sense, but that the school staffing issues were an organizational issue in retention of teachers. "There is a strong link between

teacher turnover and the difficulties schools have adequately staffing classrooms with qualified teachers" (Ingersoll, 2003a, pp. 9-10). A small amount of organizational turnover is expected and effective for a quality organization, yet "high levels of employee turnover are both cause and effect of performance problems in organizations" (Ingersoll, 2003a, p. 11). Shockley et al. (2006) concurred that high teacher turnover was a "symptom of serious problems within an organization, institution or profession" (p. 6). Ingersoll (2003a) purported that looking from an organizational perspective was an important distinction because if teacher shortages were viewed from an economic perspective, the remedy was preparing and recruiting more new teachers. Placing less experienced teachers whose turnover rates are higher than others into schools already filled with less experienced teachers and organizational problems exacerbates the school staffing issues. "One of the downsides with this strategy, from a management perspective, is that it can decrease employee quality and increase employee turnover" (Ingersoll, 2003a, p. 18). When school staffing issues are addressed from an organizational perspective, the remedy is to correct the "character and conditions of the organizations within which employees work" (Ingersoll, 2002b, p. 17). The NCTAF (2003) agreed, reporting that, "The complementary, and equally essential, ingredient for achieving quality teaching is ensuring that every school is organized to support successful teaching and learning" (p. 9).

The NCTAF (2003) requested a more intense focus on retention of quality teachers to relieve school staffing issues and to ensure each school is organized for success and each child can thrive. "We consider [organizing schools for success] today's

highest priority for ensuring that competent, caring, qualified teachers can provide high quality teaching that leads to student success" (NCTAF, 2003, p. 13). The NCTAF (2003) requested that teacher retention be improved 50% by 2006. The year 2006 has passed, and teacher attrition is still at elevated levels. "No teacher supply strategy will ever meet [finding a highly qualified teacher for every classroom] if we do not reverse the debilitating rates of teacher turnover that are undermining teaching quality in so many schools" (NCTAF, 2003, p. 22). To address school staffing issues, then, a greater focus needs to be placed on the retention of teachers already in the system. From an economic standpoint, this increased focus would be directed at providing the most desirable conditions for teachers to choose remaining in their current classroom as the best option. From an organizational perspective, this focus would mean providing a system that is a healthy and comfortable place to work.

*Distribution*

Whether school staffing problems are purely economic, purely organizational, or a combination of both, the fact remains that high teacher turnover is an issue that needs to be addressed (Feistritzer & Haar, 2005; NCTAF, 1996, 2003). The NCTAF (2003) noted, "The real school staffing problem is teacher retention. Our inability to support high quality teaching in many of our schools is driven . . . by too many leaving" (p. 8). To complicate the school staffing difficulties, the distribution of teachers and the shift of teachers out of low-achieving, low-income, high-language, and high-minority schools is of particular concern. School staffing issues are most pronounced in low-income, high-minority, low-achieving, urban, and rural settings (Barnes et al., 2007; Cochran-Smith,

2004a, 2004b; Darling-Hammond, 2003; Guarino et al., 2006; Hanushek et al., 2001, 2004a, 2004b; Ingersoll, 2002b, 2003a; Loeb et al., 2005; Loeb & Reininger, 2004; Marvel et al., 2007; NCTAF, 2003, 2007; Shockley et al., 2006; Stinebrickner, 2002; Wiegand, 2003; Zeichner, 2003; Zimpher & Howey, 2005). Hanushek et al. (2001) found that staffing schools was challenging because of high teacher attrition in the most difficult to staff schools where students were already academically disadvantaged. Barnes et al. concurred, reporting that "teacher turnover undermines at-risk schools. Low school performance and high poverty were correlated with high teacher turnover" (p. 3). Other researchers agreed that urban, racial, ethnic, poverty, language-composition, and low-performing issues increased turnover (Cochran-Smith, 2004a, 2004b; Ingersoll, 2002b; Loeb et al.; Loeb & Reininger; NCTAF, 2003, 2007; Torres, Santos, Peck, & Cortes, 2004; Zeichner, 2003; Zimpher & Howey, 2005).

To further explain school staffing issues, the next paragraphs include definitions of stayers, movers, and leavers and address the financial and emotional costs of attrition. An update on the importance of retaining novice teachers as well as a discussion on the importance of focusing on retaining the veteran teacher is included. Finally, specific studies directly related to veteran teacher retention are reviewed.

*Stayers, Movers, and Leavers*

The National Center for Education Statistics completed several Schools and Staffing Surveys (SASS) on teacher attrition and mobility. The purpose was to "collect, collate, analyze, and report full and complete statistics on the condition of education in the United States" (Marvel et al., 2007, preface). After the data were gathered, "a follow-

up of a sample of the elementary and secondary school teachers who participated in the

previous year's Schools and Staffing Survey" was conducted (Marvel et al., p. 1). The

Teacher Follow-up Survey (TFS) data were then used to examine the characteristics of

stayers, movers, and leavers. A stayer is a teacher who is teaching at the same school as

the previous year. A mover is a teacher who migrates to another school or another district

within a given year. A leaver is a person who leaves the profession or changes to a

position outside of the classroom.

According to Marvel et al. (2007), "The 2004-2005 TFS was completed by 7,429

current and former teachers. Of these respondents, 2,864 were" stayers, 1,912 were

movers, and 2,653 were leavers (p. 1). From the 2001 data on public education,

2,542,200 teachers (84.9%) were stayers, 231,000 were movers (7.7%), and leavers for

the same year were 221,400 (7.4%). From the 2005 data on public education, 2,684,200

were stayers (83.5%), 261,100 were movers (8.1%), and 269,600 were leavers (8.4%; see

Table 1). With movers and leavers combined, teacher turnover increased from 15.1% in

2001 to 16.5% in 2005. Thus, 530,700 turnovers occurred during the 2005 school year, or

one sixth of the teaching workforce was in turnover.

Table 1

*Teacher Stayers, Movers, and Leavers in Public Education From 2000-2001 and 2004-*

*2005 Schools and Staffing Surveys*

|  | Stayers | | Movers | | Leavers | |
|---|---|---|---|---|---|---|
| Year | *n* | % | *n* | % | *n* | % |
| 2000-2001 | 2,542,200 | 84.9 | 231,000 | 7.7 | 221,400 | 7.4 |
| 2004-2005 | 2,684,200 | 83.5 | 261,100 | 8.1 | 269,600 | 8.4 |

A study by NCTAF (2007) found that attrition is at a critical level and getting worse:

> America's teacher dropout problem is spiraling out of control. Teacher attrition has grown by 50 percent over the past fifteen years. The national teacher turnover rate has risen to 16.8 percent. In urban schools it is over 20 percent, and in some schools and districts, the teacher dropout rate is actually higher than the student dropout rate. (p. 1)

The NCTAF (2003) called the staggering turnover and the rising numbers of leavers a national teacher retention crisis and one needing immediate attention (p. 21).

*Costs of Attrition*

Costs of attrition and teacher turnover are both economic and organizational. Economic costs include monies spent by schools and districts for both the outgoing teacher and the incoming replacement. Although more difficult to quantify, organizational costs include decreased student achievement, debilitated learning communities, and stymied school reform (Barnes et al., 2007; Darling-Hammond, 2003; Hargreaves, 2003; Little, 2001; Milanowski & Odden, 2007; NCTAF, 2003, 2007; Shockley et al., 2006).

*Economic Costs*

Shockley et al. (2006) completed a study to determine financial costs for attrition. Shockley et al. included costs of "recruitment, separation processing, training, and orientation" (p. 3). Findings placed the cost per teacher at about "25% of the leaver's annual salary plus the cost of benefits" (Shockley et al., p. 3). For a school district with 1,952 teachers and a 16.4% turnover rate, the cost per teacher was $4,631. For a school district with 16,648 teachers and a 7.25% turnover rate, the cost per teacher was $12,652. The NCTAF (2007) estimated the national cost of public school teacher turnover well

over $7 billion per year. Placing this number at an individual level, NCTAF (2007)

calculated that each leaving urban district teacher costs $8,750, and each leaving

nonurban district teacher costs $6,250. Barnes et al. (2007) used recruiting, hiring, and

training a replacement as cost factors. Results placed the cost of a small rural district

teacher leaver at $4,366; the cost of a leaver in Granville County, North Carolina, at

$10,000; Milwaukee teacher attrition at $15,325; and the large district of Chicago at

$17,872 per teacher leaver. Milanowski and Odden (2007) sought to include as many

financial costs as possible in their study:

> Separation costs include items such as time to process termination documents,
> payment of accrued sick leave, or severance pay. Replacement staffing costs
> include out of pocket recruitment and selection expenditures and staff time, as
> well as any monetary inducements such as a signing bonus. Net replacement pay
> is the difference in compensation between the worker who left and the
> replacement, typically a cost savings when an inexperienced worker is hired to
> replace an experienced one. Training costs typically include orientation,
> induction, and training to a standard level of competence that is needed for
> adequate performance of the assigned work. These costs include materials, costs
> of formal instruction, costs of on-the-job training, and the compensation of the
> new employee during off-the-job training. The value of lost productivity is the
> productivity difference between the replacement worker and the worker who left.
> This difference is typically a loss and thus a cost when the replacement worker
> has a lower skill level or needs to learn the job in order to reach the level of
> productivity of the original worker. (pp. 3-4)

Milanowski and Odden determined that attrition costs for an urban district in the

Midwestern United States serving 90,000 students in 160 schools with 6,000 teachers

were $6,829 to $8,273 per leaving teacher.

The financial costs of attrition are high, especially when considering that

approximately one sixth, or about half a million, teachers are moving and leaving each

year. Although costs vary based on size, attrition rates, location, and district, in each case

the costs are significant. Table 2 presents a summary of findings on a variety of school

districts and the costs per teacher leaving the district.

The NCTAF (2003) report concluded that "excessive teacher turnover,

particularly in low-income urban and rural communities, saddles our schools with huge

financial costs" (p. 32). Barnes et al. (2007) noted high-turnover schools are "extremely

costly to operate" (p. 2). Chronic attrition traps schools in a cycle of spending dollars on

hiring and replacing teachers instead of bettering teaching quality and student

achievement (Barnes et al.). The NCTAF (2003) concurred,

> Schools with high turnover must continually pour money into recruitment efforts
> and professional support for new teachers, without reaping returns in the
> dividends of student achievement. Other teachers, including the few who could
> serve as mentors, are stretched thin; they feel overburdened by the needs of their
> colleagues as well as those of their students. Instead of using funds for needed
> academic improvements, monies are spent reteaching the basics of educational
> practice each year to new teachers who too often leave before they become
> skilled. Teachers who benefit from the staff-development investments of low-
> performing schools often end up leaving the profession or moving on to more
> "desirable" teaching positions in more affluent communities, creating a
> continuing drain on our most troubled schools. (p. 33)

Large financial obligations demonstrate costs of high attrition. Organizational costs

elevate the burden by escalating costs of attrition upon the students, communities, and

schools.

Table 2

*Economic Costs of Teacher Attrition From Varying Sources*

| Researcher | District (size, turnover rate, if given) | Cost per leaving teacher |
|---|---|---|
| Barnes et al. (2007) | Jemez Valley, NM | $ 4,366 |
| Shockley et al. (2006) | St. Lucie County (1,952 teachers; 16.4%) | $ 4,631 |
| NCTAF (2007) | Nonurban | $ 6,250 |
| Milanowski & Odden (2007) | Lower spectrum | $ 6,829 |
| Milanowski & Odden (2007) | Upper spectrum | $ 8,273 |
| NCTAF (2007) | Urban | $ 8,750 |
| Barnes et al. (2007) | Granville County, NC | $10,000 |
| Shockley et al. (2006) | Broward County (16,648 teachers; 7.25%) | $12,652 |
| Barnes et al. (2007) | Milwaukee | $15,325 |
| Barnes et al. (2007) | Chicago | $17,872 |

*Organizational Costs*

A reduction in teacher quality and effectiveness is an organizational cost of teacher attrition. Darling-Hammond (2003) mentioned the importance of retaining teachers for teacher effectiveness and noted a constantly churning teaching force "reduces productivity in education overall" (p. 8). The NCTAF (2003) reported the constantly "churning staff turnover keeps school administrators scrambling to find replacements" (p. 32). Many new hires are inexperienced teachers, which further "erodes teaching quality and student achievement" (NCTAF, 2003, p. 33). Consequently, student achievement suffers from high teacher attrition. Unfortunately, the students who need quality teachers the most are the students who experience teacher attrition at the highest levels.

> As usual, it is the lowest-income students who suffer most. Young people need stability in their lives. When school staff come and go in a parade of changing faces, children's emotional and social development suffer the consequences.

Excessive teacher turnover in low-income urban and rural communities is undermining teaching quality and student achievement. (NCTAF, 2003, p. 33)

School communities thrive when a stable and consistent learning community is established. Hargreaves (2003) commented on the importance of the social and emotional practice of teaching in a strong community. "Good teachers fully understand that successful teaching and learning occur when teachers have caring relationships with their students and when their students are emotionally engaged with their learning" (Hargreaves, p. 60). Hargreaves further noted a learning community takes "long-term collaborative groups" working together" (p. 63) and "professional learning communities do not flourish . . . in a workforce of transient teachers who are only in teaching for the short-term" (p. 170). High teacher attrition is counterproductive to such an environment. With high teacher attrition, the results are the same: "whether the teachers are lost to a school across town or drop out of teaching altogether . . . disruption of the coherence, continuity, and community that are central to strong schools" is the consequence (NCTAF, 2003, p. 32). Therefore, a cost of high teacher attrition is debilitation of learning communities.

School staff members seeking to improve themselves and students' learning processes through positive reform efforts also suffer from high teacher attrition. Little (2001) discussed school reform as a teacher learning process where collegial interactions foster learning and continuous school reform efforts over time. Specific teams and common planning times are established with strong colleague support and advice to enhance professional growth and school-wide reform. With such a heavy reliance on

improvement efforts for long-term teacher interactions, high teacher attrition undermines reform efforts.

> The inability to sustain strong learning communities in high turnover schools undercuts school reforms. No price tag has yet been placed on this loss, but substantial investments in instructional improvement are wiped out by high rates of teacher turnover. Schools are robbed of their ability to build the all-important capacity to sustain school improvement when teachers depart before reforms can become established practice. This is especially true in beleaguered schools, where an enduring sense of 'not yet' can lead from demoralization to outright cynicism about reforms. (NCTAF, 2003, p. 33)

High teacher attrition stymies school reform efforts. In addition to direct financial costs to schools, districts, states, and taxpayers, high teacher attrition brings heavy organizational costs to students, communities, and schools.

*Retention of Novice Teachers*

The retention of novice teachers is addressed here for two reasons: novice teachers are part of school staffing issues and novice teachers who are retained become veteran teachers of the future. Therefore, the unique issues of novice teachers could be an integral part of the retention factors of veteran teachers. Retention of novice teachers has been a highly addressed concept in school staffing issues. Novice teachers are noted for entering teaching with varying backgrounds and leaving teaching within the first 5 years, limiting teacher effectiveness and requiring supportive structures for success.

*Varying Backgrounds of Novice Teachers*

In response to combating school staffing issues, various programs have been incorporated to produce more teachers at a faster pace. Norman and Ganser (2004) noted both 4- and 5-year programs are available, but there are also alternative programs for preservicing future teachers. "Alternative programs are often brief, intensive, and largely

designed as on-the-job training" (Norman & Ganser, p. 130). Because there is such a variety of preservice routes to teaching, novice teachers enter the field with varied knowledge and abilities. The NCTAF (2003) found those novice teachers who enter teaching well-prepared "reduced first year attrition by 50 percent" (p. 84). The NCTAF (2003) defined well-prepared as possessing strong content knowledge, understanding how students learn, and demonstrating "teaching skills necessary to help all students meet high standards" (p. 73). In addition, well-prepared novice teachers "use a variety of assessment strategies to diagnose student learning needs; and they can reflect on their practices to improve instruction in collaboration with their colleagues" (NCTAF, 2003, p. 73).

*Attrition Rates of Novice Teachers*

Attrition rates of novice teachers are higher than all other categories of attrition (Ingersoll, 2003a). Some researchers noted many "new teachers enter the field with the intention of leaving it after a few years. This includes both young adults . . . and older retired adults" (Norman & Ganser, 2004, p. 130). Researchers provided differing percentages for attrition, yet most concurred that novice teachers are associated with steep attrition rates. Latham and Vogt (2007) found that Illinois public schools had a 58% exit rate after the first year of teaching (p. 157). Darling-Hammond (2003) stated 33% "of new teachers leave the profession within five years" (p. 7). Johnson and Birkeland (2003) studied 50 teachers in the first 3 years of teaching. Teacher attrition for the group was 22%, with 73% of the leavers citing job dissatisfaction as the cause for departure. Ingersoll (2003a) and Smith and Ingersoll (2004) noted attrition rates for novice teachers

within the first 5 years were between 40 and 50%. Shockley et al. (2006) reported that

retention rates for novice teachers after 4 years of service varied by district, with some as

low as 45% and others as high as 73%. That would mean attrition rates varied from 27 to

73%. The NCTAF (2007) reported,

> With the high rate of new teacher turnover, our education system is losing half of all teachers before they reach their peak effectiveness. Students, especially those in at-risk schools, are too often left with a passing parade of inexperienced teachers who leave *before* they become accomplished educators. (p. 4, italics in original)

Though not empirically based, Keller's (2007) research involved countering these

estimates, noting they were too high and misinterpreted. Keller followed up on six new

teachers from a prior interview experience. Of those six teachers, three were stayers, two

were movers, and one was a leaver. Although Keller did not state so, the results were

consistent with the 50% attrition rate countered. Keller's focus, however, was more on

the individual reasons for the numbers and that numbers alone could not provide an

accurate picture of attrition. In addition, Keller made the point that turnover rates

included movers and leavers not just leavers.

*Limited Teacher Effectiveness of Novice Teachers*

Many new teachers find preparation coursework inadequate for the realities of the

students, classroom, and school system (Darling-Hammond, 2000, 2003; Darling-

Hammond, Chung, & Frelow, 2002; Laczko-Kerr & Berliner, 2002; Michelli, 2006;

Munby, Russell, & Martin, 2001, p. 897). Gillis (2004) agreed that novice teachers

shifted quickly from "feelings of success" to "feelings of isolation, incompetence,

helplessness, and being overwhelmed" (p. 1). New teachers do not contribute as much to

student achievement in their first years of teaching as experienced teachers, and "some studies show that declines in student achievement are associated with an increase in the proportion of new, inexperienced teachers" (Public Policy Institute of California, 2006, abstract). Yet, teacher effectiveness increases with experience (NCTAF, 2007, p. 4). Therefore, an increase in new teacher retention increases novice experiences and effectiveness. And, the more experienced the teacher, the greater the student achievement.

*Supportive Structures for Success of Novice Teachers*

Novice teachers need smooth transitions from preservice expectations to first teaching positions. Smooth transitions require efforts from administration and faculty. "Without support and supervision, novice teachers often feel overwhelmed, disoriented, and frustrated when they find themselves totally on their own . . . in their classrooms" (Normore & Loughry, 2006, p. 25). Strong supportive structures may take the form of orientation, induction, mentoring, decreased teaching loads, professional and personal support groups, and ongoing professional development to provide "the support [novice teachers] need to succeed" (NCTAF, 2007, p. 7; see also Alvy, 2005). Comprehensive support structures positively impact novice teachers and can reduce turnover by more than 50% (Ingersoll & Kralik, 2004; Moir, 2006; NCTAF, 2007; Shockley et al., 2006; Smith & Ingersoll, 2004). Mentoring is especially helpful in increasing competence and enhancing teacher effectiveness (Moir, 2006; Neufeld & Roper, 2003; Smith & Ingersoll, 2004; Tillman, 2005).

*Retention of Veteran Teachers*

In addition to supporting new teachers for retention, efforts should include supporting and retaining veteran teachers (Alvy, 2005, p. 764). Darling-Hammond (2003) concurred that successful veteran teachers "constitute a valuable human resource for schools—one that needs to be treasured and supported" (p. 7). Alvy encouraged all parties to work at retention of veteran teachers in order to "benefit from the wisdom of age" (p. 765). Carroll (2006) noted, "Besides the recouping of huge public investments, retention provides an opportunity for teachers to become more proficient educators" (p. 156). The following paragraphs contain discussions of the importance of retaining veteran teachers for alleviating school staffing issues. Discussions include veteran teachers as knowledge experts, consumers, and creators and veteran teachers as student achievement lifters.

*Veteran Teachers as Knowledge Experts, Consumers, and Creators*

Veteran teachers have a variety of knowledge bases from which to draw in teaching. An experienced teacher may have gained great amounts of various types of knowledge to assist in being successful: "(a) knowledge of content, (b) knowledge of learners and learning, (c) knowledge of general pedagogy, (d) knowledge of curriculum, (e) knowledge of context, and (f) knowledge of self" (Munby et al., 2001, pp. 882). This rich knowledge can then be applied to varied and specific situations to benefit the learners. As experienced teachers continue teaching, their knowledge continues to develop and become more detailed and elaborate. Veteran teachers become knowledge expert consumers and then creators. "The overwhelming evidence of a decade of research

on teacher knowledge is that knowledge of teaching is acquired and developed by the

personal experience of teaching" (Munby et al., p. 897). Cole and Knowles (2000)

concurred, "Teaching is a form of inquiry and teachers learn from and through the

process of teaching. In other words, a teacher's practice is the site of both inquiry and

professional development" (p. 13). Cole and Knowles reviewed the complexities that a

veteran teacher possesses regarding knowledge:

> The act of teaching is informed by multiple forms of knowledge and is
> representative of a variety of ways of personal, professional, and contextual
> knowing. In the run of a normal day teachers draw on knowledge about subject
> matter of various kinds, as well as general and subject-specific pedagogical
> knowledge. They also look to research and relevant professional literature; rely on
> the wisdom of experience and practice; make use of personal learnings and
> intuitions; are mindful of how to operate within the bureaucratic structures of state
> or provincial departments of education, school boards and districts, individual
> schools and other educational institutions, and even local community and
> government bodies; negotiate complex personal interactions with students,
> parents, peers, and others; and situate themselves and their work within the larger
> historical, political, and social forces within local, regional, and national
> communities. (pp. 7-8)

With the complexity of knowledge inherent to the experienced teacher, multiple

strategies are available for use (Marzano, 2003). Mastery in several knowledge areas

creates an overall effective teacher (Stronge, 2002), one who is worth retaining.

*Veteran Teachers as Student Achievement Lifters*

A critical reason for retaining quality veteran teachers is the influence they have

on students. Teachers are the most important school resource and have a profound

influence on raising student achievement, learning, and educational quality (Darling-

Hammond, 2000; Gillis, 2004; Keller, 2007; Loeb & Reininger, 2004; Marzano, 2003;

Marzano, Pickering, & Pollock, 2001; Stronge, 2002). Keller explained that students who

have poor teachers are at an academic disadvantage, and students who have effective

teachers can make positive academic gains:

> Data show that poor and minority students assigned to ineffective teachers lag
> significantly behind their peers, a problem that compounds over time. By the
> same token, disadvantaged students can catch up if they have several effective
> teachers in a row. (p. 2)

Experienced teachers increase student achievement. Marzano noted that typically

students made about 34-percentile-point gains in an academic year regardless of teaching.

However, when a quality teacher was introduced, students gained about "53 percentage

points in student achievement over one year, whereas the least effective teachers

produced achievement gains of about 14 percentage points over one year" (p. 72). The

Public Policy Institute of California (2006) concurred, "Experienced teachers are more

effective at raising student test scores, on average, than are teachers in their first year or

two of teaching" (abstract). Therefore, the importance of retaining a quality veteran

teacher in each classroom to increase student academic achievement is critical, since a

novice teacher decreases the potential academic achievement of students.

<div align="center">Current Literature Directly Related to Veteran Teacher Retention</div>

A significant amount of literature exists on recruitment (Liu & Johnson, 2006;

Milanowski et al., 2007; Painter, Haladyna, & Hurwitz, 2007; Winter & Melloy, 2005).

Additionally, a large amount of literature exists on novice teacher needs (CoBabe, 2002;

Dillon, 2004; Justice & Espinoza, 2007; Portner, 2005; Protheroe, 2006; Rippon &

Martin, 2006). Also, there is a large amount of literature on attrition and retention of

novice teachers (Cohen, 2005; Doyle, 2004; Ingersoll & Kralik, 2004; Kelley, 2004;

Kern, 2004; Moir, 2003; Portner, 2005; Reed, Rueben, & Barbour, 2006; Smith &

Ingersoll, 2004; Wang, Odell, & Schwille, 2008; Wong, 2004). Yet, there is little

empirical literature on veteran teacher retention (Edwards, 2003; Loeb et al., 2005;

Marston et al., 2006; Miller, 2002; Robbins-LaVicka, 2007; Wiegand, 2003).

The following discussion reviews six research studies on veteran teacher retention

completed within the past 7 years. Comparisons of research findings centered on

retention factors. Then, requests for future research studies from the current literature are

addressed. Finally, a comprehensive review of literature will focus on specific retention

factors. Although not all veteran teachers are effective teachers, this review of the

literature will use the terms veteran teacher, experienced teacher, effective teacher,

quality teacher, competent teacher, and expert teacher synonymously with a caution to

the reader that some veteran teachers never attain effectiveness (Munby et al., 2001).

*Veteran Teacher Retention Research*

Six current research studies addressed veteran teacher retention. The studies are

outlined briefly and then discussed. Edwards (2003) interviewed 9 veteran teachers who

had been teaching for 10 to 20 years and 12 veteran teachers who had taught for 21 or

more years. Edwards' purpose was to

> identify the unique needs of veteran teachers and to examine how schools as
> organizations met the personal and professional needs of these veterans. In
> addition, the participants' perception of their administrations, both at the building
> and central office level, was explored. (p. 75)

Backgrounds of the teachers interviewed varied, with a mix of elementary, middle, and

high school teachers; inner city, affluent, and various socioeconomic background schools;

4 male and 17 female teachers; and 5 African Americans and 17 Caucasians.

Semistructured interview questions included,

What special needs and issues do you perceive as being unique to teachers with your level of experience? Describe what motivates you to continue working as a teacher, and describe where you believe you fall on a continuum from novice to master teacher. What forces propelled you to where you are today? (Edwards, p. 115)

Edwards found the veteran teachers were stressed more than they were at the beginning of their careers. Standardized testing, increased accountability, changing curriculum, focus of learning, uncertain salary, increased insurance costs, and family issues created the stress. Veteran teachers reported a lack in parent and student support. Edwards noted the veteran teachers needed recognition, appreciation, flexible schedules to pursue further education or leadership responsibilities, personal workspace, challenges, change, advancement opportunities, and relevant staff development with teacher input. Other needs included socialization with colleagues, physical stamina, and mental stamina. "Many said they had experienced discrimination because of their age. This discrimination was often blamed on a culture that tends to value the young over the old" (Edwards, p. 102). The veteran teachers mentioned that spiritual strength, knowledge of making a difference in children's lives, hobbies, outside interests, and supportive families helped them meet needs. "Mentoring was a positive experience in most situations. The teachers stated that they appreciated rewards—monetary, flexible time, and assistance in attending conferences" (Edwards, p. 102) as desired rewards. The veterans remarked that they had mastered how to budget their time, conserve physical energy, control emotions, keep attitudes positive, know how children learn, control a class, and understand subject matter.

Loeb et al. (2005) used data from a telephone survey of 1,071 teachers in 53 of the 58 California counties to examine teacher, student, and organizational factors related to teacher turnover. Although the focus was on all teachers, the sample was underrepresentative of less-experienced teachers. The study included more experienced and more educated teachers than the average California teacher. Questions regarding working conditions in the school, schedules, professional development, and teacher turnover were included. Loeb et al. found demographic factors such as race and poverty influenced organizational factors such as turnover and large portions of new teachers. Yet, when difficult working conditions were added into the equation, the influence of demographic factors lessened. Organizational factors included physical facilities, textbooks and technology, professional development, parental involvement, test requirements, multi-track schedules, large class sizes, and inadequate classroom space. Loeb et al. reported an increase in salaries decreased turnover by at least 75% and lowered the percentage of new teachers by 6.5 percentage points.

Marston et al. (2006) completed their study in one school district in Northern California serving 33 elementary schools and two medium-sized suburban school districts in eastern Pennsylvania serving 3,400 to 5,500 students. The sample was 100 elementary school teachers serving working-class and middle-class populations with socioeconomic status ranging from economically depressed to affluent. The students in California were 67.8% Caucasian, 15.6% Hispanic, 10.7% Asian American, and 4.7% African American. The students in Pennsylvania were approximately 88% Caucasian, 6% African American, 5% Asian American, and less than 1% Hispanic. Each teacher had 15 or more years of

experience teaching in the classroom and ranged from under 40 to over 60 years old, with the average being 40-49 years old. There were 7 men and 93 women. Data were collected using the Experienced Teacher Survey, which was designed to gather information about teachers' satisfaction and motivation for remaining in the classroom on a 4-point Likert-type scale. Professional, practical, and social factor questions were grouped on the survey. Some examples of the questions included, "I look forward to coming to work each day, If I had it to do over, I would choose the teaching profession again, I am satisfied with my job" (Marston et al., 2006, pp. 127-128). Marston et al. (2006) found that satisfaction working with students and fulfilling a professional commitment were powerful motivators for keeping teachers in the classroom. Social factors such as collegial and administrator interactions were also high factors in retention. Lifestyle experiences such as parenthood influenced teacher classroom work. Time-consuming challenges were a concern to the veteran teachers and their families.

Miller (2002) studied the relationships between novice, intermediate, and veteran teachers and indicated five factors for motivating retention. The factors were economic, social status, personal experience, time compatibility, and service-oriented. The stratified random sample included 675 certified teachers, kindergarten through 12th grade, from a midsize Midwestern public school district. There were 248 novice teachers with 1 to 5 years experience, 226 intermediate teachers with 6 to 15 years experience, and 201 veteran teachers with 16 to 30 years experience. Of the intermediate group, 36 were males and 138 were females. The veteran group had 32 males and 111 females. The mean age of the intermediate group was 41.7 and of the veteran group 49.96. In the

intermediate group, 168 teachers were White, 2 teachers were Black, 1 teacher was

Hispanic, and 2 teachers were other. The veteran group had 140 White teachers and 1

Black teacher. The marital status of the intermediate group was 20 single, 136 married,

15 divorced, and 2 widowed. Veteran marital status figures were 10 single, 109 married,

19 divorced, 3 separated, and 2 widowed. The majority of the participants had some

postgraduate work and master's degrees. Miller created and field tested a 5-point Likert-

type scale survey with 15 factor questions and several demographic questions such as

"The salary influences my decision to remain in the teaching profession, The positive

influence I can have on children/youth influences my decision to remain in the teaching

profession, Job security influences my decision to remain in the teaching profession" (pp.

121-122). Results showed that all three groups ranked the service-oriented factor first,

followed by personal experience. Veteran teachers ranked economic as third and time

compatibility as fourth. Intermediate teachers ranked time compatibility as third and

economic as fourth. Social status was ranked fifth by all groups (Miller, p. 105).

Robbins-LaVicka (2007) used Q-methodology to study factors that 17 Arkansas

veteran math and science teachers perceived as affecting their retention. Robbins-

LaVicka collected a concourse through literature review, developed a Q-sample of

statements that were reviewed by domain experts, and performed a pilot study for

"validating the selected statements as well as providing guidance for necessary

modifications" (p. 78). The factors selected were education and perception. Education

levels included academic training, mentoring, and pedagogical training; perception levels

included personal values, classroom experiences, and employment environment. Statements from the Q-sample included

> It's financially beneficial; My training and skills make me valuable to the classroom; I've spent this long teaching and there's no need to change; I'm not skilled enough to do anything but teach; My sector of math/science is not in demand so I have to teach; As a student, I had positive math/science experiences … (Robbins-LaVicka, p. 110)

Q-sorts took place by the participants, and the data was entered into a statistical analysis package PQ Method 2.11. "Correlation, factor analysis, and factor scores" (Robbins-LaVicka, 2007, p. 87) were completed to analyze the data. Findings indicated that "prior relationships with their teachers and mentors" (Robbins-LaVicka, p. 139) affected the retention of these 17 science and math teachers in Arkansas. In addition, "professional atmosphere, in multiple ways, affects classroom longevity" (Robbins-LaVicka, p. 140). Professional atmosphere included "professional development, classroom autonomy, and financial benefits" (Robbins-LaVicka, p. 141). Thus, math and science veteran teachers in this study perceived their retention as being influenced most by positive relationships with teachers and mentors and a positive professional atmosphere.

Wiegand (2003) investigated the reasons teachers remain at their schools. The participants were public school teachers with 6 or more years of teaching at the same lower socioeconomic elementary and secondary schools in a northern California county with 16 public school districts. Stratified random sampling and cluster sampling ensured the study included participants from lower socioeconomic and varied ethnicity schools with high teacher turnover. Three districts were chosen, representing kindergarten

through 12th grades. The districts had student populations of 12,000, 10,000, and 2,500. Of the total number of teachers, 119 were male, 218 were female, 240 were White, 41 did not designate, 22 were Hispanic, 17 were African American, 9 were multiple, 6 were Asian, 2 were American Indian or Alaskan Native, and 1 was Filipino. In addition, 129 were elementary teachers, 116 were middle-school teachers, and 95 were high-school teachers. Participants ranged in age from 23 to 68 years old. Wiegand developed and piloted a survey with 19 demographic questions and 28 survey questions in a 5-point Likert-type scale format. The survey included questions such as "I stay with my current school because it is close to my home", "I have become comfortable with working at this school", "There are more opportunities for professional growth than at other schools", and "The principal is supportive at this school" (pp. 184-186).

Wiegand (2003) found that the more experienced a teacher was, the more likely the teacher would return. "There was a higher rate of site veteran minority teachers planning to return to schools with over 50% minority student populations than at schools with high rates of white student populations" (Wiegand, p. 154). Teachers wanted to feel needed by their students, and returning veterans "showed a strong personal sense of connection to the schools. [Further], teachers who decided to stay at the school sites for more than six years had developed a family-like closeness to the school" (Wiegand, p. 155). Of site veterans planning to return, 84% stated they had not gone through a mentoring or induction process. Comfort was the highest rated factor by veterans who had 6 or more years of experience at the same school. Veterans were not as concerned about the principal or site leadership as beginning teachers, but collegial friendships were

an important factor in retention. Some veterans wrote in open-ended questions about "their anger over workloads, some showed callousness in their discussion of students' problems, and some demonstrated little tolerance for discipline issues" (p. 160). Wiegand asked why the frustrated teachers remained in teaching with such resentful feelings and determined that although the study was created to find information to increase retention, some teachers who are unhappy should not be retained.

These six studies taken together provide insights into veteran teacher retention patterns. The six studies are placed together in Table 3 for comparison. Discussion of the studies follows.

Table 3

*Research Studies Reviewed on Veteran Teacher Retention*

| Researcher | Location | Age/Experience in years | n | Method | Summary |
|---|---|---|---|---|---|
| Edwards (2003) | Knox County, Tennessee | Not given/10-20 | 21 | Qualitative, semi-structured interviews | Major finding: Veterans more stressed than at onset of career because of testing, accountability, and family obligation<br>Major strength: Personal, specific accounts<br>Major weakness: Small sample, not generalizable<br>Focus: Veteran needs, stressors, job satisfaction |
| Loeb et al. (2005) | California | Not given/16 mean | 1071 | Quantitative telephone survey | Major finding: Working conditions lessened effect of demographic student factors<br>Major strength: Large representative sample mirroring California schools<br>Major weakness: Teacher self-reporting<br>Focus: High-turnover schools, physical facility factors |

Table 3 (continued)

| Researcher | Location | Age/Experience in years | n | Method | Summary |
|---|---|---|---|---|---|
| Marston et al. (2006) | California and Pennsylvania | 40-49 mean/15 or more | 100 | Mixed survey interview | Major finding: Working with students and fulfilling professional commitment highest retention factors<br>Major strength: Two different geographic regions<br>Major weakness: Small districts; urban, suburban, and rural not given<br>Focus: Professional, practical, social factors |
| Miller (2002) | Midwestern district | 45.83 mean/6-15, 16-30 | 675 | Quantitative survey | Major finding: Service oriented factor ranked first, social status factor ranked last<br>Major strength: Large sample<br>Major weakness: Self-created survey tested on 20 teachers<br>Focus: Novice, intermediate, veteran; economic, social status, personal experience, time compatibility, service oriented factors |

Table 3 (continued)

| Researcher | Location | Age/Experience in years | *n* | Method | Summary |
|---|---|---|---|---|---|
| Robbins-LaVicka (2007) | Little Rock, Arkansas | Not given/more than 5 | 17 | Q-method | Major finding: Relationships with teachers and mentors and professional atmosphere affect teacher retention<br>Major strength: quantitative analysis of subjective data<br>Major weakness: not generalizable<br>Focus: educational factors – academic training, mentoring, pedagogical training; perceptions factors – personal values, classroom experiences, employment environment |
| Wiegand (2003) | Northern California | 23-68/6+ at same school | 337 | Quantitative survey | Major finding: The more experienced, the more likely to return<br>Major strength: Careful selection for urban, minority focus<br>Major weakness: Self-created survey only tested on 5 teachers<br>Focus: Lower socioeconomic schools |

*Veteran Teacher Retention Research Discussion*

*Location*

Three of the studies included teachers from California (Loeb et al., 2005; Marston et al., 2006; Wiegand, 2003). Although the districts were smaller than the district of the present study, the California districts had similar diverse students and teachers corresponding with the present urban southwestern location.

*Age*

The reported ages of participants in all studies were similar, which makes sense given a focus on experienced teachers. Because some of the studies included veteran teachers with more than 15 years of classroom experience, the study may have a lesser age range. The difference in age ranges would be an important distinction because the older the veteran teacher, the more focused on retirement the teacher becomes (Edwards, 2003; Miller, 2002). In this study, retirement thoughts from participants may not have been as significant since many of the participants were not be in the same age range as found in these studies.

*Experience in Years*

Four of the studies had veteran teachers with more than 15 years of teaching experience (Edwards, 2003; Loeb et al., 2005; Marston et al., 2006; Miller, 2002). The current study only included veteran teachers with 6-15 years of teaching experience in the district since their hire date from 1998 to 2002, although some had prior teaching experience before they were hired.

*Sample Size*

The smallest sample size was Robbins-LaVicka (2007) with 17 participants and Edwards (2003) with 21 participants. For a Q-method study, a small P-sample is appropriate (Stephenson, 1953; Watts & Stenner, 2005). For a qualitative grounded theory study, Creswell (1998) suggested 20-30 participants for interviews. Thus, Edwards' sample size was adequate based on the method. The largest sample size was Loeb et al. (2005) with 1,071. The careful selection of the sample size created a relevant comparison to the population. Wiegand (2003) also selected very specific parameters to obtain a relevant sample of urban veteran teachers. The present study had 49 participants.

*Method*

The studies represent one grounded theory qualitative study with semi-structured interviews (Edwards, 2003), one mixed-methods study with a survey and interviews (Marston et al., 2006), one Q-methodology study (Robbins-LaVicka, 2007), and three quantitative studies with survey instruments (Loeb et al., 2003; Miller, 2002; Wiegand, 2003). The current study involved using a Q-methodology similar to the Robbins-LaVicka study, yet the focus was on all classroom teachers instead of only math and science teachers. Watts and Stenner (2005) pointed out the importance of using Q-method for a study that has many complex issues with various subjective opinions and variables. Q-methodology can "show us the primary ways in which these themes are being interconnected or otherwise related by a group of participants" (Watts & Stenner, p. 70). Thompson (1998) concurred, "The Q-technique methods described here are well suited to studying education phenomena in which there are numerous ideals present in a

reality in which only a limited number of ends or means can be realistically pursued" (p. 20). Through Q-methodology, a researcher can take multiple and complex subjective ideas and quantify them for critical evaluation and increased understanding (Stephenson, 1953; Valenta & Wigger, 1997; Watts & Stenner). With Q-methodology, both empirical quantitative statistical analysis can occur along with the qualitative subjective realities of veteran teacher retention in the educational field. Q-methodology is "a unique combination of qualitative and quantitative research techniques that permits the systematic study of subjectivity" (Valenta & Wigger, p. 501).

The findings of the research studies are presented in the current study review of the literature format for ease of discussion. Demographic, preservice, service, school climate, system, empowerment, intellectual, and personal factors will be the framework used to compare and contrast the studies.

*Findings: Demographic Factors*

All of the studies had a mix of male and female respondents in the samples. Race and ethnicity of the veteran teachers closely followed typical percentages with a higher concentration of White teachers. No studies included information about where the veteran teachers attended high school. However, some teachers wrote on the surveys that the teaching positions were either the same as or similar to previously attended schools (Wiegand, 2003). Life experiences such as parenthood were also an influential factor for some of the veteran teachers (Marston et al., 2006). Loeb et al. (2005) reported, "Black teachers are six times more likely to report a turnover problem in their school" (p. 60). Wiegand (2003) noted the more experienced the educator, the higher the retention.

*Findings: Preservice Factors*

Robbins-LaVicka (2007) found "a long term goal of becoming a teacher and prior, positive experiences they had as students were significant in their decision to remain in the classroom" for one group of teachers (p. 118). A second group of teachers ranked their initial desire as influential without the prior experiences influencing retention (p. 123). Other studies did not mention a desire to go into teaching as a factor for retention. Wiegand (2003) mentioned preservice education. The teachers self-reported attending a California State University (57.7%), private colleges (18.5%), and other public colleges (11.2%), with other responses making up the difference. Robbins-LaVicka found that no teachers in the study "felt that their academic training assisted in their perception of success within the classroom" (p. 134). The other four studies did not provide preservice information.

Loeb et al. (2005) noted a higher level of education than the typical California teacher, with "38% having obtained a master's degree or higher as compared to 31% statewide" (p. 56). The higher level of education is understandable because the data included more experienced teachers than novice teachers. Wiegand (2003) reported 44.1% of respondents had earned a master or doctoral degree, and 55% had earned a bachelor degree. "Of the planning to return site veteran teachers, 54.8% reported their highest earned degree was a bachelor's, and the others master's" (Wiegand, p. 146). Miller's (2002) intermediate participants self-reported bachelor degrees ($n = 5$), some postgraduate work ($n = 41$), master's degrees ($n = 125$), specialist degree ($n = 2$), and doctorate ($n = 1$). Veteran participants self-reported bachelor degrees ($n = 3$), some

postgraduate work (*n* = 15), master's degrees (*n* = 119), specialist degrees (*n* = 4), and

doctorate (*n* = 2).

*Findings: Service Factors*

An emotional attachment to the students, an altruistic mission, contributing to

society, and assisting students in succeeding were common motivational themes

throughout the studies (Marston et al., 2006; Miller, 2002; Robbins-LaVicka, 2007;

Wiegand, 2003). Miller noted that novice, intermediate, and veteran teachers

"overwhelmingly ranked service-oriented as the most influential factor motivating them

to remain in teaching" (p. 111). Teachers enjoyed working with students and felt they had

a calling to teach. Edwards (2003) found the desire to make a difference in the lives of

the students was a high motivation for retention. Teachers stated they loved children.

Marston et al. validated the same findings, noting that satisfaction working with students

and fulfilling a professional mission were powerful motivators for keeping teachers in the

classroom. Teachers described their "balanced professional and personal relationships

with students" as important and fundamental with "mutual respect and trust" (p. 118) as

the keys. Wiegand mentioned teachers wanting to feel needed by their students. Even

though veteran teachers expressed the emotional attachment to teaching, they also knew

that it took hard work to "persevere" (p. 155), or remain at the schools. Wiegand noted

the desire to serve students might have been the reason minority teachers were more

likely to return to schools with a minority population over 50% than to predominantly

nonminority schools. Students were the "primary reasons for remaining in teaching"

(Marston et al., p. 119).

These six studies did not contain discussions of placement issues as part of service factors; however, Wiegand (2003) specifically established the research sample to be most representative of urban and higher minority schools. Wiegand found that veteran teachers at high poverty schools ranked comfort issues as lower and safety and principle issues as higher noting, "school poverty is influential in teachers choosing to stay for the teachers" (p. 160). Loeb et al. (2005) found that teachers were more optimistic when their placements were in majority non-Black, non-Latino, and majority Black schools compared to less optimistic teachers in mixed-majority Black and Latino schools. In addition, there were "substantially higher reported turnover problems in schools with higher proportions of Black, Latino, or low-income students" (p. 60). Higher reports of turnover and difficulty filling vacancies were also linked to "larger schools and those with multi-track schedules" (Loeb et al., p. 60) as well as "bigger classes, those that use nonclassroom space for classes, and those with noisy classrooms" (Loeb et al., p. 62). Loeb et al. also reported "that Black teachers and those with less experience are more likely to be in schools with a high fraction of 1st-year teachers" (p. 65) and that school conditions are a predictor of high concentrations of first year teachers.

Initial support through mentoring was not given to the majority of the teachers in Wiegand's (2003) study. Wiegand noted, "84% of the site veterans planning to return stated they had not been involved in a mentor or induction program when they began their teaching careers" (p. 156). Robbins-LaVicka (2007) found that math and science teachers were influenced either positively or negatively by mentors, yet the influence was not significant perhaps because "it did not play a significant role in their development as

teachers" (p. 138). The other four studies did not mention induction or mentoring received by the veteran teachers at the onset of their service.

*Findings: School Climate Factors*

Physical facility issues were a major part of the study by Loeb et al. (2003). When working conditions were added into the comparison of turnover, the effect of race and poverty causing dissatisfaction were lessened. "Classrooms in schools with more Black or Latino students [had] more facilities-related problems such as uncomfortable classroom temperatures; unclean bathrooms; and evidence of cockroaches, rats, or mice" (Loeb et al., p. 58). Loeb et al. concluded physical facility factors were indicative of high turnover more so than student demographics. Edwards (2003) found veteran teachers also wanted their own work space instead of sharing a classroom. Researchers of the other four studies did not mention physical facility issues.

Marston et al. (2006) reported veteran teachers were highly motivated to remain in teaching by positive collegial and administrative interactions.

> The teachers reported that they shared a common concern for the well-being of the students and school. Several teachers said that they viewed all personnel in the school as a family, valuing the contributions of the custodian, secretaries, and administrators, as well as those of their teacher colleagues. (p. 122)

Wiegand (2003) agreed that veteran teachers rated collegial interactions as influencing retention choices, specifically hard-working and supportive colleagues. Robbins-LaVicka (2007) also found that positive collegial support was an important retention factor for math and science teachers. Wiegand found, however, that veteran teachers did not rank the site administrator as important in decisions to return to the same school. The principal or leadership was more of a concern to beginning teachers than to veteran teachers.

Marston et al. (2006) recorded mixed results. "Having a good principal tended to be more important to California teachers than to Pennsylvania teachers with respect to their decision to stay in teaching" (Marston, et al., 2006, p. 122). Negative issues that were mentioned by the teachers regarding administrators included inconsistent student discipline, "lack of accountability, and low visibility in the classroom" (Marston et al., 2006, p. 123). Teachers mentioned good leadership roles included "setting the tone . . . of the school; and providing support for teachers in the form of positive feedback, good discipline, resources, professional growth opportunities, and competent staff . . . and serving as a buffer between the teachers, parents, and community" (Marston et al., 2006, p . 123). Robbins-LaVicka noted that the site administrator did not influence the decision of the math and science teachers to remain in the classroom.

Learning environments were not discussed directly; however, Wiegand (2003) noted that the veteran teachers had a "strong personal sense of connection to the schools" (p. 155). This comfort factor "was rated the highest on the attitudinal responses section of the survey by teachers planning to return with six or more years experience at the school" (Wiegand, p. 157). Those with bachelor's degrees ranked comfort higher than those with master's degrees. In addition, comfort was more important in remaining at the school than any other item. Wiegand also noted that in the open-ended portion of the survey, veteran teachers remarked that stability was important, linking stability to comfort as knowing "where they are, what they have to do, and where they are going" (p. 158).

Edwards (2003) noted that veteran teachers were concerned about decreased parent and student support. Specific concerns were about parents not supporting or being

responsible for their own children. Loeb et al. (2005) mentioned parental involvement as an indicator of turnover. However, Marston et al. (2006) found "teachers reported that the students respected their authority and viewed them as role models" (pp. 118-119).

*Findings: System Factors*

Edwards (2003) reported system factors as causing the most stress in veteran teachers. Standardized testing, increased accountability, changing curriculum, and focus of teaching were points of concern. Loeb et al. (2005) also noted appropriateness of testing requirements as an indicator of turnover. "Tests teachers are required to administer [were] the most negatively rated variable by the overall sample of California teachers" (Loeb et al., pp. 65-66). Marston et al. (2006) mirrored Edward's findings of challenges experienced teachers have with constant changes to the curriculum.

Compensation as a motivator for retention or turnover received the most volatile results across the studies. Miller (2002) found that salary had the least influence for novice, intermediate, and veteran teachers. Veteran teachers in the study were near retirement age, so for them retirement benefits were very influential in the compensation area. Job security was rated the highest overall in the economic factors for novice, intermediate, and veteran teachers combined. Yet in the comment section of the survey, many teachers wrote about poor pay. Edwards (2003) reported quite different results. Salaries and insurance were concerns for the teachers in Edwards' study. Uncertain salaries and increased insurance costs were mentioned as stressors for veteran teachers. Loeb et al. (2005) found that teachers in California schools with lower salaries reported higher rates of turnover. Marston et al. (2006) found that California teachers did not rate

salaries as high in importance as their Pennsylvania counterparts. "Pennsylvania teachers placed a higher value on . . . salary, job security, and a family friendly teaching schedule" (Marston et al., 2006, p. 120). Wiegand (2003) mentioned a comment from one teacher about remaining at the school because other school districts would not compensate for the full years of service. One teacher wrote about poor pay on the write in section of the survey. In the Robbins-LaVicka (2007) study, teachers remained "in the classroom because they found it financially beneficial" (p. 127). Yet, Robbins-LaVicka noted that teacher salaries were commensurate with other local salary structures.

*Findings: Empowerment and Intellectual Factors*

Efficacy, autonomy, career advancement, and professional development were mentioned throughout the studies. Edwards (2003) noted the veteran teachers desired more flexible schedules, advancement opportunities, and relevant staff development with teacher input. Mentoring others was a positive experience for most veteran teachers. California teachers "valued freedom and flexibility in the classroom" (Marston et al., 2006, p. 119). Loeb et al. (2005) reported that the "quality of professional development" (p. 65) was a predictor of retention. Edwards found "teachers voiced strong opinions about staff development. . . . [T]hey favored practical staff development with ideas that could be taken to the classroom and implemented immediately" (p. 78). Teacher choice in staff development options were the "most beneficial" (p. 78). Several respondents wrote on their surveys that they would like more input such as site-based management or additional choice in school and curriculum decisions (Wiegand, 2003). Robbins-LaVicka

(2007) also found that teachers persisted in teaching for personal fulfillment and because of classroom autonomy.

*Findings: Personal Factors*

Edwards (2003) documented that veteran teachers needed recognition, appreciation, and rewards for their work. "People need to feel they are valued if they are to continue working" (Wiegand, 2003, p. 155). One of the three groups in the Robbins-LaVicka study concurred, "Their choice to remain in the classroom stemmed from the level of appreciation they received from others" (p. 129). Edwards found that teachers "did not believe that the administrators esteemed the age and wisdom of their veteran teachers" (p. 94). Marston et al. (2006) noted that veteran teachers "wanted to have their opinions valued" (p. 123). Miller (2002) reported that social status was lower in influence than economic, personal experiences, time compatibility, or service-oriented factors. Veteran teachers ranked social status lower than novice teachers. Yet, some respondents were "compelled to add editorial comments regarding . . . lack of respect" (Miller, p. 113).

Time-consuming challenges were an issue for several veteran teachers (Edwards, 2003; Marston et al., 2006; Miller, 2002). Miller noted that veteran teachers appreciated summer months off and this factor influenced decisions to remain in teaching, but other time demands caused a drop in time being an influential factor for remaining. Unsolicited remarks on the survey included comments about long hours. During interviews, Marston et al. (2006) found that "elementary teachers discussed how time-consuming teaching was in their lives" (p. 123). Edwards reported teachers had no "time to plan, reflect, and

complete duties" (p. 78). Veteran teachers were given more assignments with no extra time allotments, and increasing workloads were of concern.

Family issues created stress; however, family, spiritual, outside interests, and hobbies provided support for handling the difficulties of teaching (Edwards, 2003). Marston et al. (2006) found that Pennsylvania teachers were motivated to remain by the compatibility of raising a family and teaching. Robbins-LaVicka (2007) concurred that family concerns influenced teachers "decision to remain in the classroom" (p. 136). Marston et al. reported that lifestyle experiences such as parenthood influenced veteran teachers in their classroom work and that teachers "reported being more compassionate and sensitive to students after having their own children" (Marston et al., 2006, p. 125). However, during interviews veteran teachers "admitted how hard teaching could be on family life" (Marston et al., 2006, p. 123). The teachers mentioned how family always seemed to come second to school demands.

*Research Basis for Methodology Used*

Broadening the base of respondents was a frequent request for further research. Edwards (2003) suggested extending the number of respondents and varying the locations as important further research to give an "adequate picture of all veteran teachers" (p. 108). Edwards and Marston et al. (2006) suggested conducting studies in other states. Marston et al. (2006) concurred with learning more about teachers from teachers and broadening the scope of teachers heard. Marston et al. (2006) suggested "listening to the voices of experienced teachers—their motivations for staying in the profession as well as their attitudes towards selected issues and values that define their

practice" (p. 126). Marston et al. (2006) also suggested broadening the information to include urban districts "where issues of race, ethnicity, and class are especially important" (p. 126) and middle school teachers. Robbins-LaVicka (2007) requested including the level of education and influence of gender on retention of veteran teachers. In addition, Robbins-LaVicka suggested including "perceptions of the influence the vacation schedule, work hours, and perceived flexibility of the daily schedule have on an individual's desire to remain" (p.146). Miller (2002) failed to suggest further research possibilities. Because the study was conducted in one school district in the Midwestern United States, further research could include broadening the scope of the study to include other geographic areas with varying demographic characteristics.

Edwards (2003) suggested cross-referencing data for demographics such as age, gender, and race as well as other factors. Loeb et al. (2005) also failed to request further possible studies. However, their focus on school climate and particularly physical facilities as higher indicators of turnover lessening student demographic factors seems worth researching further. Wiegand (2003) suggested expanding the survey to include questions about "personal connection, comfort, and working through problems" (p. 162) as well as time off from careers and "personal factors including family, hobbies, or spiritual support" (p. 162).

The current research study addressed several of these requests for further research. The study was conducted in a different state and geographical area than all six of the previous studies. The participants were experienced teachers from kindergarten through 12th grade, including those in urban settings. Demographic factors were included

as part of the final evaluations. Several other factors were included in building the Q method concourse such as preservice, service, school climate, system, empowerment, intellectual, and personal factors.

With the incredible amount of variables mentioned by these prior studies that may affect a teacher remaining in the classroom, using Q-methodology was an appropriate choice for assisting in greater understanding of what factors influence veteran teachers to remain in the classroom. Watts and Stenner (2005) mentioned the power of Q-methodology in taking numerous, complex ideas of a subjective nature and defining "ways in which these themes are being interconnected or otherwise related by a group of participants" (p. 70) in a quantitative format of analysis and a qualitative focus on the persons involved. Thompson (1998) suggested using Q-method in education "research projects, because the method addresses questions about person types, and educators and psychologists are often more interested in people than in variables" (p. 19).

In a thorough review of the literature, specific factors were found that may affect retention of veteran teachers. In an effort to create a universal Q-method concourse, the remainder of the literature review will focus on various factors which veteran teachers may use to explain retention: demographic, preservice, service, school climate, system, empowerment, intellectual, and personal.

<center>Retention Factors</center>

Researchers outlined specific factors that may relate to retention. The following review presents that information in brief, specific terms for possible factors that may

affect veteran teacher retention: demographic, preservice, service, school climate, system, empowerment, intellectual, and personal.

*Demographic Factors*

Demographic factors that may influence retention include age, gender, race and ethnicity. Also, location where the teacher attended high school may influence retention.

*Age*

Older beginning and older female teachers had higher retention rates (M. B. Allen, 2005; Alt & Henke, 2007*;* Feistritzer & Haar, 2005). The higher rate would indicate that the older the teacher is at entrance into the education field, the more likely that teacher will remain in the classroom.

*Gender*

Most of the teachers in the workforce are female and work at the elementary level (M. B. Allen, 2005; Alt & Henke, 2007, Feistritzer & Haar, 2005; Loeb & Reininger, 2004). Further, female teachers had higher attrition rates than male teachers (Guarino et al., 2006). However, "males were more likely to leave for a job outside of education" (Alt & Henke, p. vi). Weaver (2006) pointed out the lack of male teachers in the workforce by stating, "In the United States, only one out of every ten public school elementary teachers is male" (p. 172). Therefore, even though females have higher attrition rates, the majority of teachers remaining in education are female.

*Race and Ethnicity*

Most teachers are White, and White teachers have higher attrition rates (M. B. Allen, 2005; Guarino et al., 2006). There are fewer minority teachers. Weaver (2006)

noted, "For every nine hundred public school children, there is only one African American male teacher" (p. 172) and only 13% of the teacher workforce is minority. There was, though, "limited evidence that some alternative programs are successful in recruiting a constituency into teaching that is more diverse ethnically and in age than the profession as a whole" (M. B. Allen, p. x). Minority teachers are more likely "to remain in schools with higher proportions of minority students" (M. B. Allen, p. vi). "White teachers were more likely than Black teachers to plan to teach until retirement" (Alt & Henke, 2007, p. vi), and "White, Black, and Hispanic graduates" (Alt & Henke, p. 45) were more likely to be teaching in 2003 than Asian/Pacific Islander graduates. This would indicate that minority teachers who are in minority schools would have higher retention rates and White teachers who remain in education would be more likely to expect to teach to retirement than Black teachers.

*Location*

Teachers preferred to work in locations close to where they grew up or that were similar to where they grew up (Boyd et al., 2003; Darling-Hammond & Sykes, 2003; Loeb & Reininger, 2004, p. iii; Milanowski et al., 2007). Feistritzer and Haar (2005) noted, "Two out of three (66 percent) of public school teachers in 2005 [were] teaching within 150 miles of the place where they received their undergraduate degree" (p. 3) and that the undergraduate college was located "within 150 miles of where they were born" (p. 3). Thus, the more the school is similar to the school where the teacher grew up, the more likely the teacher will remain.

*Preservice Factors*

Preservice factors include the teacher's initial desire to go into teaching, level of education, preservice exam score, GPA, and education to teaching route. Cole and Knowles (2000) summarized the preservice factor effect on teachers:

> Who we are and come to be as teachers and teacher-educators is a reflection of a complex, ongoing process of interaction and interpretation of elements, conditions, opportunities, and events that take place throughout our lives in all realms of existence – the intellectual, physical, psychological, spiritual, political, and social. For us, making sense of prior and current life experiences in the context of the personal as it influences the "professional" is the essence of professional development. (pp. 14-15)

*Initial Desire*

Teachers who were initially very certain about teaching had greater retention rates (Cochran-Smith, 2004a; Feistritzer & Haar, 2005; Justice & Espinoza, 2007). Alt and Henke (2007), in a 10-year longitudinal study of 1992-1993 bachelor's degree recipients, found education majors were more likely to teach than other majors, even though several education majors chose not to teach. So, the teacher who was determined to go into teaching and the teacher who was an education major were more likely to remain in teaching.

*Education*

Alt and Henke (2007) noted, "Graduates whose highest earned degree in 2003 was a master's or a post-baccalaureate certificate became teachers in larger proportions than those who attained bachelor's degrees or graduate degrees beyond a master's" (p. 45). Although only one study, this would indicate that those who received a master's degree remain in teaching.

*Exam scores and GPA*. Some evidence exists that teachers who have high intellectual abilities as demonstrated by SAT and ACT scores are less likely to remain in teaching (M. B. Allen, 2005; Alt & Henke, 2007; Guarino et al., 2006; Loeb & Reininger, 2004). Alt and Henke noted,

> Graduates' scores on college entrance examinations . . . were inversely related to their subsequent likelihood of teaching in 2003. For example, 16 percent of graduates with college entrance examination (CEE) scores in the lowest 25 percent of the distribution were teaching in 2003, compared with 10 percent of those in the middle half of the score distribution and 6 percent of those with the highest scores. (p. v)

Conversely, if teachers had higher college GPAs, they were more likely to go into and remain in teaching (Alt & Henke). Also, teachers with high college ratings and test scores had students who excelled at a greater rate than teachers without high college ratings and test scores (Wayne & Youngs, 2003). However, Latham and Vogt (2007) found data that did not support the idea that "persistence in educational careers is predictable by" SAT and ACT scores and GPA (p. 158). Therefore, a teacher who has lower SAT and ACT scores but higher college GPAs will possibly be more likely to remain in teaching, and the higher the SAT or ACT scores, the more academic gains the students make.

*Education to teaching route.* Research differed in this area. Some studies stated that traditional routes produced teachers who were more likely to remain in teaching and feel better prepared (Alt & Henke, 2007; Darling-Hammond, et al., 2002). Professional development school evidence noted professional development graduates were more likely to remain in teaching (Latham & Vogt, 2007). Other reports stated the alternative routes produced teachers who were more likely to remain in teaching (M. B. Allen, 2005). Conversely, some reports indicated that alternate routes produced teachers who were less

likely to remain in teaching (Laczko-Kerr & Berliner, 2002; Michelli, 2006). The NCTAF (2003) noted that prepared teachers had a 12.6% attrition rate while unprepared teachers had a 28.1% attrition rate. In addition, teachers whose education route included student teaching had an 11.6% attrition rate while teachers who did no student teaching had a 25% attrition rate. "Teacher preparation, when done right, provides prospective teachers with the disposition and capacity for learning with the passage of time and on the job. It engenders school renewal" (Zimpher & Howey, 2005, p. 267).

Some studies indicated teachers who are trained through more traditional routes are more effective academically with students (Darling-Hammond, 2000, 2003; Laczko-Kerr & Berliner, 2002). "High school students clearly learn more from teachers with certification in mathematics, degrees related to mathematics, and coursework related to mathematics" (Wayne & Youngs, 2003, p. 107). Thus, teachers who have undergone traditional or alternative teaching routes may or may not remain in the classroom, yet those who have followed more traditional routes produce better academic gains for students.

*Service Factors*

The service factors include emotional connections through serving society, seeing young people learn and grow, and providing equity for students. Service factors also include initial placement through teaching the subject, working with young people, and initial support connections through induction and mentoring.

*Emotional Connections*

Teacher passion for working with students, loving and caring for students, and influencing future possibilities was evident in the literature. "Many enter teaching for idealistic reasons—they love children, they love learning, they imagine a world that is a better and more just place, and they want all children to have the chance to live and work productively in a democratic society" (Cochran-Smith, 2004a, p. 391). Others agreed that students were the main reason for remaining in teaching, and teachers wanted to influence students in both academic and social ways (Feistritzer & Haar, 2005; Guarino et al., 2006; Marston et al., 2004; Nieto, 2003). Nieto noted, "Love is a blend of confidence, faith, and admiration for students, and an appreciation for the strengths they bring with them" (p. 391). Hargreaves (2003) identified teaching as "an emotional practice of engagement with learning" (p. 117).

> Love is the basis for the practice of servant leadership. Servant leadership requires that one loves the purposes, goals, and intents that define the leader's work and that of the school. Servant leadership requires that one loves those who are being served. (Sergiovanni, 2005, p. 100)

In fact, Sergiovanni noted that a caring relationship can increase academic achievement of students. Future aspirations for students were evident in the literature.

> Hope is at the very essence of teaching, and it was evident in many ways in the work of these teachers. They had hope in the promise of public education and in their students; faith in their abilities as teachers. (Nieto, 2003, p. 392)

Hargreaves noted the importance of bringing back "teaching as a sacred vocation that pursues a compelling social mission" (p. 5). So, teachers who are passionate and caring about the students are more likely to remain in teaching.

Anger and equity propelled teachers to remain in teaching as support systems for their students. Sergiovanni (2005) reported, "The heartbeat of a school is strongest when commitment strategies are the center and control strategies are at the periphery" (p. 36). Commitment strategies increase when anger and equity are evident. Nieto (2003) found,

> Teachers were angry at the injustices their students have to endure, including racism and poverty; they were impatient with the arbitrariness of 'the system'; they were baffled at school policies made by people far removed from the daily realities of classroom life; they were indignant at being treated as if they were children. (p. 393)

Sergiovanni concurred by stating that duty brings an increase in motivation.

> What we believe in and what we feel obligated to do because of moral commitments gets done, gets done well, gets done when no one is looking, and gets done even though it might not be extrinsically or intrinsically satisfying to do it. (p. 11)

Thus, teachers who want to provide more equitable circumstances for the students are more likely to remain in teaching.

*Placement Connections*

Various researchers found the initial placement into the teaching field had a direct effect on retention or attrition (M. B. Allen, 2005; Feistritzer & Haar, 2005; Guarino et al., 2006; Ingersoll, 2003b, 2002; Loeb & Reininger, 2004; Liu & Johnson, 2006; Painter et al., 2007; Rippon & Martin, 2006). Retention was higher among elementary teachers (M. B. Allen). Also, teachers working in their subject of expertise or certification were less likely to leave and more likely to have job satisfaction and positive effects on student learning (M. B. Allen; Ingersoll, 2002a, 2003b, 2008; Loeb & Reininger). Attrition was higher among science and math teachers and secondary teachers (M. B. Allen; Guarino et al.). Feistritzer and Haar noted 50% of high school teachers expected not to be teaching

by 2010. Turnover was also higher in schools with low-income, high-minority, low-performing, and high-misbehavior students (M. B. Allen; Guarino et al.; Ingersoll, 2002b, 2003a; Loeb & Reininger). Attrition was also higher in urban schools (Guarino et al.; Ingersoll, 2002b). Therefore, a teacher placed at the elementary level or in the field of expertise and at a nonurban school with higher income, higher performing, lower minority, and lower misbehavior from students would more likely remain in teaching.

*Initial Support Connections*

Research supported induction and mentoring as increasing teacher retention (M. B. Allen, 2005; Carroll, 2006; Guarino et al., 2006; Moir, 2006; Smith & Ingersoll, 2004, Wang et al., 2008). Smith and Ingersoll found that teachers without mentoring and induction programs for support had 41% attrition rates. In addition, Moir (2006) noted that mentoring of new teachers increased student academic achievement, and veteran teachers also benefited from mentoring novice teachers. Thus, a teacher who received a comprehensive induction and mentoring program would be more likely to stay and have positive influence on student academics.

*School Climate Factors*

The school climate factors include physical facilities and materials, administration, colleague interaction, learning environment, parent support, and student characteristics. Several studies mentioned the importance of school climate factors in general and the need for attention to overall working conditions (M. B. Allen, 2005; Carroll, 2006; Darling-Hammond, 2003; Hammerness, 2006; Hanushek et al., 2004a, 2004b; Ingersoll, 2004; Killian & Baker, 2006; Leithwood, 2002; Marzano, 2003;

Milanowski et al., 2007; Milner & Hoy, 2003; Schneider, 2003; Schonfeld, 1991).

According to Robertson (2006), It is important to create "safe, engaging, and productive

learning environments for teachers and students" (p. 178). Chance and Chance (2002)

defined school climate factors as follows:

> Climate is defined as the total environment of the school as is the result of the interrelationships between the physical, social, structural, and cultural components of the school. Open school climates, characterized by high levels of communication among teachers and administrators and by teachers who are highly supported by administration and generally committed to the goals of the school, are more conducive to change and manifest leadership that promotes educational effectiveness. (p. 27)

*Physical Facilities and Materials*

Sergiovanni (2005) noted the importance of providing teachers with a "respectful

place to work" (p. 107) and with "decent working conditions" (p. 107). Positive working

conditions were an important element for retention, and in some studies more so than

salaries (M. B. Allen, 2005; Hanushek et al., 2004a, 2004b; Loeb & Reininger, 2004).

Schneider (2003), in a study of Chicago and Washington school facilities, found,

> Among teachers who graded their facilities with a C or below, more than 40 percent said that poor conditions have led them to consider changing schools and 30 percent [were] thinking about leaving teaching. The numbers [were] even higher for teachers who [had] experienced health effects related to poor facilities: about 50 percent of Chicago teachers and 65 percent of Washington teachers [considered] changing schools, and about 40 percent of Chicago and Washington teachers [were] thinking about leaving the profession entirely. (p. 3)

Schneider concluded,

> School facilities have a direct affect on teaching and learning. Poor school conditions make it more difficult for teachers to deliver an adequate education to their students, adversely affect teachers' health, and increase the likelihood that teachers will leave their school and the teaching profession. (p. 4)

Examples of poor facility conditions included the school being too large, few or no science classrooms, classrooms that were the wrong size, and nonclassroom spaces such as hallways and closets being used as classrooms. Other researchers reported the need for resources (Johnson & Birkeland, 2003; Nichols, 2002). Therefore, retention increases with adequate physical facilities and materials.

*Administration*

Teachers who received positive support from an administrator were more likely to be successful and remain (L. Allen, 2006; M. B. Allen, 2005; Blasé & Blasé, 2002; Guarino et al., 2006, Ingersoll, 2001, 2002a; Johnson & Birkeland, 2003; Marston et al., 2004; Milanowski et al. 2007; Weaver, 2006). Loeb and Reininger (2004) noted, "Principals strongly affect the working conditions in a school; some principals are able to create environments that teachers find favorable, regardless of the characteristics of the student body or limited resources" (p. iii). L. Allen (2006) suggested principals have an open door policy and be visible throughout the school as well as "value teachers as humans" (p. 122). However, Marston et al. (2004) found that elementary teachers more so than high school teachers rated having a good principal as very important. Thus, a positive and supportive principal aids in teacher retention, especially for elementary teachers.

*Colleague Interaction*

Positive, collaborative interactions with colleagues created an appropriate environment for improvement (Leithwood, 2002; Sergiovanni, 2005).

> Authentic collaboration among teachers, about the improvement of teaching and learning, for example, provides opportunities for the dissemination of hard-won

technical knowledge from one teacher to another. It also provides occasions for joint problem solving around individual teacher dilemmas as well as tasks shared by teachers, such as curriculum development tasks. (Leithwood, p. 99)

Marston et al. (2004) found, though, that colleague relationships "tended to be more important to elementary teachers than high school teachers" (p. 484). So, retention may increase with positive, collaborative colleague relationships, especially for elementary teachers.

*Learning Environment.*

The learning environment was an important element in satisfaction of teachers (Alt & Henke, 2007; Cochran-Smith, 2004a, 2004b; T. Smith & Rowley, 2005). The NCTAF (2007) noted,

Teachers should be inducted into a genuine learning organization. In such an organization, the expectation is that all members of the school's community share responsibility for each other's continued growth and success, as well as for the success of all students in the school. (p. 8)

Hargreaves (2003) outlined the reasons learning communities were so important:

One of the most powerful resources that people in almost any organization have for learning and improving is one another. Knowledge economies depend on collective intelligence and social capital, including ways of sharing and developing knowledge among fellow professionals. Sharing ideas and expertise, providing moral support when dealing with new and difficult challenges, discussing complex individual cases together – this is the essence of strong collegiality and the basis of effective professional communities. Strong professional communities in teaching are not only emotionally rewarding for teachers; they are also directly responsible for improving standards of students learning and achievement results. They are key components of knowledge-based organizations. (p. 109)

T. Smith and Rowley (2005) found collaborative environments bring about increased participation in professional development with commitment to change, which has been linked to retention.

> When people gather together to share ideas and commit themselves to those ideas their relationships change—they have made promises to each other and are likely to feel morally obliged to keep their promises. Communities embody civic virtue—the willingness of people to sacrifice their self-interest on behalf of the common good. (Sergiovanni, 2005, p. 32)

Thus, a strong learning community where there is shared responsibility, commitment, and collaborative learning assists in satisfying teachers and may be linked to retention.

*Parent Support*

Johnson and Birkeland (2003) found that teachers were "unsettled because of lack of parent involvement" (p. 589). With a concern about parent involvement, teacher retention may diminish. Marzano (2003) outlined three parenting styles that affect student behaviors. The authoritative style with consistent consequences and active interest in the activities of children was most beneficial for increasing student academics and behavior at school. If parents are appropriately involved in the lives of their children, retention of teachers may increase.

*Student Characteristics*

Lack of student motivation, poor student achievement, and student discipline problems were reasons for leaving given by teachers (Ingersoll, 2002b; Johnson & Birkeland, 2003; Killian & Baker, 2006; Winter & Melloy, 2005). Ingersoll (2001) added that good student discipline reduced turnover, which would indicate that the more motivated and disciplined the students are, the higher the teacher retention rates will be.

### *System Factors*

System factors include policies created at the school, district, state, and national level. Also, accountability and expectations shouldered by the teachers are part of system

factors. System factors include financial compensation including salary, benefits, and retirement. Finally, respect and professionalism toward the teacher are system factors.

*Policies*

Hargreaves (2003) stated that too many policy changes caused teacher attrition. "In the face of relentless standardization, we will see, an exhausted and demoralized teaching force turn to resignation and early retirement, creating massive problems of recruitment and retention" (p. 82). Valli and Buese (2007) concurred,

> Teachers' work has increased, intensified, and expanded in response to federal, state, and local policies aimed at raising student achievement. . . . We find that rapid-fire, high-stakes policy directives promote an environment in which teachers are asked to relate to their students differently, enact pedagogies that are often at odds with their vision of best practice, and experience high levels of stress. The summative effect of too many policy demands coming too fast often resulted in teacher discouragement, role ambiguity, and superficial responses to administrative goals. If policy expectations for teacher role change had benefited students, one could argue that the toll on teachers, although unfortunate, was for the greater good of students. But that did not seem to be the case. (p. 520).

According to Jones and Egley (2007), "Teachers struggle with the problem of wanting to teach for understanding, yet feeling limited in their ability to do so within the context of a high-stakes environment that measures achievement only through standardized test scores" (p. 247). Moir (2006) agreed and noted that policy changes were felt most heavily on the poorest students. The "poorest kids in this country are getting shortchanged. Part of the reason is that they are getting scripted, robotic instruction that gives them double and triple doses of what didn't work on the first day" (p. 161). Hargreaves (2003) also noted that standards-based reform policies further disadvantaged students already at risk, "where seemingly common and neutral standards that actually favor middle-class students exclude and further marginalize the rest" (p. 90). When

policies are at odds with what teachers know benefit students, dissatisfaction in teachers

occurs and an increase in attrition may result. Hargreaves reported teachers felt

government policies were an attack on democratic life and public education. Winter and

Melloy (2005) mentioned the difficulty of recruiting teachers because of system

mandates. Feistritzer and Haar (2005) reported 44% of teachers nationwide are

dissatisfied with tests of student achievement. Therefore, the research indicated that

government policies, and particularly focusing on high-stakes testing, might affect

teacher retention.

*Accountability*

Hargreaves (2003) indicated that for teachers to be held accountable, they needed

to be empowered to make the decisions establishing that accountability.

> Accountability is related to empowerment and responsibility. It is not likely that
> someone is empowered or has real responsibility unless that person is also
> accountable. Accountability provides a healthy measure of excitement, challenge,
> and importance that raises the stakes just enough so that achievement means
> something. (Sergiovanni, 2005, p. 129)

Yet with government policies dictating what to teach, how to teach, and what the

accountability measures will be, teacher accountability is meaningless.

> Standardization is the great friend of mediocrity but the enemy of imagination and
> excellence. Furthermore, legislated learning and bureaucratic teaching make it
> impossible to hold individual teachers and principals and individual school
> communities accountable. They can only be held accountable for results when
> they have the responsibility for deciding the means and the responsibility for
> helping to shape the ends. (Hargreaves, p. 10)

Valli and Buese (2007) mentioned that teachers in at-risk schools take on additional

burdens simply because they are in an at-risk school. "Although too many fast-paced

policy demands can affect teachers' roles in all schools, the demands that come from

high-stakes accountability disproportionately affect teachers in at-risk schools, typically

those with higher rates of poor, minority, and ELL students" (Valli & Buese, p. 553).

Thus, when dictated by policy demands instead of teachers as decision makers,

accountability creates an unfair situation for teachers, possibly adding to dissatisfaction,

which might lead to attrition.

*Expectations*

When there are too many teacher expectations applied too fast without

compensation for teacher learning and ownership, confusion and decreased teaching

effectiveness were results.

> The sheer onslaught of role change expectations over a few short years simply
> overwhelmed most teachers. Because teachers and principals felt so pressed to
> implement so many changes, they seemed unable to prioritize instructional
> improvement efforts according to the needs of their students or themselves. (Valli
> & Buese, 2007, p. 553)

Hargreaves (2003) found similar results: "Teachers experienced more work, more

regulation of their work, and more distractions from what they regarded to be core to

their work (teaching children) by the bureaucratic and form-filling burdens of

administrative decentralization" (p. 13). Therefore, too many changes in teacher

expectations may cause dissatisfaction in teaching and teacher attrition.

*Financial Compensation*

Compensation is a factor in teacher retention. The higher the pay, the more likely

teachers remain; higher salaries in other districts and within the community were causes

for teacher attrition (M. B. Allen, 2005; Alt & Henke, 2007; Guarino et al., 2006;

Ingersoll, 2002b; NCTAF, 2003, p. 134). Feistritzer (2005) noted teachers were "least

satisfied with their salary" (p. 3). Some teachers mentioned an inability to pay bills or purchase a home (Olsen & Anderson, 2007). Michelli (2006) found that "whenever teachers' salaries are compared with those from other fields with similar educational preparation, we find that teachers are paid at a lower level" (p. 145). Financial compensation, then, is a factor in teacher retention.

*Respect and Professionalism*

A lack of respect and professionalism toward teachers may affect teacher retention. Michelli (2006) suggested treating teaching as a complex profession with respect and professionalism from the public. Weaver (2006) agreed that teachers needed respect. Hargreaves (2003) provided a summary of the lack of respect and professionalism from a public that supposedly values education.

> The knowledge society finds it difficult to make teaching a true learning profession. It craves higher standards of learning and teaching. Yet it has also subjected teachers to public attacks, eroded their autonomy of judgment and conditions of work; created epidemics of standardization and over-regulation; and provoked tidal waves of resignation and early retirement, crises of recruitment, and shortages of eager and able educational leaders. The very profession that is so often said to be of vital importance for the knowledge economy is the one that too many groups have devalued, more and more people want to leave, less and less want to join, and very few are interested in leading. This is more than a paradox. It is a crisis of disturbing proportions. (Hargreaves, p. 10)

Therefore, a lack of respect and professionalism from the system and the public may decrease teacher retention.

*Empowerment and Intellectual Factors*

Empowerment and intellectual factors include decision making and efficacy, autonomy, career advancement, and differentiated professional development.

Empowering teachers contributes to ownership, increased commitment, and increased motivation to work. When teachers feel like pawns rather than players who can control their own behavior, they are likely to respond with reduced commitment, mechanical behavior, indifference, and even dissatisfaction and alienation. (Sergiovanni, 2005, p. 129)

*Decision Making and Efficacy*

Teachers who have more decision-making power have less attrition (Ingersoll, 2003a). Slye (2000) found that an increase in teacher empowerment increased teacher satisfaction. Ingersoll (2001) also concluded that faculty input into decision making increased retention. An increase in decision making also brought about an increase in professional development participation (T. Smith & Rowley, 2005, p. 148). When teachers participated in decision making, professional learning increased, collective problem solving was encouraged, and meaningful responsibility and accountability from decision makers increased (Leithwood, 2002, p. 100). Efficacy also increases teacher retention (Darling-Hammond et al., 2002; Milanowski et al., 2007; Torres et al., 2004). Sergiovanni (2005) noted teachers needed "more discretion to make better decisions for their students" (p. 107). Thus, when decision making increases, retention may also increase, and the more a teacher is involved with personal effectiveness in teaching, the higher the retention rates.

*Autonomy*

Higher levels of autonomy were associated with greater retention and job satisfaction (M. B. Allen, 2005; Guarino et al., 2006; Ingersoll, 2003a; Marston et al., 2004; Milanowski et al., 2007). "Educators are frustrated over what they may perceive as lack of autonomy for what and how they will teach and evaluate their students" (Earley &

Ross, 2006, p. 7). Nieto (2003) found that teachers felt standardization of schools was "limiting the kinds of pedagogical approaches teachers use as well as constricting the curriculum" (p. 387). Weaver (2006) noted standardization was limiting teacher creativity. Olsen and Anderson (2007) found that teachers frequently mentioned "a general desire for increased autonomy" (p. 22). Hargreaves (2003) noted that when teachers were robbed of independence in teaching, dissatisfaction occurred: "Teachers with over-examined professional lives complain[ed] of eroded autonomy, lost creativity, restricted flexibility, and constrained capacity to exercise their professional judgment" (p. 92). An increase in autonomy promoted an increase in teacher retention.

*Career Advancement*

Many teachers requested opportunities for career advancement (Alt & Henke, 2007; Nieto, 2003; Olsen & Anderson, 2007). Olsen and Anderson found that many teachers wanted to pursue additional education work outside of the urban classroom to meet personal professional goals. These teachers moving up the career ladder would be considered movers and thus be part of teacher attrition. Olsen and Anderson noted,

> More teachers will be retained if there are opportunities for them to adopt new roles as career urban educators still connected to classrooms: taking sabbaticals, sharing teaching duties while taking on additional education work, mentoring new teachers in the schools where they teach, working as administrators who teach part-time. (p. 25)

Thus, teacher retention may increase if additional career advancement opportunities exist.

*Differentiated Professional Development*

Professional development increases teacher quality and retention (Reichardt, 2001; T. Smith & Rowley, 2005; Valli & Hawley, 2002). Reichardt noted, "Professional

learning during service provides a tool both for improving the quality of teachers who are already in the classroom and for keeping them in the classroom" (p. 7). T. Smith and Rowley concurred that participation in professional development positively affected teacher retention.

> If we expect all students to attain new and more challenging learning goals, goals that emphasize sustained and rigorous inquiry, teachers must also have opportunities to learn new material, new ways of thinking and teaching, better ways of connecting with an increasingly diverse range of students, and ways to construct and use appropriate curriculum and assessments. (Valli & Hawley, p. 93)

Hargreaves (2003) agreed that professional development was important in teacher effectiveness and retention, yet he stressed the importance of self choice in the learning process. "Today's teachers therefore need to be committed to and continually engaged in pursuing, upgrading, self-monitoring, and reviewing their own professional learning" (p. 24). Hargreaves' findings indicated,

> The reform process had made a mockery of teachers' professional learning by reducing formal professional development time, by creating conditions that gave teachers no time to understand or reflect on what was asked of them, and by replacing intellectual creativity with fearful compliance. (Hargreaves, p. 109)

Therefore, teacher effectiveness and retention increased when teachers were personally involved in professional development.

<div align="center">*Personal Factors*</div>

Personal factors include recognition, time, and lifestyle choices. Recognition for the teacher from colleagues, department chairs, administration, and district personnel is important. Time involvement is a critical factor for ongoing learning and completing teaching and other administrative assignments successfully. Finally, lifestyle choices

such as needing time out to have a baby, taking care of family, or meeting the needs of

elderly parents are personal factors.

*Recognition*

Alvy (2005) described the importance of recognition for retention.

"Administrators, department chairs, grade-level leaders, and teaching colleagues need to

support values, traditions, and norms that honor veteran teachers" (Alvy, p. 765).

*Time*

Time issues showed up frequently in the literature. Teachers noted how time

consuming teaching was (Marston et al., 2004, p. 486). In addition, teachers and

researchers mentioned how time was a precious commodity needed for teachers to

engage fully in teaching. "Teachers need time to reflect on student learning needs, time to

work with colleagues, time to observe, time to plan and collaborate, time to reflect on

what is working, and time to take a step back and evaluate" (NCTAF, 2003, p. 130).

Nieto (2003) found many teachers were fully involved in time-consuming teaching tasks.

> They also take part in curriculum development, both individual and collaborative,
> and they do research in their classrooms. They attend conferences and are active
> in professional organizations. They keep journals and engage in other kinds of
> writing as well. They also mentor new colleagues, present workshops for their
> colleagues, and visit other schools. They think of teaching as research; an
> exploration to expand the curriculum and their own teaching practices, an
> examination of new and interesting ways of presenting material, and a constant
> search to include students meaningfully in their own education. They refuse to
> become stale in motivation, methods, or subject matter. In a word, these teachers
> are constantly updating their craft and their knowledge. (Nieto, p. 393)

Time was mentioned as a reason for attrition (Olsen & Anderson, 2007). Olsen

and Anderson noted several of the teachers in their study "did not expect to be able to

keep up this intense work pace for long, especially because they were no longer young and single" (p. 22). Hence, time is a factor that affects teacher retention.

*Lifestyle*

Lifestyles may affect teacher retention. Some attrition of young, female teachers is because of childbearing and rearing (Alt & Henke, 2007). In addition, females were more likely to leave teaching for family-related reasons (M. B. Allen, 2005; Alt & Henke; Ingersoll, 2002b). Ingersoll (2001, 2002b) also mentioned health problems and family moves as lifestyle reasons for attrition. Marston et al. (2004) noted how "hard teaching can be on . . . families and family life" (pp. 486-487) of teachers, yet teachers also spoke about how teaching was integrated with families. Thus, lifestyle choices may affect teacher retention.

<div align="center">Summary</div>

School staffing issues include economic and organization challenges. Economic challenges can place a heavy financial burden on the district perpetually seeking to recruit, hire, train, and process teachers. Organization challenges of constant teacher turnover include stymied school reform, debilitated school climate, decreased teacher quality, and decreased student academic achievement. Quality teachers are needed, yet the revolving door of teachers moving and leaving the profession counters educational effectiveness. Costs for attrition, both financial and emotional, are high for all involved and hardest on schools already at risk. Retention of novice teachers is important, and improvements have been made in meeting novice needs. However, retention of veteran

teachers has received little attention. Veteran teachers are typically more effective, so a focus on the needs of veteran teachers for their retention is warranted.

Studies focused on veteran teacher retention outlined various factors for increasing teacher retention including lessening teacher stress, allowing teachers the opportunity to fulfill a professional commitment, enhancing the physical working conditions, and capitalizing on mentoring relationships. Other literature reviewed supported findings from the studies and added additional possible veteran teacher retention factors. Those factors included demographic, preservice, service, school climate, system, empowerment, intellectual, and personal. A review of literature regarding each factor provided more detailed information for possible veteran teacher retention. For example, school climate factors included appropriate physical facilities and materials, consistent administrative support, positive colleague interactions, collaborative learning environments, responsible parent support, and disciplined students. Researchers supported increased teacher retention with certain factors functioning properly.

Chapter 3 includes an outline of the quantitative and qualitative designs considered. Complex issues, theoretical perspective testing, subjective ideas, patterns of understanding for groups, and social change are presented as the justifications for selecting the Q-methodology design. A history and overview of the Q-method is given followed by the details of the method as used in the present study. Demographic details of the 49 participants in the sample are presented. Finally, the methods used to determine what factors veteran teachers stated affected their retention are specified.

CHAPTER 3: RESEARCH METHOD

Attrition of classroom teachers remains high across the United States, especially in schools with low-income, low-achievement, and high-minority student populations (Alt & Henke, 2007; Barnes et al., 2007; Guarino et al., 2006; Hanushek et al., 2001, 2004a). High turnover results in elevated economic costs, disrupted organizational costs, and a reduced amount of money spent in the classroom (NCTAF, 2007; Shockley et al., 2006). For these reasons, it is important to discover factors that influence the retention of experienced teachers, especially because the longer a teacher remains satisfied with teaching, the more likely the teacher will stay in the classroom and the more effective the teacher will become (Cole & Knowles, 2000; Marzano, 2003; Munby et al., 2001; Stronge, 2002). The purpose of this Q-methodology study was to explore the factors veteran teachers in a large public school district in the southwestern region of the United States use to explain their retention.

Chapter 3 includes a discussion of research methods that addressed the groupings of veteran teachers and the factors the veteran teachers indicated impacted their retention. The theoretical perspective was that teachers will chose to remain in the classroom if economic and organizational structures are appealing. According to the literature review, the following ideas may be instrumental in the retention of veteran teachers: demographics, preservice, service, school climate, system, empowerment, intellectual, personal. The ideas were then allocated within a concourse of two factors including personal and structural, with three levels within each factor. The personal factor levels

included serving students, fitting lifestyle, and professional fulfillment. The structural

factor levels included physical structures, emotional structures, and systemic structures.

The main research question for the study was as follows: What factors do veteran

teachers use to explain their retention? The sub-questions included the following:

1. What effect do personal factor levels such as serving students, fitting lifestyle,

and professional fulfillment have on teacher retention?

2. What effect do structural factor levels such as physical, emotional, and

systemic structures have on teacher retention?

The research questions served to influence the Q-methodology study to gain an increased

understanding of the possible relationships among veteran teachers and the factors the

veteran teachers indicated affected their retention.

Although Q-methodology includes the use of both quantitative and qualitative

methods in its design, the layout of chapter 3 uses a more quantitative format. Chapter 3

includes a presentation of the research design, setting and sample selection,

instrumentation and materials, data analysis procedures, and ethical considerations. The

research design includes quantitative designs considered, qualitative designs considered,

justification for the design chosen, history of Q-methodology, and an overview of the Q-

method.

<div align="center">Research Design</div>

The research design was a Q-methodology study. Although the study involved

considering several research designs, including those from both quantitative and

qualitative perspectives, no design fully satisfied the theoretical framework of

discovering possible economic and organizational factors that influence teachers to remain in the classroom or the purpose of exploring numerous factors veteran teachers may use to explain their retention.

*Quantitative Designs Considered*

The research was begun using a postpositivism paradigm reflecting the idea that causes determine effects (Creswell, 2003). Postpositivists "operate from the assumption that, because of the limitations of human inquiry, the inherent order of the universe can never be known completely" (Hatch, 2002, p. 14) and "reality can be approximated but never fully apprehended" (Hatch, p. 14). Postpositivism also includes reductionistic thinking to "reduce the ideas into a small, discrete set of ideas to test, such as the variables that constitute hypotheses and research questions" (Creswell, 2003, p. 7). The epistemology of a postpositivist is to "capture close approximations of reality" (Hatch, p. 14) with an objective, not subjective, focus on empirical data. A postpositivist researcher becomes a data collection instrument with "disciplined research techniques" (Hatch, p. 14). Simon (2006) summarized, "In quantitative research rigor is reflected in narrowness, conciseness, and objectivity and leads to rigid adherence to research designs and precise statistical analyses" (p. 37). Quantitative research is both deductive, testing theory, and inductive, "investigating a sample to generalize to a population" (Simon, p. 37).

With these quantitative requirements in mind, an independent-measures research design using a *t* test was considered. An independent-measures *t* test "involves separate and independent samples and makes a comparison between two groups of individuals" (Gravetter & Wallnau, 2005, p. 247). The independent-measures research design using a *t*

test was potentially appropriate to compare teachers who left the district with teachers who remained in the district, yet too many factors for consideration and comparison existed. Records were unavailable for teachers who left the district.

An analysis of variance was a possible choice because it could assist in comparing various factors with regard to the remaining veteran teachers (Gravetter & Wallnau, 2005). However, too many possible retention factors existed and the theoretical idea was to explore factors veteran teachers considered most economically and organizationally advantageous to remain in teaching, rather than to compare one group of veteran teachers against another.

A correlational study involves a search for "co-relationships between two or more variables to better understand the conditions and events encountered and with the hope of making predictions about the future" (Simon, 2006, p. 125). A correlational study was considered using a survey instrument. Simon posited a survey is frequently used in research "for gathering data on population variables" (p. 71). Because the current study had many variables, a survey structure was considered. According to Creswell (2003), "A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population" (p. 153). A quantitative description was also desirable. Fink (2006) explained, "Surveys are used to collect information from or about people to describe, compare, or explain their knowledge, feelings, values, and behavior" (p. 1). A correlational design with a survey instrument met both the theoretical perspective of finding economic and organizational reasons teachers indicated kept them in teaching and the purpose of the study to better understand

from the veteran teachers' viewpoint the factors influencing their retention. The study

involved the creation of a survey structure with over 50 possible factors that might

function to influence veteran teacher retention. The complexity of possible factors to

include on the survey and correlate post survey administration proved unwieldy.

Another consideration was factor analysis, where many variables are reduced to a

few factors "by combining variables that are moderately or highly correlated with one

another. Factor analysis is often used in survey research to see if a long series of

questions can be grouped into shorter sets of questions" (Simon, 2006, p. 127). The

relationships between variables can undergo analysis to present a few variables that

"contain the essential information in a larger set of observed variables. The researcher

seeks to obtain a smaller number of factors to account for approximately the same

amount of information as the larger set of original observations" (Simon, p. 27). With the

complexity and sheer number of possible variables to include, data reduction proved

difficult using R-methodology.

*Qualitative Designs Considered*

Although the author maintains a postpositive perspective, the thought of

considering a qualitative tradition was appealing because the purpose of the study

incorporated highly subjective and diverse perspectives from veteran teachers. Hatch

(2002) explained qualitative research occurs in natural settings with the "lived

experiences of real people" (p. 6) and "how individuals make sense of their everyday

lives" (pp. 6-7). According to Hatch, "Qualitative research seeks to understand the world

from the perspectives of those living in it" (p. 7). The use of phenomenology, grounded

study, and ethnography designs were possible choices for the study.

A phenomenology "seeks to understand the meaning of experiences of

individuals" (Creswell, 1998, p. 38) about a phenomenon. A phenomenological approach

was appealing because it would function as a way to explore veteran teachers'

experiences and reasons for remaining in teaching through the use of interviews. The

complexities and number of possible factors contributing to veteran teacher retention

would necessitate numerous and extensive interviews with a handful of people in an

effort to cover enough depth, detail, vividness, nuance, and richness (Rubin & Rubin,

2005). Such interviews would help to define factors regarding why a few teachers remain

in teaching and perhaps support prior research, yet the purpose of discovering patterns of

reasons veteran teachers give for their retention would not be accomplished. The

coupling of interviews with observations would be problematic because it is difficult to

observe the reasons teachers remain in teaching in the classroom setting. Hatch (2002)

contended, "Observation is a cornerstone of qualitative data collection" (p. 90), yet

observation would not serve to uncover the retention factors of veteran teachers.

A grounded theory study serves as a way to generate ideas and construct a theory

(Creswell, 1998). In addition to the difficulties outlined previously in conducting a

phenomenological study, various theories for teacher attrition already exist, such as those

outlined in the theoretical perspectives section of the current study.  A grounded study

would result in data that might support research but not necessarily generate theory. The

use of a grounded theory methodology did not receive further consideration.

The intent behind the structure of an ethnography design is to "study the behavior of a culture-sharing group" (Creswell, 1998, p. 40). Veteran teachers could comprise the group and the study could include an exploration of their shared cultural behaviors that constitute reasons for remaining in teaching. The ethnography design relies on the use of "documents, participant observation, and interviewing" (Creswell, 1998, p. 34), as well as artifacts. Observation and interviewing forms of data collection are problematic for the purpose of the current study and do not yield results that would provide appropriate answers to the research question. Therefore, the use of qualitative designs did not receive further consideration.

*Justification for Q-Methodology Design*

The research design selected was a Q-methodology study. Q-methodology is "a strategy linking qualitative and quantitative analyses" (McKeown & Thomas, 1988, p. 36). The Q-method includes an association with both quantitative studies "because of its reliance on factor analysis" (M. Brown, 2004, p. 1) and qualitative studies because of its subjectivity (Valenta & Wigger, 1997; Watts & Stenner, 2005). Q-methodology best suits the purpose of a study of factors that veteran teachers use to explain their retention, as well as the theoretical perspective of economic and organizational issues that may affect teacher retention in the following ways. The current study includes the incorporation of complex issues, several theoretical perspectives exist in the current literature, subjective ideas of veteran teachers are integral to the purpose of the study, patterns of understanding for groups could result in greater insights, and an exploration of veteran

teacher perceptions may bring about social change to better train, recruit, and retain teachers.

*Complex Issues*

Stephenson (1953) proposed Q-methodology included the "analysis of complex, multivariate situations, that is in which several possible effects and the like are at issue" (p. 30). The idea of multiple factors affecting the choice of teachers to remain in the classroom is complex, subjectively debatable with no right or wrong answers, and multifaceted, as demonstrated by the extensive review of the literature. Q-methodology serves as a way to explore highly complex subjective perceptions as viewed by the group of participants (M. Brown, 2004; Redburn, 1975; Thompson, 1998; Watts & Stenner, 2005). Redburn contended the primary strength of the Q-method was revealing "logical or psycho-logical relationships that would be blotted out by treatment of each subject or set of subjects as a cluster of scale scores" (p. 769), which is "the primary strength of Q when dealing with the impacts of ambiguous, complex symbolic exchanges" (Redburn, p. 769). Barata (2007**)** concurred, "Q allows for a social constructionist understanding of the world that can entertain diverse and nonlinear perspectives on the same issue" (p. 203) and "efficiently and meaningfully summarize large amounts of data" (Barata, p. 203). Q-methodology can function to address the complex and varied factors affecting veteran teacher retention.

*Theoretical Perspective Testing*

Stephenson (1953) proposed the testing of theoretical perspectives of human behavior through the use of Q-methodology. McKeown and Thomas (1988) concurred

that Q-methodology includes an emphasis on theoretical testing. Stephenson posited

theoretical facts found with one person in a study "are likely to be found for other persons

as well if the theory we use and our operations are on the right lines" (p. 22). Stephenson

purported no distinction should exist between the quantitative methods of testing theory

with huge samples and testing theory with a few participants. Either way, the theory is

tested and more information about the theory results. According to Stephenson, "All

psychometry and the techniques based on individual differences purport to deal with

general propositions and to test theories as general propositions. Instead, experiments can

be conducted, if at all, only in relation to singular propositions" (p. 42). Stephenson

further noted, "The proof of a theory then becomes a matter of how many and varied are

the different singular propositional sets it assists us to devise and to understand" (p. 76).

In other words, testing of a theory can occur through the use of even a singular case,

which can then serve to support the theory or reject the theory by proving it wrong.

Because multiple theories involve the retention of veteran teachers, Q-methodology

serves to embrace the exploration of the theories.

*Subjective Ideas*

Stephenson (1953) proposed Q-methodology as a way to empirically study the

subjective behavior of a human. Q-methodology was for

> Those psychologists who believe that one's yearnings, wishes, ruminations,
> reflections, wanting, inclinations, fancies, dreams, remembrances, and a thousand
> other "inner" forms of behavior are of crucial importance; and we believe that
> most of these matters can now be brought into testable propositional form. They
> can be dealt with as objectively as any psychologist ever dealt with a rat.
> (Stephenson, p. 100)

McKeown and Thomas (1988) concurred by indicating Q-methodology was a design whereby human subjectivity could be put to rigorous scientific study. Other researchers contended Q-methodology included an emphasis on "the systematic study of human subjectivity" (McKeown & Thomas, p. 9), the subjective "how and why people think the way they do" (M. Brown, 2004, p. 1; Valenta & Wigger, 1997, p. 502), human "subjective expressions and viewpoints" (Watts & Stenner, 2005, p. 69), and participant "subjective structures, attitudes, and perspectives" (S. R. Brown, 1996, p. 565). The purpose of the present study was to determine the subjective reasons veteran teachers indicated affected their retention. The subjective, yet rigorous, design of Q-methodology is appropriate as a means of quantifying a qualitative topic.

*Patterns of Understanding for Groups*

Q-methodology includes the use of typologies or "patterns of thought within individuals and among groups" (M. Brown, 2004, p. 17). The groups demonstrate varying patterns of thoughts, some similar, some diverse (Valenta & Wigger, 1997). According to DeMol and Buysse (2008), "Q methodology is well designated to explore diversity in understandings in a systematic way" (p. 363). The patterns are subjective opinions, and Q-methodology serves to identify the "patterns and clusters of opinions that surface within a group" (M. Brown, 2004, p. 16). In the current study, the groups were veteran teachers and their similar and dissimilar patterns of thought regarding retention. Q-methodology includes the identification of "groups with conflicting values, preferences, and opinions to better understand the differences" (M. Brown, 2004, p. 17). Redburn (1975) noted the traditional method designs were not appropriate for

anticipating a variety of group directions or discovering "a range of participant responses" (p. 777). Barata (2007) concurred, "[Q-methodology reveals] perspectives that are not easily accessible by other methods" (p. 204). Q-methodology, however, can help to identify the "person types" (Thompson, 1998, p. 19) or "prototypes of people" (Thompson, p. 7) that are not identifiable through the use of other quantitative and qualitative methods. Watts and Stenner (2005) posited Q-methodology shows "us the particular combinations or configurations of themes which are preferred by the participant group" (p. 70). With this group typology information, "potential areas for research or action" are identifiable (M. Brown, 2004, p. 17). The use of Q-methodology satisfied the desire to find patterns among veteran classroom teachers to answer the research questions in the current study.

*Social Change*

A better understanding of what veteran teachers indicate keeps them teaching in the classroom is of interest only if it can produce information to assist preservice institutions; site administrators; and local, state, and national policy makers in social change efforts that serve to positively influence economic and organizational benefits to retain teachers in the classroom. An increased understanding of why teachers remain in classrooms can result in program adjustments or policy modifications that function to mutually benefit all involved (M. Brown, 2004; Redburn, 1975). M. Brown (2004) noted Q-methodology was useful for "targeting and tailoring system features, training needs, . . . tailoring system performance measures and metrics" (p. 2), and providing increased security. Redburn also mentioned the importance of Q-methodology in program

evaluation, movement monitoring, specifying various viewpoints, and identifying

attitudes. Redburn further noted the structure of Q-methodology would aid in program

modification for varying groups approaching "one set of objectives for certain individuals

and quite another set for others" (p. 777). The use of Q-methodology is a good match for

the purpose of the study through coverage of complex issues, theoretical perspective

testing, subjective ideas in an objective design, patterns of understanding for groups, and

social change.

*History of Q-Methodology*

William Stephenson is the inventor of Q-methodology (M. Brown, 2004; S. R.

Brown, 1996, 1998; Watts & Stenner, 2005). Stephenson was a British physicist and

psychologist who studied and worked with "Spearman, the inventor of factor analysis"

(S. R. Brown, 1998, p. 1). According to S. R. Brown (1998), "Spearman once referred to

his protégé as the most creative statistician in psychology" (p. 1). Stephenson (1953)

understood the controversies "associated with factor analysis of R-technique and gestalt

psychology" (p. 12) and began "writing about the possibilities of person correlations"

(VandenBosch, 2001, p. 10) around 1935. Publication of his work occurred about the

same time as but independent of the work of Sir Godfrey Thomson, a factorist, who also

proposed the possibilities of correlating people rather than tests. According to

VandenBosch, "Thomson named this technique 'Q' to distinguish the technique from the

traditional R technique" (p. 10). Prior to both Thomson and Stephenson, Sir Cyril Burt

also "proposed factoring people over a series of tests" (VandenBosch, p. 10). Yet,

Stephenson continued to pursue the idea.

Stephenson merged Sir R. A. Fisher's small-sample theory and variance analysis experimental design for representing psychological theories with a reformulation of Spearman's factor analysis to correlate persons "instead of tests" (Stephenson, 1953, p. 9). Thus, "Stephenson switched the method from giving a large number of people a small number of tests to giving a small number of people a large number of tests" (Stephenson, p. 11). Stephenson contended when factor testing included the use of large quantities of individuals, the quality of the study decreased and the true details of human behavior were lost among the huge numbers. At its first introduction, Stephenson's Q-methodology met with criticism from peers, yet the use of the method has more recently resulted in supporters and users in many areas of psychology and the social sciences (S. R. Brown, 1998; Watts & Stenner, 2005).

*Overview of Q-Methodology*

The Q-method includes seven phases: building a concourse, selecting a Q-sample, running a pilot study, selecting a P-sample, gathering the Q-sorts, completing data analysis, and providing interpretation of the data. Chapter 3 includes an overview of each section. Descriptions for the current study of building the concourse, selecting the Q-sample, and running the pilot will appear under the instrumentation and materials section. P-sample information for the current study will appear under the setting and sample selection heading. Q-sort information for the current study will appear under the data collection and procedures heading. Finally, data analysis and providing interpretation of the data for the current study will appear under the data analysis heading.

*Building a Concourse*

A concourse is a set of subjective universal statements, or assertions, about a topic (Stephenson, 1953) that can be neither proved nor disproved scientifically (S. R. Brown, 1998). A concourse consists of subjective opinions. According to S. R. Brown (1998), "Concourse is the common coinage of societies large and small, and is designed to cover everything from community gossip and public opinion to the esoteric discussions of scientists and philosophers" (p. 6). A concourse could be opinionated statements, artwork, music, or any other construct from the human mind. The concourse could also comprise "art objects, descriptions of behavior, personality traits" (Stephenson, p. 63), "and even musical selections" (Valenta & Wigger, 1997, p. 502). The current study included the use of statements. The statements could derive from theory (Stephenson), "television and radio talk shows" (McKeown & Thomas, 1988), interviews, "editorials, publications, essays, or any other sources germane to the issue" (Valenta & Wigger, p. 502). M. Brown (2004) indicated, "The primary point is that the collection of items in the concourse should reflect the range of perceptions on a particular topic of interest" (p. 4). The concourse in the current study derived from a review of the literature.

*Selecting a Q-Sample*

According to Valenta and Wigger (1997), "From the concourse, a subset of statements is selected to form the Q-sample" (p. 502). The Q-sample should include anywhere from 20 to 100 statements and cover the comprehensiveness of the concourse (M. Brown, 2004; S. R. Brown, 1996; McKeown & Thomas, 1988; Valenta & Wigger; Watts & Stenner, 2005). Because the "focus is on capturing a wide array of perceptions,

the rigor that is often associated with identifying the target sample is redirected toward

identifying the [Q-sample]" (M. Brown, 2004, p. 4). Various methods exist for the

selection of a Q-sample: structured, unstructured, naturalistic, or ready-made (McKeown

& Thomas; Stephenson, 1953). Structured samples are planned and prepared in a

systematic fashion and function to promote the use of theory testing (McKeown &

Thomas; Stephenson). Unstructured samples are chosen at random without ensuring

coverage of all issues of the topic. McKeown and Thomas contended, "The risk with

unstructured samples is that some issue components will be under or oversampled" (p.

28). Naturalistic samples derive directly from the source, such as statements made during

interviews. Ready-made samples are not naturalistic and can be either quasi-naturalistic,

standardized, or hybrid. Quasi-naturalistic Q-samples derive from prior research, surveys,

or other sources beside direct contact with individuals. Standardized Q-samples include

the incorporation of conventional rating scales from previous surveys, checklists, or

research. Hybrid Q-samples include a combination of both naturalistic and ready-made

methods (McKeown & Thomas). The current study included the use of structured, ready-

made, and quasi-naturalistic methods to create the Q-sample.

   To ensure the Q-sample was "comprehensive, balanced, and representative" of the

topic (M. Brown, 2004, p. 4), domain experts reviewed the statements in the Q-sample

(M. Brown, 2004; Valenta & Wigger, 1997). Each individual statement appeared on a

separate card for Q-sorting (McKeown & Thomas, 1988; Stephenson, 1953; Valenta &

Wigger).

*Running the Pilot Study*

Upon creation of the Q-sample, the use of a pilot test served to ensure validity of the items (M. Brown, 2004; Valenta & Wigger 1997); reduce "semantic duplication" (Watts & Stenner, 2005, p. 87); and provide clarity, balance, and comprehensiveness of the issue (Watts & Stenner). The pilot tests usually do not include the use of actual sorts, but rather a reading of the statements for "general comments on the construction of the Q-set" (Watts & Stenner, p. 87). The pilot test in the current study the pilot test included the use of specific directions of checking the statements for semantics, clarity, balance, and comprehensiveness.

*Selecting a P-Sample*

The P-sample (or person-sample or P-set) comprised the selected group of participants categorizing the Q-sample statements. In Q-methodology, the variables are the people performing the Q-sort, rather than the items they are sorting (McKeown & Thomas, 1988; Watts & Stenner, 2005). The purpose of Q-methodology is to find patterns of thought between people (M. Brown, 2004; Valenta & Wigger, 1997). People "significantly associated with a given factor, therefore, are assumed to share a common perspective" (McKeown & Thomas, p. 17). McKeown and Thomas explained the rationale:

> It is not the purpose of Q-method to explore idiosyncrasy at the expense of general principles. Subjectivity and idiosyncrasy are not functional equivalents. Just as subjectivity is amenable to empirical analysis, so too can small P-sets and single case studies sustain meaningful generalizations about behavioral dynamics. The purpose is to study intensively the self-referent perspectives of particular individuals in order to understand the lawful nature of human behavior. Specific sampling principles and techniques important in mainstream behavioral research

are not necessarily relevant to person sampling in Q given the contrasting research orientations and purposes. (p. 36)

Because the variables are people performing the Q-sort, the number of respondents remains at a minimum (McKeown & Thomas, 1998). Watts and Stenner (2005) noted, "Large numbers of participants in a Q methodological context can itself be problematic. Indeed, such an approach can easily negate many of the subtle nuances, complexities, and hence many of the essential qualities contained in the data" (p. 79). The goal in Q-methodology is to find patterns of thought, not how many people think a particular way (Valenta & Wigger, 1997). A small P-sample is "psychometrically acceptable since the observational perspective is the respondent's own" (McKeown & Thomas, p. 45). Stephenson (1953) contended the P-sample could be as small as 1 participant. Other researchers provided varying P-sample size suggestions, from a 1:1 correspondence of people to statements (Watts & Stenner) to a 1:2 correspondence of people to statements (S. R. Brown, 1998), noting, however, that the numbers are arbitrary (Watts & Stenner). McKeown and Thomas indicated the P-sample size simply "depends upon the nature and purpose of the study" (p. 37). The P-sample size is typically small (Valenta & Wigger; Watts & Stenner). The current study included 49 participants from a large school district in the southwest United States who had taught in the classroom and district for more than 5 years and less than 15 years. The teachers were hired between 1998 and 2002.

The selection of P-samples can be theoretical and random, with extensive or intensive considerations in mind (McKeown & Thomas, 1988). The theoretical considerations perspective includes the selection of individuals who know the subject

well and fit "the goals of the study" (McKeown & Thomas, p. 36). Random selection is

convenience sampling, including the selection of individuals who are available and

willing to participate. Extensive considerations entail striving to locate a variety of person

types to explore the possible patterns in the population; intensive considerations entail

searching for a few select persons to study with a variety of conditions or for increased

understanding of a certain person type (McKeown & Thomas). In the current study,

theoretical considerations were used to select diverse veterans with 5 to 15 years of

experience teaching in the classroom in a large school district in the southwestern United

States. Demographic data and teaching location served to indicate diversity. Random

sampling and extensive selection criteria were used to construct the P-sample.

*Gathering the Q-Sorts*

The use of the Q-sort resulted in the quantitative data for the study. Upon

selection of the Q-sample and P-sample, the Q-sample statements were placed on

separate, numbered cards for sorting. Individual participants sorted the statements under a

certain condition of instruction on a continuum from negative disagree to positive agree

determined by the participant's own personal significance of the item. In this way,

participants themselves defined what was most important, of value, or meaningful and

what was least important, of lesser value, or less meaningful.

Participants complete the Q-sort "according to their own subjective understanding

of each statement's meaning. Sorting statements in this way allow participants to express

similar attitudes about particular issues, but to hold different perspectives about the topic

as a whole" (Barata, 2007, p. 203). According to Redburn (1975), "The relative rankings

of statements often give insight into the structure as well as the content of an individual's

thinking" (p. 765). S. R. Brown (1998) agreed that the subjective ideas of each individual

are "rendered operational through Q-technique" (p. 13). The common unit of

measurement for each participant is the ranking of the items. For example, the items the

participant places under the -4 marker on a -4 to +4 distribution scale represent items that

are less significant than the items under any other markers (McKeown & Thomas, 1998).

The condition of instruction is the statement that serves to direct sorting of the Q-

sample items. The condition of instruction "can be simple requests for agreement and

disagreement or operationalizations of theoretical constructs" (McKeown & Thomas,

1988, p. 30). The condition of instruction in the current study was the ranking of the

items influential in retention of the veteran teacher completing the Q-sort from least

significant to most significant.

Stephenson (1953) noted the power of this strategy: "[In Q-methodology], all the

statements of a sample have to be compared with one another, and judgments must be

made about each statement in the context of all the others and the conditions of

instruction" (p. 59). Watts and Stenner (2005) contended Q-methodology "invites

participants to engage in the unusual task of relating (in a complex and in-depth way)

with a set of prepared items" (p. 71). Barata (2007) posited Q-methodology "is

particularly appropriate for the study of attitudes because it forces participants to engage

more deeply with the items" (p. 203).

The Q-sort process includes seven steps: first read, right +4 and left -4, right +3

and left +3, right +2 and left -2, right +1 and left -1, neutral, and recording distribution

and demographic information. During the first read, participants read all of the cards and place them into three piles: "to the right are those with which the subject agrees, to the left those with which he or she disagrees, and in the middle those about which he or she is either neutral, ambivalent, or uncertain" (McKeown & Thomas, 1998, p. 31). During the right +4 and left -4 step, participants select two cards from the agree pile "that are most like his or her position (or, the number of items called for) and places them vertically" (McKeown & Thomas, pp. 32-33) under the most significant +4 category. Then participants select two cards from the disagree pile that most closely align with their opinion and place them vertically under the least significant -4 category. During the right +3 and left +3 step, participants select three cards that correspond most with their opinion for that measurement for the positive and then for the negative. During the right +2 and left -2, participants select four cards that correspond most with their opinion for each side of the measurement. During the right +1 and left -1 step, participants select five cards that correspond most with their opinion for the positive and negative measurement. The remaining eight cards go in the neutral position. McKeown and Thomas indicated, "The reason for having subjects work back and forth is to help them think anew the significance of each item in relation to the others" (p. 33). Participants can change cards to various categories at any time during the sort based on their value of the statements to arrive at the most accurate picture of "his or her personal point of view" (McKeown & Thomas, p. 33). The number of categories and the number of cards within each category vary according to the number of Q-sample statements.

The final step of recording distribution and demographic information includes placing the sort card numbers into the distribution chart (see Figure 1) and requesting additional demographic data or open-ended comments (McKeown & Thomas, 1998; Watts & Stenner, 2005). The process involved writing the demographic data, sorting the cards, filling out the Q-sort answer sheet or calling numbers for the researcher to place on the answer sheet, and writing open-ended comments as desired (see Figure 1 and Appendix F).

This method of Q-sorting is "conventional-sorting in a forced-choice distribution format" (VandenBosch, 2001, p. 11). Objections exist to the forced-choice format and alternative methods made available (McKeown & Thomas, 1988; Thompson, 1998; Watts & Stenner, 2005). Objections to forced-choice distribution indicated the sorting task was unwieldy, the continuum had too many categories, and the participant was forced to place the cards in a certain fashion, violating "the principles of operant subjectivity" (McKeown & Thomas, p. 34). Watts and Stenner (2005) noted, "Distribution effects are virtually nil. This means that the chosen distribution actually makes no noticeable contribution to the factors which emerge from a particular study" (p. 77). Watts and Stenner further noted the forced-choice distribution format "is convenient for their participants" (p. 77). Other studies indicated confirmation that no matter the format, the data indicated similar final results (McKeown & Thomas). Nonetheless, alternative formats exist to combat the perceived loss of operant subjectivity. Mediated ranking includes the rank ordering of each category and unnumbered graphic scale ranking indicates a straight line distribution without any categories (Thompson;

VandenBosch). The P-sample in the current study included the use of the forced-choice distribution format.

*Completing Data Analysis*

After the P-sample completes the Q-sorts, the next step involves entering the data into a statistical software package such as SPSS or PQ Method 2.11 and then placing the data into an array matrix. Each person's array correlates with the other arrays. Factor analysis takes place next, followed by varimax rotation.

*Array matrix*. The creation of the array matrix involves placing each person's Q-sort "into an array of numerical data" (Valenta & Wigger, 1997, p. 503). The normally distributed and standard score person arrays are then correlated with each other (M. Brown, 2004; Stephenson, 1953). The final "resulting correlation matrix shows which participants sorted the statements into similar orders" (Valenta & Wigger, p. 503) through the use of "Pearson's r, Spearman's rho, or other commonly employed nonparametric measures of association" (M. Brown, 2004, p. 5).

| Least significant | | | | Neutral | | | | Most significant | |
|---|---|---|---|---|---|---|---|---|---|
| -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 | Ranks |
| Two | Three | Four | Five | Eight | Five | Four | Three | Two | No. of cards |
| | | | | | | | | | |
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*Figure 1*. Q-sort forced distribution chart.

*Factor analysis*. Stephenson (1953) preferred factor analysis for obtaining

information in Q-methodology because it resulted in more operant subjectivity. Factor

analysis aligns more clearly with the participants' original meanings, "preserving the

operations involved in ordering the statements" (S. R. Brown, 1998, p. 8). McKeown and

Thomas (1988) contended, "Factor analysis is fundamental to Q-methodology since it

comprises the statistical means by which subjects . . . group themselves—through the

process of Q-sorting" (p. 50). The next step in Q-methodology is to complete a factor

analysis on individuals. According to Valenta and Wigger (1997), "People correlate to

others with similar opinions based on their Q-sorts" (p. 503). Factor analysis serves to

identify "clusters of individuals who have performed similarly" (Redburn, 1975, p. 768).

The correlated clusters result in a factor loading, indicating the extent of the similarity or

difference in correlation to the composite factor array (Barata, 2007; M. Brown, 2004;

McKeown & Thomas; Valenta & Wigger). Watts and Stenner (2005) noted, "Hence, two

participants that load onto the same factor will have created very similar item

configurations" (p. 80). A positive loading will indicate "shared subjectivity with others

on that factor; negative loadings, on the other hand, are signs of rejections of the factor's

perspective" (M. Brown, 2004, p. 6; McKeown & Thomas).

Various ways exist to determine whether a factor loading is significant. Weighted

averaging is one way to "reveal the level of agreement and disagreement that each

statement receives within each of the identified opinion types" (Valenta & Wigger, 1997,

p. 503). The scores are arranged from largest value to smallest value and then

"transformed back into the whole-number scores (+4, +3, etc.) used in the original sorting

process" (Valenta & Wigger, p. 503) to provide easier comparisons between factors.

Another way to determine whether a factor loading is significant is to include the factors

that have at least two Q-sorts that loaded "significantly upon it alone" (Watts & Stenner,

2005, p. 81). A final way to measure significance is to employ the use of eigenvalues.

The eignevalue is "the sum of squared factor loadings for that factor" (Watts & Stenner,

p. 87). Watts and Stenner provided the formula for obtaining the eigenvalue by dividing

the characteristic value by *n* and multiplying the result by 100. The common practice is to

consider eigenvalues greater than 1.00 significant (McKeown & Thomas, 1988).

*Varimax rotation*. Orthogonally rotated factors using varimax rotation serve to

"improve the interpretability of the results and maximize high correlations" (Barata,

2007, p. 206). M. Brown (2004) described the use of principle components analysis "with

a varimax [method of orthogonal] rotation" because it is the most widely used in Q-

methodology (M. Brown, 2004, p. 5). Watts and Stenner (2005) further explained that Q-

methodologists preferred the varimax procedure because, true to the Q-methodology

purpose of revealing a "range of viewpoints that are favoured by our participant group"

(p. 81) the varimax procedure served to maximize "the amount of variance explained by

the extracted factors" (Watts & Stenner, p. 81).

*Providing interpretation of the data.* The use of factor scores serves to interpret

the data and reflect upon the "extent of agreement among perceptions related to the

individual Q-sort statements" (M. Brown, 2004, p. 6). The inclusion of demographic data

can assist in the evaluation of the factor loadings (McKeown & Thomas, 1988), resulting

in further insights. Watts and Stenner (2005) cautioned Q-methodologists about including

the neutral areas of configuration in the interpretation of the data: "Any interpretation

which disregards the item rankings in this area will almost certainly fail to capture the

subtleties of the viewpoint being expressed" (p. 84). Q-methodologists provide a

narrative explaining viewpoints based upon the factor loadings and other data (Valenta &

Wigger, 1997). Although the interpretation is subjective based on the objective data, "if

one is reminded that a major value of Q is its use as a tool of discovery, then the

possibility of multiple interpretations" (Redburn, 1975, p. 770) is not problematic.

Because the data are presented for all to see, "others are free to examine the factor arrays

and arrive at their own independent conclusions—our interpretations are open to debate"

(McKeown & Thomas, 1988, p. 66). Varying interpretations can exist and undergo

further evaluation (McKeown & Thomas; Watts & Stenner). In the current study, the data

presentation takes place in conjunction with the interpretations for readers to consider all

viewpoints.

<div align="center">Setting and Sample Selection</div>

The population included approximately 3,000 certified, veteran classroom

teachers working in prekindergarten through 12th grade from a large public school

district in the southwestern region of the United States. The population included teachers

hired into the district throughout a 5-year period from 1998 to 2002, ensuring most of the

teachers were veterans with more than 5 years but less than 17 years of teaching

experience in the current school district. District administrators provided the initial e-mail

contact to individuals hired between 1998 and 2002. The introductory e-mail included a

note from the district research department and an introduction letter explaining the

purpose of the study and providing ethics information (see Appendix A).

After participants responded to the original e-mail, the researcher had direct

access to the participants through district e-mail if the participants left their first and last

name, spelled correctly. Some participants provided personal e-mail addresses, some

provided phone numbers, and some participants preferred district e-mail addresses for

communication. District employees did not provide a list of the population for the study,

but sent out 3,406 e-mail requests to individuals remaining in the district hired between

1998 and 2002. The recipients of the 3,406 e-mails included individuals other than

classroom teachers. For example, replies were received from school counselors, school

psychologists, occupational therapists, learning strategists, speech and language

pathologists, and special education facilitators. The exact number for the population was

not available.

Approximately 330 responses were received, including responses from

nonclassroom teachers. A reply to each respondent included thanking the respondent and

reiterating the selection criteria, as well as possible locations and times to meet. The

locations and times included school sites and public libraries, before and after school,

during school, and Saturdays. The respondents then selected what best met their situation.

Some respondents required multiple e-mails, some did not appear at the agreed-upon

time, some respondents canceled and did not reschedule, some asked not to be a part of

the study because of time constraints. Some respondents never returned the second e-

mail. Some respondents who indicated their data would be negative received

encouragement to participate because their data would also be important.

The study involved collecting 53 Q-sorts from participants. Two of the 53

participants completed the Q-sort without the researcher present and then e-mailed and

district mailed the responses to the researcher. The remaining participants completed the

Q-sorts at school sites and public libraries. Four Q-sorts were not filled in correctly or did not fit into the selection criteria. One participant was teaching in prekindergarten and was included in the study. One participant, who was hired before 1998 and listed teaching years in the district as 16, did participate in the study. The P-sample size was 49 participants.

In Q-methodology, sample sizes are purposefully kept small in an effort to explore a variety of person viewpoints that may be available in the population (Valenta & Wigger, 2007; Watts & Stenner, 2005). With smaller numbers, "an emphasis on quality is maintained [and] pattern and consistency can still be detected with the data" (Watts & Stenner, p. 79). The focus of Q-methodology is not to determine the numbers of types of individuals in a population, but to explore the various types of opinions within the population (Stephenson, 1953; Valenta & Wigger; Watts & Stenner). The population and sample sizes are given here to provide transparent data analysis. The purpose of Q-methodology is not to generalize sample numbers to population numbers. Stephenson noted,

> The mistake is often made of supposing that "large numbers of cases" are required before we can have such a theory or before it can be supported, or that somehow, we are engaged in a process called "generalizing from the single case" when singular propositions are being tested. The truth is that we might prove a million testable propositions about a theory, and yet throw away the theory . . . . Or, we might test a theory in terms of a "single case" and accept it. (p. 81)

M. Brown (2004) posited, "Because Q-methodology does not seek to make claims to larger representative groups, it is less concerned with participant sampling techniques" (p. 4). The study will include "no assumption that all relevant population variables are included. Nor is it assumed that theoretical possibilities . . . governing respondent

selection exhaust all possibilities" (McKeown & Thomas, 1988, p. 39). Although Q-methodology is not strictly a quantitative method, the current study included the use of a random, stratified sampling procedure.

Stratification ensured selected participants taught varying subjects. A total of 28 participants taught all subjects (57%), 8 participants taught science (16%), 7 participants taught language arts (14%), 2 participants taught social studies (4%), 2 participants taught library (4%), 1 participant taught computers (2%), and 1 participant taught math (2%).

Stratification ensured selected participants were veteran classroom teachers with more than 5 years and less than 17 years of teaching experience in the district. If participants listed years of service in partial numbers, the years of service were rounded down to the last full year of service. For example, if a participant reported 12.5 years of service in the district, the response was rounded down to 12. Years of teaching service in the district included 1 participant with 6 years, 11 with 7 years, 11 with 8 years, 4 with 9 years, 10 with 10 years, 9 with 11 years, 1 with 14 years, 1 with 15 years, and 1 with 16 years of district teaching experience (see Table 4). A total of 23 participants had 6-8 years of service teaching in the district, 23 participants had 9-11 years, and 3 participants had 14-16 years. The numbers might be slightly misleading because some of the participants had taught in the district prior to their hire date of 1998-2002. For example, 1 participant taught in the district, left the district, and returned to the district.

Participants also noted any additional years of public teaching experience. Partial totals were rounded down to the last whole number. For example, 14.5 years of public teaching experience was rounded down to 14 years of public teaching experience.

Twenty-seven participants had 7-11 total years of public teaching service, 10 participants had 12-17 total years, and 12 participants had 19-45 years. Total years of public education teaching experience for participants were as follows: 5 participants had 7 years, 6 had 8 years, 3 had 9 years, 5 had 10 years, 8 had 11 years, 3 had 12 years, 2 had 13 years, 2 had 14 years, 2 had 15 years, 1 had 17 years, 3 had 19 years, 2 had 20 years, 1 had 22 years, 2 had 29 years, 1 had 35 years, 2 had 40 years, and 1 had 45 years of total public teaching experience (see Table 4).

The use of stratification resulted in a more representative sample of teachers from schools with various student populations. The locations derived from the district e-mail system, which included a list of the school location of the teacher. Schools on the district Web site were checked for the assigned region. Varying school population locations included 9 participants from the east area, 6 from the northeast area, 12 from the southeast area, 9 from the superintendent schools, 5 from the northwest area, 4 from the southwest area, 3 from the east superintendent (ESD) area, and 1 unknown (see Table 5). The unknown category for region included 1 participant who was not listed at a particular school. Participants self-reported their school setting area as follows: 32 participants from urban schools, 13 from suburban schools, and 1 from a rural school (see Table 5). This may be misleading because the participants themselves determined what constituted urban, suburban, or rural.

Table 4

*Participant Self-disclosed Years of Teaching Experience*

| Years of teaching experience | *n* | % |
|---|---|---|
| Years of teaching experience in the district | | |
| 6 | 1 | 2 |
| 7 | 11 | 22 |
| 8 | 11 | 22 |
| 9 | 4 | 8 |
| 10 | 10 | 20 |
| 11 | 9 | 18 |
| 14 | 1 | 2 |
| 16 | 1 | 2 |
| Unknown | 1 | 2 |
| | | |
| Total years of public teaching experience | | |
| 7 | 5 | 10 |
| 8 | 6 | 12 |
| 9 | 3 | 6 |
| 10 | 5 | 10 |
| 11 | 8 | 16 |
| 12 | 3 | 6 |
| 13 | 2 | 4 |
| 14 | 2 | 4 |
| 15 | 2 | 4 |
| 17 | 1 | 2 |
| 19 | 3 | 6 |
| 20 | 2 | 4 |
| 22 | 1 | 2 |
| 29 | 2 | 4 |

Table 5

*Participant School Location and Self-disclosed Geographic Area*

| Location | *n* | *%* |
|---|---|---|
| Region | | |
| East | 9 | 18 |
| Northeast | 6 | 12 |
| Southeast | 12 | 24 |
| Superintendent | 9 | 18 |
| Northwest | 5 | 10 |
| Southwest | 4 | 8 |
| ESD | 3 | 6 |
| Unknown | 1 | 2 |
| | | |
| Area | | |
| Urban | 32 | 65 |
| Suburban | 13 | 27 |
| Rural | 1 | 2 |
| Unknown | 3 | 6 |

There were 7 males, 41 females, and 1 unknown (see Table 6). The participant labeled as unknown did not mark either male or female on the demographic data collection sheet.

Self-disclosed ages of participants ranged from 31 to 67 years old, with 16 in their 30s (33%), 17 in their 40s (35%), 9 in their 50s (18%), and 6 in their 60s (12%). One participant did not fill in the age on the demographic data sheet. The mean age was 45 years old. The median was 42 and 43. Table 7 lists the specific ages.

Table 6

*Participant Self-disclosed Gender*

| Gender | *n* | *%* |
|---|---|---|
| Male | 7 | 14 |
| Female | 41 | 84 |
| Unknown | 1 | 2 |

Table 7

*Participant Self-disclosed Age*

| Age | *n* | % |
|---|---|---|
| 31 | 1 | 2 |
| 32 | 2 | 4 |
| 33 | 2 | 4 |
| 34 | 2 | 4 |
| 36 | 4 | 8 |
| 37 | 2 | 4 |
| 38 | 2 | 4 |
| 39 | 1 | 2 |
| 40 | 5 | 10 |
| 41 | 2 | 4 |
| 42 | 1 | 2 |
| 43 | 3 | 6 |
| 45 | 3 | 6 |
| 46 | 1 | 2 |
| 47 | 1 | 2 |
| 49 | 1 | 2 |
| 50 | 1 | 2 |
| 52 | 1 | 2 |
| 53 | 1 | 2 |
| 54 | 1 | 2 |
| 55 | 1 | 2 |
| 57 | 1 | 2 |
| 58 | 1 | 2 |
| 59 | 1 | 2 |
| 60 | 2 | 4 |
| 62 | 1 | 2 |
| 63 | 1 | 2 |
| 65 | 1 | 2 |
| 67 | 1 | 2 |
| Unknown | 1 | 2 |

Participants self-disclosed race as 1 African American, 43 Caucasian, 3 Latino, 1 other, and 1 unknown (see Table 8). The participant listed as other did not specify a race. The participant listed as unknown did not fill in race information on the demographic data sheet.

Table 8

*Participant Self-disclosed Race*

| Race | *n* | % |
|------|-----|---|
| African American (Black) | 1 | 2 |
| Asian (or Polynesian) | 0 | 0 |
| Caucasian (White) | 43 | 88 |
| Latino (Hispanic) | 3 | 6 |
| Native American | 0 | 0 |
| Other | 1 | 2 |
| Unknown | 1 | 2 |

Participants self-disclosed grade levels as follows: 1 taught prekindergarten, 18 taught kindergarten through 2nd grade, 10 taught 3rd through 5th grade, 11 taught 6th through 8th grade, and 9 taught 9th through 12th grade (see Table 9). The numbers might be misleading because the demographic data sheet did not indicate the participant to write the current grade level taught. Several participants listed several different grade levels, and each participant was placed into the grade-level category listed first or the grade-level category the participant listed as a majority. For example, if a participant listed teaching in 2nd and 3rd grades, the participant was logged into the K-2 category. If a participant listed teaching in 5th, 7th, and 8th grades, the participant was logged into the 6th-8th grade category.

Table 9

*Participant Self-disclosed Grade Levels Taught*

| Grade levels taught | *n* | % |
|---------------------|-----|---|
| Prekindergarten | 1 | 2 |
| Kindergarten through 2nd grades | 18 | 37 |
| 3rd through 5th grades | 10 | 20 |
| 6th through 8th grades | 11 | 22 |
| 9th through 12th grades | 9 | 18 |

Participants self-disclosed their education to the teaching route as follows: 8 on-the-job training, 1 teaching school, 6 two-year universities, 39 four-year universities, 4 five-year universities, and 3 other (see Table 10). The 3 other comments included "32 credit graduate licensure," "Project Grow," and various university names. The numbers might be misleading because some participants marked two or more areas for education to teaching route, so the percentages will equal more than 100%. Several participants stated how difficult it was to determine which choice to mark in this area. For example, some participants marked on-the-job training because they learned as they taught and 2-year university because they earned their teaching credentials in addition to their nonteaching-focused undergraduate degree. Some participants marked 4-year university and 2-year university because they earned their teaching degree from a 4-year university and their master's degree from a 2-year program.

Table 10

*Participant Self-disclosed Preservice Training*

| Preservice training | *n* | % |
|---|---|---|
| On the job | 8 | 16 |
| Teaching school | 1 | 2 |
| Two-year university | 6 | 12 |
| Four-year university | 39 | 80 |
| Five-year university | 4 | 8 |
| Other | 3 | 6 |

Finally, participants self-disclosed their educational degree as follows: 2 bachelor's, 2 bachelor's plus additional education, 10 master's, 34 master's plus additional education, and 1 doctorate. No participants listed doctorate plus additional education (see Table 11).

The use of theoretical, random, and extensive principles of Q-methodology in selecting a P-sample helped meet the purpose of the current study. The attempt to use random, stratified sampling techniques with theoretical, random, extensive principles resulted in "a degree of comprehensiveness not found in samples chosen solely on the basis of availability" (McKeown & Thomas, 1988, p. 38).

Table 11

*Participant Self-disclosed Educational Degree*

| Educational degree | *n* | *%* |
|---|---|---|
| Bachelor's | 2 | 4 |
| Bachelor's plus additional education | 2 | 4 |
| Master's | 10 | 20 |
| Master's plus additional education | 34 | 69 |
| Doctorate | 1 | 2 |
| Doctorate plus additional education | 0 | 0 |

Instrumentation and Materials

The instrumentation and materials included developing the concourse and creating the Q-sample from the literature reviewed. Descriptions of each step follow.

*Concourse*

The review of the literature helped to create a universe of subjective statements veteran teachers may give for remaining in teaching including demographic, preservice, service, school climate, system, empowerment, intellectual, and personal factors. Stephenson (1953) noted, "[Theory] indicates what the sample of statements will be initially: it defines the 'populations' of statements for us in Q-methodology" (p. 21). Concourse ideas were then allocated into a theoretical design of personal factors and structural factors, with three levels within each factor (see Table 12). The personal factor

levels included serving students, fitting lifestyle, and professional fulfillment. The

structural factor levels included physical structures, emotional structures, and systemic

structures.

Table 12

*Concourse Theoretical Design of Q-Methodology Study*

| Factors | Levels | Items | *df* |
|---|---|---|---|
| Personal | Serving students | 3 | 2 |
| | Fitting lifestyle | | |
| | Professional fulfillment | | |
| Structural | Physical structures | 3 | 2 |
| | Emotional structures | | |
| | Systemic structure | | |

With two factors and three levels within each factor, the concourse theoretical

design served to establish a research matrix of nine correlated categories. Serving

students (a) correlated with physical structures (d), emotional structures (e), and systemic

structures (f). Fitting lifestyle (b) correlated with physical structures (d), emotional

structures (e), and systemic structures (f). Professional fulfillment (c) correlated with

physical structures (d), emotional structures (e), and systemic structures (f). Each

correlated category included four statements. Thus, the resulting matrix had 36

statements correlated as follows:

ad (4) × ae (4) × af (4) = 12 statements

bd (4) × be (4) × bf (4) = 12 statements

cd (4) × ce (4) × cf (4) = 12 statements

After establishing the concourse theoretical design, the literature was reviewed again to

provide the 36 correlating statements that comprised the Q-sample (see Appendix B).

*Q-Sample*

The Q-sample was the research instrument comprised of "the set of opinion statements" (Valenta & Wigger, 1997, p. 502). From the universal concourse, "a subset of statements is selected to form the Q-sample: the group of statements to be rank-ordered" (Valenta & Wigger, p. 502) by the participants. The idea was to provide a miniature of the concourse so the statements were representative of the varied and complex perspectives on the topic (M. Brown, 2004; S. R. Brown, 1998; Stephenson, 1953; Valenta & Wigger). Stephenson proposed, "In Q, any sample of statements put together theoretically is, in principle, as acceptable as any other for the same design, but care is taken about such matters as conciseness, clarity, representativeness, and the like" (p. 76). Content domain experts reviewed the statements to ensure the statements represented "various meanings by various individuals" (Redburn, 1975, p. 769) and a "range of subjective communicability" (S. R. Brown, 1998, p. 6), that "each [made] a different (but nonetheless recognizable) assertion about the appropriate subject matter" (Watts & Stenner, 2005, p. 74), and that the statements were comprehensive and representative (M. Brown, 2004). Three content domain experts reviewed the statements and indicated the statements were varied, subjective, comprehensive, and representative.

*Pilot*

The use of a pilot study at a school district site with 10 participants served to ensure validity (M. Brown, 2004; Valenta & Wigger, 1997; Watts & Stenner, 2005). The participants did not sort the statements, but checked the Q-statements for appropriate

semantics, clarity, single correlated propositions, balance, and representativeness (Watts

& Stenner). Watts and Stenner contended,

> [Remember] that the primary functions of the piloting process are to ensure: (a)
> that semantic duplication within the statements is avoided; (b) that statements are
> clearly expressed (usually in everyday rather than technical terminology); (c) that
> statements express a single proposition only (as multiple propositions can make
> sorting and interpretation highly problematic); (d) that the Q set is properly
> "balanced" (in the context of politically charged or particularly contentious
> research questions . . . and perhaps most importantly, (e) that the Q set provides
> adequate coverage of relevant issue and that it is, therefore, broadly representative
> of the appropriate opinion domain. (p. 87)

The pilot participants wrote the following suggestions and comments for

improved semantics, clarity, single correlated propositions, balance, and

representativeness. One pilot participant suggested changing "better take" to "take better"

for Number 19. Another wrote, "They look good. I couldn't find any changes to make."

Another wrote, "What if you are able to 'make a difference' w/o mentoring and the

induction?" for Number 7. Another suggested changing the word *preservice* to *pre-*

*service* and "no matter what" to "in spite of" on Number 8 and adding the word

"personal" to Number 27. One pilot participant wrote, "Personally, I always want things

better than adequate" in response to Number 10. Another commented, "Mine was awful!"

after reading Number 12. All other responses were verbal statements such as, "These

look just fine." Of the statements pilot participants wrote, four included suggestions for

wording or spelling changes, two were reactions to the statements, and the remainder

were comments suggesting no changes. All verbal comments of the pilot participants

suggested no changes should be made. No changes were made to the original statements.

Upon completion of the pilot study, the data collection and procedures began.

Data Collection and Procedures

Permission was obtained to collect data by submitting the research proposal to the internal review board of the university. Upon receipt of conditional approval (see Appendix C), the proposal was submitted to the research department's internal review board of the school district where data collection would take place and received approval (see Appendix D). District personnel also requested a National Institutes of Health certificate for completing the online training course titled *Protecting Human Research Participants*. Completion of the course occurred on November 15, 2008, and received Certification Number 134173. Upon receiving approval from the district, the proposal was resubmitted to the doctoral university review board with the approval letter from the district. District personnel requested a change from "Name" to "Pseudo Name" on the demographic data sheet, which also affected the informed consent. The changes were sent to the university internal review board for acceptance. Appendix E contains approvals from the university.

*Q-Sort*

The data collection consisted of participants completing the Q-sort process. Participants averaged approximately 30 minutes to sort, write demographic information, and fill in the answer sheet. After receiving an introduction to the purpose of the study and answering all questions, the participant signed an informed consent (see Appendix F) and received a request to provide demographic data (see Appendix G). Participants received verbal information regarding details of how to perform the Q-sort, along with a written form of Q-Sort instructions (see Appendix H) and an answer sheet (see Appendix

I). The Q-Sort Instruction sheet included the condition of instructions. The participant then began to rank order the Q-sample statement cards into the forced-choice distribution format from -4 to 0 to +4. The participants could ask questions at any time for clarification of how to complete the sort, as well as change cards from one category to another until the final distribution most represented their opinions. The participant or the researcher then wrote the numbers from the cards onto the Q-sort answer sheet and the participant wrote any free response comments directly on the answer sheet.

The forced-choice distribution cards were divided into nine categories beginning from the left, with -4 representing most definitely have not influenced my decision to remain teaching in the classroom, -3 representing definitely have not influenced my decision to remain teaching in the classroom, -2 representing have not influenced my decision to remain teaching in the classroom, -1 representing have somewhat not influenced my decision to remain teaching in the classroom, 0 representing have neither influenced nor not influenced my decision to remain teaching in the classroom, +1 representing have somewhat influenced my decision to remain teaching in the classroom, +2 representing have influenced my decision to remain teaching in the classroom, +3 representing definitely have influenced my decision to remain teaching in the classroom, and +4 representing most definitely have influenced my decision to remain teaching in the classroom. The forced-choice distribution answer sheet included a range from -4 representing least significant, to -3, -2, and -1. Neutral, 0, was in the middle. Continuing to the right were +1, +2, +3, and +4 representing most significant.

At a secure location, the Q-sort data were entered into the PQ Method 2.11

software computer program (Schmolck, 2007) and double checked for accuracy. After

double checking the information for accuracy, statistical analysis was performed.

Demographic information was entered into a spreadsheet and the data were double

checked for further analysis.

<div align="center">Data Analysis</div>

Once all participants completed the Q-sorts, statistical analysis occurred. The

study involved descriptive analysis, array matrix, factor analysis, varimax rotation, and

interpretation of the data.

<div align="center">*Array Matrix*</div>

Creating the array matrix involved placing each person's Q-sort "into an array of

numerical data" (Valenta & Wigger, 1997, p. 503) and then correlating the normally

distributed and standard score person arrays with each other (M. Brown, 2004;

Stephenson, 1953). The final "resulting correlation matrix will show which participants

sorted the statements into similar orders" (Valenta & Wigger, p. 503) using Pearson's *r* in

an effort to "identify accurate correlation coefficients" (Robbins-LaVicka, 2007, p. 95).

The correlation matrix is given in Appendix J.

<div align="center">*Factor Analysis*</div>

The study also involved performing factor analysis on the matrices. The factors

with an eigenvalue of 2.00 or greater were considered statistically significant,

"exemplifying the shared item pattern or configuration that is characteristic of that factor"

(Watts & Stenner, 2005, p. 81). An unrotated factor loading matrix served to provide

information for interpretation and possible loaded factors. The unrotated factor matrix is given in Appendix K.

*Varimax Rotation*

In addition to the unrotated factor loading matrix, a varimax orthogonal rotation served to provide further possible loadings and interpretation of the data. The varimax procedure helped to maximize "the purity of saturation of as many variates (Q-sorts) as possible on one or the other of the *m* factors extracted initially" (McKeown & Thomas, 1988, p. 52). The loads that are significant stand out more and the loads that are not as significant are removed. The varimax rotation is given in Appendix L.

*Interpretation of the Data*

The use of the factor loadings and demographic information provided a narrative of the data for each pattern of significance. The analysis included a focus on how the data did or did not corroborate with the initial review of the literature. Through the use of PQMethod 2.11, initial correlation matrices resulted in a quantitative view of the relationships among the Q-sorts, resulting in the foundation for factor analysis, which is the heart of Q-methodology, and assisting in the explanation of factors affecting the retention of veteran classroom teachers in the district.

Social Change Implications

After approval of the final dissertation, all results will be disseminated to the district and other interested parties with recommendations for further action and research. The implications for positive social change include future retention efforts of quality teachers by principals, area superintendents, superintendents, school boards, and state

agencies for increased school stability and positive student learning. District personnel may be able to use the information to evaluate and guide teacher policies and procedures, recruitment efforts, and retention abilities. Finally, staff at colleges and universities may be able to use the information to assist in preservice teacher instructional programs.

## Ethical Considerations

Permission was sought from the university and school district institutional review boards to ensure participant protection. The approval number from the university was 11-11-08-0335365. Each potential participant received an introduction letter (see Appendix A) explaining the purpose and reason for the study. An informed consent (see Appendix C) indicated the information would be used for research in the current study and for no other reason. Coding the raw information helped to ensure privacy and anonymity on all publishable documents. The raw data were in a lockable filing cabinet away from any school district sites, only accessible to the researcher. Participation was voluntary and participants received no incentives. Participants had the option to decline participation at any time during the Q-sort process. After 5 years, the raw data will be destroyed.

## Summary

Chapter 3 included a review of the research design, setting and sample selection, instrumentation and materials, data collection and procedures, data analysis, implications for social change, and ethical considerations for the current study. The purpose of the Q-methodology study was to explore the factors veteran teachers use to explain their retention. The research design was a Q-methodology study. The methodology included building a concourse, selecting a Q-sample, running the pilot study, selecting a P-sample,

gathering the Q-sorts, completing data analysis, and providing interpretation of the data. The concourse derived from an extensive review of the literature and the Q-sample was based on personal and structural factors. The levels within the personal factors included serving students, fitting lifestyle, and professional fulfillment. The levels within the structural factors included physical, emotional, and systemic structures. The Q-sample underwent a pilot test for validity, clarity, and comprehensiveness. The P-sample included 49 participants in a large school district in the southwest region of the United States. Q-sorts yielded the data. The data were entered into PQ Method 2.11 software. Array matrices, factor analysis, varimax rotation, and interpretation of the data occurred. Ethical considerations included institutional review board approval, procedures for protection of anonymity, and participant consent.

Chapter 4 includes a review of participant demographics followed by the details of the Q-method data analysis. An unrotated factor matrix extracted seven clusters with eigenvalues greater than 2. After using a varimax rotation, four factors emerged with significant loadings and defining sorts. Standard errors demonstrated validity and reliability. Emerging factors were empowerment with emotional support, family lifestyle with intellectual growth, family lifestyle with serving students, and serving students with physical support.

CHAPTER 4: RESULTS

The high attrition of classroom teachers results in instability in school organizations, increased financial costs, and heightened emotional burdens for staff and students (Alt & Henke, 2007; Barnes et al., 2007; Cochran-Smith, 2004b; Guarino et al., 2006; Hanushek et al., 2001, 2004a; Ingersoll, 2002b, 2003a; Loeb et al., 2005; Loeb & Reininger 2004). The purpose of the current Q-methodology study was to develop a better understanding of perceptions of the factors that influence the decisions of veteran teachers in a large public school district in the southwestern region of the United States to remain in the classroom.

From the literature review, the following groups of factors were ascertained: demographic, preservice, service, school climate, system, empowerment, intellectual, and personal. The constructs were then allocated within a concourse of two factors, including personal and structural, with three levels within each factor.

The main research question was: What factors do veteran teachers use to explain their retention? The sub-questions were as follows:

1. What effect do personal factor levels such as serving students, fitting lifestyle, and professional fulfillment have on teacher retention?

2. What effect do structural factor levels such as physical, emotional, and systemic structures have on teacher retention?

The research questions guided the Q-methodology study to gain an increased understanding of the possible relationships among veteran teachers and the factors the veteran teachers indicated affected their retention. The personal factor levels included

serving students, fitting lifestyle, and professional fulfillment. The structural factor levels included physical structures, emotional structures, and systemic structures. The two theoretical perspectives were teachers will choose to remain teaching in the classroom when the economic structures are most appealing, as outlined by Guarino et al. (2006), and teachers will remain teaching in the classroom when organizational structures are healthy, as posited by Ingersoll (2002b, 2003a).

The current study included building a concourse from the review of the literature, selecting a Q-sample from the concourse, conducting the pilot study, selecting a P-sample as the variables, gathering the Q-sorts on a forced distribution matrix, and completing data analysis. The selection of Q-methodology occurred because the design served to satisfied the theoretical framework indicating that discernable factors influence teachers to remain in the classroom. The use of Q-methodology matched the purpose of exploring numerous economic and organizational factors veteran teachers might use to explain their retention.

Chapter 4 includes a summary of the demographic data and a detailed explanation of the data analysis processes. Data analysis, as computed using the PQMethod 2.11 program (Schmolck, 2002), included three steps: correlation matrix, factor analysis, and varimax rotation. The correlation matrix served to correlate people based upon how participants completed the Q-sorts. According to Valenta and Wigger (1997), "Each person's array of numerical data [was] intercorrelated with the arrays of all the others" (p. 503). The second step was factor analysis. The correlation matrix was factor analyzed "to produce a set of factors onto which the participants load on the basis of the item

configurations they have created" (Watts & Stenner, 2005, p. 80). For example, if two or more participants loaded on one factor, the participants created similar choices in how they distributed the statements. The standard for selecting factors for analysis include those with two or more factor loadings and an eigenvalue of 1.00 or greater (Watts & Stenner). The final step in factor analysis was varimax rotation, including the realization of additional loadings (McKeown & Thomas, 1988). Chapter 4 includes a discussion of each step in further detail.

## Demographic Information

The population was approximately 3,000 certified, veteran classroom teachers working in prekindergarten through 12th grade from a large public school district in the southwestern region of the United States. The population included persisting teachers hired into the district throughout a 5-year period from 1998 to 2002, ensuring most of the teachers were veterans with more than 5 years but less than 17 years of teaching experience in the school district. Approximately 330 responses were received from the initial invitation e-mail, including several responses from non-classroom teachers such as school counselors, psychologists, occupational therapists, learning strategists, speech and language pathologists, and special education facilitators. The participants were thanked for their willingness to participate and were excluded because they did not meet the selection criteria.

After participants responded to the original e-mail, the researcher had direct access to most participants through district e-mail, if the participants left a first and last name spelled correctly in the reply to the district, which was forwarded to the researcher,

or if the participants directly e-mailed the researcher. After replying to each respondent with a thank you and reiteration of the selection criteria, possible locations and times to meet were offered. Of the respondents who received the second e-mail, some scheduled times to meet, some requested to not be a part of the study, some never returned an e-mail, some scheduled and did not appear, and 53 scheduled and completed the Q-sort. Of the 53 Q-sorts, 4 were not filled in correctly or did not meet the selection criteria. Thus, the P-sample size included 49 participants.

Years of teaching service in the district for the participants ranged from 6 to 16 years, with the majority of the participants falling into the 7- to 11-year range. Total public teaching service for the participants ranged from 7 to 29 years, with the majority of the participants falling into the 7- to 11-year range (see Table 4).

Participants represented all areas of the district, including east, northeast, southeast, superintendent, northwest, southwest, and ESD. Participants also self-reported urban, suburban, and rural school sites with the majority of the participants, 65%, being from urban locations (see Table 5). The participants included 7 males, 41 females, and 1 unknown gender (see Table 6).

The ages of the participants ranged from 31 to 67 years old, with 16 in their 30s, 17 in their 40s, 9 in their 50s, 6 in their 60s, and 1 unknown. The mean age was 45 years old (see Table 7). Participants self-disclosed race as 1 African American, 43 Caucasian, 3 Latino, 1 other, and 1 unknown (see Table 8).

Grade levels taught by participants included the following: 1 taught prekindergarten, 18 taught kindergarten through 2nd grade, 10 taught 3rd through 5th

grade, 11 taught 6th through 8th grade, and 9 taught 9th through 12th grade. The majority of the participants, 80%, listed their preservice training as occurring at a 4-year university (see Table 10). The majority of the participants, 69%, listed their educational attainment as a master's degree plus additional education (see Table 11).

Table 13 includes a summary of participants' years of service teaching in the district, years of service in public education, location, and gender demographic data. A summary of the participants' race, grade levels taught, preservice training, and educational degree demographic data is given in Table 14.

## Data Analysis

Data analysis included organizing a correlation matrix and factor analysis. A discussion of the correlation matrix will occur, followed by details of factor analysis including identified factors, eigenvalues and loading, rotation, factor scores, correlation among factor scores, and emergent factors defining teacher retention among groupings of participants.

Table 13

*Summary of Demographic Data—Service, Location, and Gender*

| Demographic | *N* | *%* |
|---|---|---|
| Years of teaching service in the district | | |
|   6-8 years | 23 | 47 |
|   9-11 years | 23 | 47 |
|   14-16 and unknown years | 3 | 6 |
| | | |
| Years of teaching service in public education | | |
|   7-10 years | 19 | 39 |
|   11-14 years | 15 | 31 |
|   15-20 years | 8 | 16 |
|   21-30 years | 3 | 6 |
| | | |
| Location | | |
|   Region | | |
|     East and Northeast | 15 | 31 |
|     Southeast | 12 | 24 |
|     Superintendent, ESD, and unknown | 13 | 27 |
|     Northwest and Southwest | 9 | 18 |
|   Area | | |
|     Urban | 32 | 65 |
|     Suburban | 13 | 27 |
|     Rural and unknown | 4 | 8 |
| | | |
| Gender | | |
|   Male | 7 | 14 |
|   Female | 41 | 84 |
|   Unknown | 1 | 2 |

Table 14

*Summary of Demographic Data—Age, Race, Grades Taught, Training, and Educational*

*Degree*

| Demographic | *n* | *%* |
|---|---|---|
| Age (years) | | |
| 30-39 | 16 | 33 |
| 40-49 | 17 | 35 |
| 50-59 | 9 | 18 |
| 60-67 and unknown | 7 | 14 |
| | | |
| Race | | |
| African American (Black) | 1 | 2 |
| Caucasian (White) | 43 | 88 |
| Latino | 3 | 6 |
| Other and unknown | 2 | 4 |
| | | |
| Grade levels taught | | |
| Prekindergarten through 2nd grade | 19 | 39 |
| 3rd through 5th grade | 10 | 20 |
| 6th through 8th grade | 11 | 22 |
| 9th through 12th grade | 9 | 18 |
| | | |
| Preservice training | | |
| On the job | 8 | 16 |
| Four-year university | 39 | 80 |
| Two-year and 5-year university | 10 | 20 |
| Teaching school and other | 4 | 8 |
| | | |
| Educational degree | | |
| Bachelor's and bachelor's plus | 4 | 8 |
| Master's and master's plus | 44 | 90 |
| Doctorate | 1 | 2 |

*Note*. Preservice training does not total 100% because some participants marked multiple answers.

### *Correlation Matrix*

Data analysis in Q-methodology begins with correlation. The use of PQMethod

2.11 software (Schmolck, 2002) helped to create the correlation matrix, which serves to

demonstrate how each participant completed the sort correlating with each additional

participant positively or negatively with regard to subjective reasons for why teachers

remain in the classroom. According to McKeown and Thomas (1988), "The

psychometrics of Q call for the correlation and factoring of persons" (p. 46). With 49

participants, the correlation matrix was a 49 × 49 array (see Appendix J). Stephenson

(1953) noted, "Since the sample, $n$, is structured . . . several arrays can be correlated and

factored" (p. 105). Each participant completed the Q-sort using the same scale for self-

significance, the $n$ to which Stephenson is referring, so the correlation matrix includes an

equal comparison of the forced-choice, normal distribution operant choices, resulting in a

matrix ready for factor analysis (Valenta & Wigger, 1997).

A correlation coefficient typically ranges from -1.00 to +1.00. However, the

charts in the PQ Method 2.11 use -100 to +100. Thus, the correlation coefficient for PQ

Method 2.11 could be transferred by shifting the decimal two places to the left. Using the

PQ Method 2.11 program, the correlation coefficients range from -100 through 0 to a

maximum value of +100. A -100 score indicates a perfectly opposed sort, a 0 indicates a

noncorrelated sort, and a +100 indicates a perfectly matched sort. For example, Sorts 23

and 24 have a score of 71, indicating a high correlation or similar choices in how the

participants sorted the statements (Valenta & Wigger, 1997).

The completion of the correlation matrix functioned to yield the data for the

factoring process and whether the analysis includes the use of Pearson's $r$ or Spearman's

rho "makes virtually no difference" (McKeown & Thomas, 1998, p. 49). The current

study included the use of Pearson's $r$ and calculation using the PQMethod 2.11 program

(Schmolck, 2002). A benefit of using Pearson's $r$ is the ability to clarify similar sorts

more accurately (Robbins-LaVicka, 2007). Unlike Pearson's *r*, Spearman's rho is affected by ties. This could prove problematic in a Q-methodology study, because similar sorts, as already shown by Sorts 23 and 24, could cause distinctions to become less visible in the analysis process than they are using Pearson's *r*.

A forced-choice, normal distribution was used to complete the Q-sorts. Each Q-sort had a mean of 0, a standard deviation of 2.138, and a standard error of 0.356. Upon completion of the correlation matrix, the correlation coefficients were determined. McKeown and Thomas (1998) noted, "The standard error for a zero-order factor loading is given by the expression $SE = 1/\sqrt{N}$, where N = the number of items in the Q-sample" (p. 50). The Q-sample included 36 statements, which would indicate $SE = 1/\sqrt{36}$ or $SE = 0.17$. McKeown and Thomas noted statistical significance is indicated by loadings 2.58 in excess of the standard error. A correlation coefficient of $p < .01$ or 99% accuracy would be .439, as indicated by 2.58 (.17) = .439.

*Factor Analysis*

With the correlation matrix completed and statistical significance calculated, factor analysis occurred. The factor analysis involved computing an unrotated factor matrix and identifying eigenvalues. Next, rotation occurred to identify defining sorts. The calculation of factor scores served to determine standard errors and factor characteristics. The final step involved completion of the correlation between factor scores. Details for each step follow.

*Unrotated Factor Matrix*

S. R. Brown (1993) contended factor analysis takes the correlation matrix and determines how many different families of sorts are correlated. Each family is unique in that each represents similar Q-sorts clustered together that differ from any other family clusters. According to S. R. Brown (1993), "Factor analysis tells us how many different families (factors) there are" (p. 106). A centroid analysis served to extract an unrotated factor matrix for determining the families. The resulting matrix ($m \times N$) indicates the sorts correlated with the factors or families (see Appendix K). The closer the number is to -1 or +1, the more correlation the sort has to the factor or family.

Of the eight centroids extracted, seven resulted in eigenvalues greater than 2.00. Eigenvalues less than 1.00 are weak relationship indicators and eigenvalues greater than 1.00 are significant (McKeown & Thomas, 1988). Because the unrotated factor matrix indicated seven factors greater than 2.00, the eighth factor was not considered, although it was greater than 1.00. This allowed for a more succinct differentiation between factors. The eighth, unused factor may hold significance; however, the lower eigenvalue indicated the value to the study would be less than those chosen. Stephenson (1953) posited Q-methodologists usually use "fewer factors than others might employ, on the grounds that, although the data might hold more, [Q-methodologists] are satisfied to find some empirical proof for propositions asserted beforehand—whatever *else* may also be there" (p. 40).

The top seven eigenvalues accounted for 70% of the variance. Factor 1 had an eigenvalue of 16.7081. Factor 2 had an eigenvalue of 4.9525. Factor 3 had an eigenvalue

of 3.1087. Factor 4 had an eigenvalue of 2.862. Factor 5 had an eigenvalue of 2.4287.

Factor 6 had an eigenvalue of 2.3032. Factor 7 had an eigenvalue of 2.0278. The

unrotated factor matrix eigenvalues are given in Table 15.

Table 15

*Unrotated Factor Matrix Eigenvalues*

| Factor | Eigenvalue | % of variance |
|--------|-----------|---------------|
| 1 | 16.7081 | 34 |
| 2 | 4.9525 | 10 |
| 3 | 3.1087 | 6 |
| 4 | 2.862 | 6 |
| 5 | 2.4287 | 5 |
| 6 | 2.3032 | 5 |
| 7 | 2.0278 | 4 |
| 8 | 1.8584 | 4 |

*Rotation*

The seven factors with eigenvalues greater than 2.00 were used to complete a

varimax orthogonal rotation. The varimax orthogonal rotation is not only frequently used,

but also helps to "maximize the purity of saturation of as many variates (Q-sorts) as

possible on one or the other of the *m* factors extracted initially" (McKeown & Thomas,

1988, p. 52). The use of rotation helps to create a stronger correlation between the actual

Q-sorts and the factors, especially with more "complicated data" (Stephenson, 1953, p.

123). Upon completion of the varimax orthogonal rotation, four factors were created with

significant loadings representing 55% of the total variance. The loadings were on a scale

of -1.00 to +1.00. A score of -1.00 indicated the Q-sort did not correlate at all with the

given factor, 0 meant the Q-sort neither correlated nor did not correlate with the given

factor, and +1.00 meant the Q-sort correlated completely with the given factor. For

example, Q-sort 3 has a weight of 0.6115 for Factor 1, indicating a high correlation with

Factor 1. The rotated factor matrix is given in Table 16.

Table 16

*Rotated Factor Matrix With X Indicating a Defining Sort*

| Q-sort | Loading 1 | Loading 2 | Loading 3 | Loading 4 |
|---|---|---|---|---|
| 1 | 0.5603 | 0.3135 | -0.4451 | 0.1615 |
| 2 | 0.4595 | 0.0102 | -0.5309 | -0.1765 |
| 3 | 0.6115X | -0.0948 | -0.1782 | 0.0691 |
| 4 | 0.4305 | 0.4738 | -0.4165 | 0.1528 |
| 5 | -0.0385 | -0.4162 | -0.1267 | -0.2416 |
| 6 | 0.1675 | 0.5910 | -0.0744 | 0.4145 |
| 7 | 0.6446X | 0.1722 | 0.4690 | -0.0493 |
| 8 | 0.6271X | -0.2271 | -0.1583 | 0.1412 |
| 9 | 0.6077 | -0.2489 | 0.2101 | -0.1531 |
| 10 | 0.7216X | 0.0602 | 0.1822 | -0.0106 |
| 11 | 0.1510 | 0.1203 | 0.5013X | 0.0387 |
| 12 | 0.6547X | -0.0144 | 0.2503 | 0.4254 |
| 13 | 0.8107X | -0.1529 | 0.0912 | -0.2101 |
| 14 | 0.5653X | -0.0897 | -0.2749 | 0.1491 |
| 15 | 0.3179 | 0.7140X | 0.3212 | 0.0591 |
| 16 | -0.1181 | 0.8257X | 0.0036 | -0.1763 |
| 17 | 0.2710 | 0.6343X | 0.2536 | -0.3272 |
| 18 | 0.5650X | -0.2480 | -0.0271 | 0.3320 |
| 19 | 0.6198X | 0.2100 | 0.0860 | -0.1154 |
| 20 | 0.6321X | -0.1073 | -0.4030 | -0.0724 |
| 21 | 0.6233X | -0.3033 | -0.0770 | 0.2148 |
| 22 | 0.7187X | -0.2026 | 0.0740 | 0.2377 |
| 23 | 0.7120X | -0.0369 | -0.1546 | -0.2108 |
| 24 | 0.6823X | 0.2110 | -0.1141 | -0.2350 |
| 25 | 0.7093X | -0.1622 | 0.1042 | 0.1600 |
| 26 | 0.6734X | -0.0877 | 0.0497 | 0.1770 |
| 27 | 0.4292 | -0.0060 | 0.1898 | -0.6106X |
| 28 | 0.7613X | -0.0160 | 0.3087 | -0.3441 |
| 29 | 0.4835 | -0.2028 | -0.2101 | -0.2656 |
| 30 | 0.2482 | 0.3581 | -0.1702 | -0.0403 |
| 31 | 0.7016X | 0.1268 | -0.1531 | -0.1363 |
| 32 | 0.6517 | -0.1926 | 0.4593 | -0.1671 |
| 33 | 0.5648 | -0.0109 | 0.4585 | 0.3911 |

Table 16 (*continued*)

| Q-sort | Loading 1 | Loading 2 | Loading 3 | Loading 4 |
|---|---|---|---|---|
| 34 | 0.7504X | -0.2085 | -0.0715 | -0.1133 |
| 35 | 0.7827X | 0.0857 | -0.0308 | -0.0289 |
| 36 | 0.6443X | 0.3027 | -0.0555 | -0.0902 |
| 37 | 0.5545 | -0.3007 | -0.0624 | -0.0552 |
| 38 | 0.3178 | 0.8249X | 0.1290 | -0.2325 |
| 39 | 0.8069X | -0.1685 | -0.1147 | 0.0358 |
| 40 | 0.5873X | 0.2712 | -0.3003 | 0.1369 |
| 41 | 0.6591X | -0.1650 | 0.3347 | 0.2051 |
| 42 | 0.6310X | -0.1176 | 0.1993 | 0.1086 |
| 43 | 0.6078X | 0.2430 | -0.1442 | -0.0706 |
| 44 | 0.2002 | -0.2392 | 0.1825 | 0.2917 |
| 45 | 0.6622X | -0.0058 | -0.1277 | -0.1392 |
| 46 | 0.1961 | 0.3211 | -0.0220 | 0.0797 |
| 47 | 0.8392X | -0.1498 | -0.1626 | 0.0709 |
| 48 | 0.1813 | 0.6665X | -0.0610 | 0.4907 |
| 49 | 0.7715X | -0.1264 | -0.0205 | -0.1071 |
| % of total variance explained | 34 | 10 | 6 | 5 |

*Factor Scores*

The four factor loadings each had at least one Q-sort that was a defining sort, meaning that at least one sort exhibited close alignment with the given factor. For example, Factor 3 defining sort was Q-sort 11, which had a weight of .5013. Thus, each factor had at least one Q-sort that loaded to the factor.

In Q-methodology, interpretation is primarily based upon factor scores, so a factor array was created for each identified factor. McKeown and Thomas (1998) contended, "Factor scores are computed as *z*-scores, but for convenience are converted into whole numbers" (p. 53). The Q-sort values for each statement with each factor are in Appendix L. When researchers create factor arrays, they make comparisons between the factors, including distinguishing Q-sample statement placement. To compare factors, standard errors must be defined. McKeown and Thomas indicated the formula for computing the

standard error of the difference is $SED_{x-y} = \sqrt{SE^2_x + SE^2_y}$. In the formula, "x and y

represent scores given the same statement by factors x and y, and SE refers to the

standard error for each of these scores" (McKeown & Thomas, p. 54). When comparing

standard error differences in normalized factor scores, the lower the value, the more

reliable the results. Standard errors for differences in normalized factor scores are in

Table 17.

Table 17

*Standard Errors for Differences in Normalized Factor Scores*

| Factors | 1 | 2 | 3 | 4 |
|---------|-------|-------|-------|-------|
| 1 | 0.131 | 0.237 | 0.457 | 0.457 |
| 2 | 0.237 | 0.309 | 0.498 | 0.498 |
| 3 | 0.457 | 0.498 | 0.632 | 0.632 |
| 4 | 0.457 | 0.498 | 0.632 | 0.632 |

Thus, the standard errors for differences in normalized factor scores indicated

people who loaded on Factor 1 are more likely to duplicate their sorts than people who

loaded on Factor 4. With a score of 0.131, Factor 1 is more stable.

With normalized factor scores, a definition of factor characteristics can occur.

McKeown and Thomas (1988) posited part of determining differences between factors is

based upon the reliability of the factor and a researcher can gauge a factor's reliability

through the use of a mathematical formula. McKeown and Thomas contended, "The

magnitude of error associated with factor scores diminishes as factor reliability increases"

(p. 54).

A total of 29 defining variables exist for Factor 1 with an average reliability

coefficient of 0.80, resulting in a composite reliability of 0.991 and a standard error factor

score of 0.092. Five defining variables exist for Factor 2 with an average reliability

coefficient of 0.80, resulting in a composite reliability of 0.952 and a standard error of

factor scores of 0.218. One defining variable exists for Factor 3 with an average

reliability coefficient of 0.80, resulting in a composite reliability of 0.80 and a standard

error of 0.447. One defining variable exists for Factor 4 with an average reliability

coefficient of 0.80, resulting in a composite reliability of 0.80 and a standard error of

0.447. Factor characteristics are in Table 18.

Table 18

*Factor Characteristics*

| Characteristic | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Number of defining sorts | 29 | 5 | 1 | 1 |
| Average reliability coefficient | 0.80 | 0.80 | 0.80 | 0.80 |
| Composite reliability | 0.991 | 0.952 | 0.80 | 0.80 |
| Standard error of factor scores | 0.092 | 0.218 | 0.447 | 0.447 |

The standard for valid data is a reliability score of 0.80, "assuming that the same

person will render Q-sort orderings with the same Q-sample at different times that

correlate upwards of .80" (McKeown & Thomas, 1988, p. 54). Thus, the factor

characteristics indicated the data were valid and reliable.

*Correlation Between Factor Scores*

Four factors with eigenvalues greater than 2.00 and multiple loadings were

identified. Standard errors for differences in normalized factor scores and factor

characteristics underwent review for validity. Next, standard correlation was completed

between factor scores. Standard correlation between factor scores indicated whether the

factors are more pure or mixed (Stephenson, 1953) and whether the relationships are

strong or weak. Strong relationships are greater than 0.50. Factor 1 and 2 correlation was

0.1485. Factor 1 and 3 correlation was 0.1228. Factor 1 and 4 correlation was -0.3785.

Factor 2 and 3 correlation was 0.2229 and Factor 2 and 4 correlation was -0.0779. Factor

3 and 4 correlation was -0.1562. No strong correlation existed among the four factors,

either positive or negative. The strongest relationship was between Factors 1 and 4 with -

0.3785, indicating if a person related most with Factor 1, that person would not relate

with Factor 4. Q-sorts that loaded on one factor identified most with that factor and no

other factor. Table 19 includes the correlations between factor scores.

Table 19

*Correlations Between Factor Scores*

| Factor | 1 | 2 | 3 | 4 |
|--------|--------|--------|--------|---------|
| 1 | 1.0000 | 0.1485 | 0.1228 | -0.3785 |
| 2 | 0.1485 | 1.0000 | 0.2229 | -0.0779 |
| 3 | 0.1228 | 0.2229 | 1.0000 | -0.1562 |
| 4 | -0.3785 | -0.0779 | -0.1562 | 1.0000 |

The rank statement totals with each factor indicate how each statement ranked

within each factor (see Appendix M). The descending array of differences between

factors that indicates comparisons of statement ranks between Factors 1 and 2, 1 and 3, 1

and 4, 2 and 3, 2 and 4, and 3 and 4 is in Appendix N. The normalized factor scores for

each factor, which result in $z$-scores for each statement within the factor, are in Appendix

O.

*Emergent Factors Defining Teacher Retention Among Groupings of Participants*

The four emergent factors teachers indicated most influence retention were

empowerment with emotional support, family lifestyle with intellectual growth, family

lifestyle with serving students, and serving students with physical support. Chapter 4 includes an introduction to each factor and chapter 5 includes further discussion.

Factor 1, empowerment with emotional support, represents a group of participants who remain in teaching mainly because of emotional support from an administrator and colleagues. Their administrators value them as teachers. This group of participants enjoys the professional benefits of empowerment in their classrooms. They have freedom and flexibility to design and execute creative lessons. Empowerment abilities with support from administrators and colleagues keep them in the classroom although time issues are great challenges for them. Family lifestyle, physical materials, and job security do not affect retention for this group of teachers. Table 20 includes the complete factor array for empowerment with emotional support.

Factor 2, family lifestyle with intellectual growth, represents a group of participants who remain in teaching mainly because of their family lifestyles and the intellectual challenges of teaching. They are able to be at home with family, take care of family, and take time off work for family more as a result of selecting a career in teaching. This group of participants enjoys the professional benefits of enhancing their intellectual abilities as teachers in classrooms. The ability to focus on their family lifestyle while keeping their intellect active keeps them in the classroom although their administrators cause negative emotional challenges for them. Colleagues, past and present training, materials, and serving students do not influence the retention of this group of teachers. Table 21 includes the complete factor array for family lifestyle with intellectual growth.

Table 20

*Factor 1 Array—Empowerment With Emotional Support*

| Rank | No. | Statement |
|------|-----|-----------|
| +4 | 17 | Comfortable because of a supportive administrator[a] |
| +4 | 18 | Happy because of supportive colleagues |
| +3 | 25 | Able to be creative designing lessons with materials available |
| +3 | 28 | Freedom and flexibility in the classroom[b] |
| +3 | 36 | Administrator values me as a teacher[a] |
| +2 | 15 | Enjoy being in school |
| +2 | 20 | School has a supportive learning environment for teachers |
| +2 | 30 | Able to teach students although they are disadvantaged |
| +2 | 31 | Enjoy the intellectual challenge of teaching |
| +1 | 5 | Help students grow because of supportive student learning environment |
| +1 | 8 | Provide equitable education because of school climate |
| +1 | 26 | Able to give back to community although in rough area |
| +1 | 27 | Receive satisfaction in fulfilling professional commitment |
| +1 | 32 | Receive respect from others |
| 0 | 1 | Make a difference because of adequate materials |
| 0 | 3 | Provide equitable education because of materials |
| 0 | 13 | Job security |
| 0 | 19 | Better able to take care of family |
| 0 | 21 | Able to take off work for family or personal issues |
| 0 | 22 | Able to be at home with family more |
| 0 | 29 | Produce desired effect even with student discipline issues |
| 0 | 33 | Able to select professional development that works for me[a] |
| -1 | 2 | Make a difference because the school facility is adequate[a] |
| -1 | 4 | Provide equitable education because of adequate school facility[b] |
| -1 | 6 | Help student grow because of supportive parents |
| -1 | 12 | Serve students better because of adequate preservice training |
| -1 | 34 | Opportunities for career advancement if I want them |
| -2 | 7 | Make a difference because of positive induction and mentoring |
| -2 | 9 | Serve students better because of pay structure and benefits |
| -2 | 14 | Community where I teach similar to where I grew up |
| -2 | 35 | The district treats me as a professional |
| -3 | 10 | Provide equitable education because of standardized testing |
| -3 | 11 | Nowhere else to go after many years of service |
| -3 | 16 | Don't have to spend too much time at the school |
| -4 | 23 | Does not require too much time compared to other jobs[a] |
| -4 | 24 | Time to complete most teaching tasks during contract time[b] |

[a]Distinguishing statements for the factor. [b]Statements are unique to the factor.

Factor 3, family lifestyle with serving students, represents a group of teachers who remain in teaching mainly because of their ability to better take care of and be at home with family because of their teaching career. This group of teachers enjoys serving students. Teachers who align with Factor 3 perceive they like making a difference in the lives of students in an adequate facility and helping students grow through supportive parents. This group of teachers also indicates other jobs require more time than a career in teaching. Maintaining their family lifestyle while serving students keeps them in the classroom although standardized testing and mobility to another career are negatives for them. School climate, induction and mentoring, preservice training, and professional respect do not influence their retention. Table 22 includes the complete factor array for family lifestyle with serving students.

Table 21

*Factor 2 Array—Family Lifestyle With Intellectual Growth*

| Rank | No. | Statement |
|------|-----|-----------|
| +4 | 22 | Able to be at home with family more |
| +4 | 31 | Enjoy the intellectual challenge of teaching |
| +3 | 19 | Better able to take care of family |
| +3 | 21 | Able to take off work for family or personal issues |
| +3 | 30 | Able to teach students although they are disadvantaged |
| +2 | 13 | Job security |
| +2 | 25 | Able to be creative designing lessons with materials available |
| +2 | 26 | Able to give back to community although in rough area |
| +2 | 29 | Produce desired effect even with student discipline issues[a] |
| +1 | 2 | Make a difference because the school facility is adequate[b] |
| +1 | 3 | Provide equitable education because of materials[b] |
| +1 | 4 | Provide equitable education because of adequate school facility |
| +1 | 15 | Enjoy being in school |
| +1 | 28 | Freedom and flexibility in the classroom |
| 0 | 1 | Make a difference because of adequate materials |
| 0 | 8 | Provide equitable education because of school climate |
| 0 | 11 | Nowhere else to go after many years of service |
| 0 | 12 | Serve students better because of adequate preservice training |
| 0 | 14 | Community where I teach similar to where I grew up |
| 0 | 18 | Happy because of supportive colleagues |
| 0 | 32 | Receive respect from others |
| 0 | 33 | Able to select professional development that works for me |
| -1 | 7 | Make a difference because of positive induction and mentoring |
| -1 | 23 | Does not require too much time compared with other jobs |
| -1 | 24 | Time to complete most teaching tasks during contract time |
| -1 | 34 | Opportunities for career advancement if I want them |
| -1 | 35 | The district treats me as a professional |
| -2 | 5 | Help students grow because of supportive student learning environment |
| -2 | 6 | Help students grow because of supportive parents |
| -2 | 9 | Serve students better because of pay structure and benefits |
| -2 | 27 | Receive satisfaction in fulfilling professional commitment |
| -3 | 10 | Provide equitable education because of standardized testing |
| -3 | 16 | Don't have to spend too much time at the school |
| -3 | 20 | School has a supportive learning environment for teachers[b] |
| -4 | 17 | Comfortable because of a supportive administrator[b] |
| -4 | 36 | Administrator values me as a teacher[b] |

[a]Statements are unique to the factor. [b]Distinguishing statements for the factor.

Table 22

*Factor 3 Array—Family Lifestyle With Serving Students*

| Rank | No. | Statement |
|------|-----|-----------|
| +4 | 19 | Better able to take care of family |
| +4 | 22 | Able to be at home with family more |
| +3 | 2 | Make a difference because the school facility is adequate |
| +3 | 6 | Help students grow because of supportive parents[a] |
| +3 | 23 | Does not require too much time compared with other jobs[b] |
| +2 | 1 | Make a difference because of adequate materials |
| +2 | 18 | Happy because of supportive colleagues |
| +2 | 20 | School has a supportive learning environment for teachers |
| +2 | 21 | Able to take off work for family or personal issues |
| +1 | 4 | Provide equitable education because of adequate school facility |
| +1 | 15 | Enjoy being in school |
| +1 | 27 | Receive satisfaction in fulfilling professional commitment |
| +1 | 31 | Enjoy the intellectual challenge of teaching |
| +1 | 34 | Opportunities for career advancement if I want them |
| 0 | 5 | Help students grow because of supportive student learning environment |
| 0 | 7 | Make a difference because of positive induction and mentoring |
| 0 | 8 | Provide equitable education because of school climate |
| 0 | 12 | Serve students better because of adequate preservice training |
| 0 | 13 | Job security |
| 0 | 16 | Don't have to spend too much time at the school |
| 0 | 32 | Receive respect from others |
| 0 | 35 | The district treats me as a professional |
| -1 | 17 | Comfortable because of a supportive administrator |
| -1 | 24 | Time to complete most teaching tasks during contract time |
| -1 | 25 | Able to be creative designing lessons with materials available |
| -1 | 28 | Freedom and flexibility in the classroom |
| -1 | 29 | Produce desired effect even with student discipline issues |
| -2 | 3 | Provide equitable education because of materials |
| -2 | 14 | Community where I teach similar to where I grew up |
| -2 | 30 | Able to teach students although they are disadvantaged |
| -2 | 36 | Administrator values me as a teacher |
| -3 | 9 | Serve students better because of pay structure and benefits |
| -3 | 26 | Able to give back to community although in rough area[a] |
| -3 | 33 | Able to select professional development that works for me[b] |
| -4 | 10 | Provide equitable education because of standardized testing |
| -4 | 11 | Nowhere else to go after many years of service |

[a]Distinguishing statements for the factor. [b]Statements are unique to the factor.

Factor 4, serving students with physical support, represents a group of teachers who remain in teaching mainly because of the ability to provide an equitable education for students as well as teaching in a community that is similar to where they grew up. Having adequate and available materials helps them provide an equitable education for students. This group of teachers enjoys serving students by making a difference in their lives with adequate materials and an adequate school facility. They are also able to provide an equitable education for students because of the school climate. Serving students with physical supports in place and in a community similar to where they grew up keep this group of teachers in the classroom although they don't enjoy being in school nor do they receive satisfaction in fulfilling a professional commitment. Standardized testing, time, administrators, giving back to the community, and being treated as a professional do not influence the retention of this group of teachers. Table 23 includes the complete factor array for serving students with physical support.

The emergent factors that distinguish groupings of teachers and the characteristics that do or do not assist in teacher retention will be discussed further with reference to the research questions, independently as factors, and in chapter 5 with interpretations of the data.

Table 23

*Factor 4 Array—Serving Students With Physical Support*

| Rank | No. | Statement |
|------|-----|-----------|
| +4 | 3 | Provide equitable education because of materials[a] |
| +4 | 14 | Community where I teach similar to where I grew up[b] |
| +3 | 1 | Make a difference because of adequate materials |
| +3 | 2 | Make a difference because the school facility is adequate |
| +3 | 8 | Provide equitable education because of school climate |
| +2 | 7 | Make a difference because of positive induction and mentoring |
| +2 | 13 | Job security |
| +2 | 33 | Able to select professional development that works for me |
| +2 | 34 | Opportunities for career advancement if I want them |
| +1 | 4 | Provide equitable education because of adequate school facility |
| +1 | 9 | Serve students better because of pay structure and benefits[b] |
| +1 | 11 | Nowhere else to go after many years of service |
| +1 | 21 | Able to take off work for family or personal issues |
| +1 | 32 | Receive respect from others |
| 0 | 10 | Provide equitable education because of standardized testing[b] |
| 0 | 16 | Don't have to spend too much time at the school |
| 0 | 17 | Comfortable because of a supportive administrator |
| 0 | 22 | Able to be at home with family more |
| 0 | 24 | Time to complete most teaching tasks during contract time |
| 0 | 26 | Able to give back to community although in rough area |
| 0 | 35 | The district treats me as a professional |
| 0 | 36 | Administrator values me as a teacher |
| -1 | 5 | Help students grow because of supportive student learning environment |
| -1 | 6 | Help students grow because of supportive parents |
| -1 | 18 | Happy because of supportive colleagues |
| -1 | 20 | School has a supportive learning environment for teachers[a] |
| -1 | 23 | Does not require too much time compared with other jobs |
| -2 | 12 | Serve students better because of adequate preservice training |
| -2 | 19 | Better able to take care of family |
| -2 | 28 | Freedom and flexibility in the classroom |
| -2 | 29 | Produce desired effect even with student discipline issues |
| -3 | 25 | Able to be creative designing lessons with materials available |
| -3 | 30 | Able to teach students although they are disadvantaged |
| -3 | 31 | Enjoy the intellectual challenge of teaching[b] |
| -4 | 15 | Enjoy being in school[b] |
| -4 | 27 | Receive satisfaction in fulfilling professional commitment |

[a]Distinguishing statements for the factor. [b]Statements unique to the factor.

Research Questions

The main research question for the study was: What factors do veteran teachers use to explain their retention?

From the literature review, the following groups of factors were ascertained: demographic, preservice, service, school climate, system, empowerment, intellectual, and personal. Constructs were then allocated within a concourse of two factors including personal and structural, with three levels within each factor, resulting in the following specific subquestions:

1. What effect do personal factor levels such as serving students, fitting lifestyle, and professional fulfillment have on teacher retention?

2. What effect do structural factor levels such as physical, emotional, and systemic structures have on teacher retention?

*Research Question 1*

Research Question 1 was: What effect do personal factor levels such as serving students, fitting lifestyle, and professional fulfillment have on teacher retention? Information specifically related to serving students, fitting lifestyle, and professional fulfillment and the distinguishing factor statements that emerged along with the ranking of influence follows.

The distinguishing statements for Factor 1 correlated with Research Question 1 serving students included Statements 2 and 4 as a -1 rank, *had somewhat not influenced teacher retention*. Statement 2 was about making a difference with students because of

the school facility. Statement 4 was about providing an equitable education for students because of the school facility.

The distinguishing statements for Factor 2 correlated with Research Question 1 serving students included Statements 2 and 3. Statement 2 was about making a difference because of an adequate school facility and was ranked +1, *had somewhat influenced teacher retention*. Statement 3 was about providing an equitable education for all students because of adequate materials and was also ranked +1, *had somewhat influenced teacher retention*.

The distinguishing statement for Factor 3 correlated with Research Question 1 serving students was Statement 6. Statement 6 was about helping young people grow because of supportive parents and was ranked +3, *had definitely influenced teacher retention*.

The distinguishing statement for Factor 4 correlated with Research Question 1 serving students included Statements 3, 9, and 10. Statement 3 was about providing an equitable education for all students because of adequate materials and was ranked -1, *had somewhat not influenced teacher retention*. Statement 9 was about serving students better because of adequate pay and benefits and was ranked +1, *had somewhat influenced teacher retention*. Statement 10 was about providing an equitable education for all students because of standardized student testing and was ranked 0, *had neither influenced nor not influenced teacher retention*. Table 24 includes summaries of Research Question 1 serving students correlated with the distinguishing statements of each factor.

The distinguishing statements for Factor 1 correlated with Research Question 1

fitting lifestyle included Statements 17, 23, and 24. Statement 17 considered comfort

level because of a supportive administrator and was ranked +4, *had most definitely

influenced teacher retention*. Statement 23 indicated teaching did not require too much

time commitment compared with other jobs and was ranked -4, *had most definitely not

influenced teacher retention*. Statement 24 indicated there was enough time to complete

teaching tasks during the teacher contract time and was ranked -4, *had most definitely not

influenced teacher retention*.

Table 24

*Serving Students Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 2. Make a difference because of adequate school facility | -1 |
| 1 | 4. Provide equitable education because of adequate facility | -1 |
| 2 | 2. Make a difference because of adequate school facility | +1 |
| 2 | 3. Provide an equitable education because of adequate materials | +1 |
| 3 | 6. Help young people grow because of supportive parents | +3 |
| 4 | 3. Provide an equitable education because of adequate materials | -1 |
| 4 | 9. Serve students better because of adequate pay structure and benefits | +1 |
| 4 | 10. Provide equitable education because of standardized student testing | 0 |

The distinguishing statements for Factor 2 correlated with Research Question 1

fitting lifestyle included Statements 17 and 20. Statement 17 was about comfort level

because of a supportive administrator and was ranked -4, *had most definitely not

influenced teacher retention*. Statement 20 was about the school having a supportive

learning environment for teachers and was ranked -3, *had definitely not influenced

teacher retention*.

The distinguishing statement for Factor 3 correlated with Research Question 1 fitting lifestyle was Statement 23. Statement 23 indicated being a teacher does not require too much time commitment compared with other jobs and was ranked +3, *had definitely influenced teacher retention*.

The distinguishing statements for Factor 4 correlated with Research Question 1 fitting lifestyle included Statements 14, 15, and 20. Statement 14 was about remaining in teaching because the community is similar to where the teacher grew up and was ranked +4, *had most definitely influenced teacher retention*. Statement 15 indicated the teacher enjoyed being in school and was ranked -4, *had most definitely not influenced teacher retention*. Statement 20 indicated the school has a supportive learning environment for teachers and was ranked -1, *had somewhat not influenced teacher retention*. Table 25 includes summaries of Research Question 1 fitting lifestyle correlated with the distinguishing statements of each factor.

Table 25

*Fitting Lifestyle Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 17. Comfortable because of a supportive administrator | +4 |
| 1 | 23. Not too much time commitment compared with other jobs | -4 |
| 1 | 24. Enough time to complete most teaching tasks during contract time | -4 |
| 2 | 17. Comfortable because of a supportive administrator | -4 |
| 2 | 20. Supportive learning environment for teachers | -3 |
| 3 | 23. Not too much time commitment compared with other jobs | +3 |
| 4 | 14. Teaching community similar to where teacher grew up | +4 |
| 4 | 15. Enjoy being in school | -4 |
| 4 | 20. Supportive learning environment for teachers | -1 |

The distinguishing statements for Factor 1 correlated with Research Question 1 professional fulfillment included Statements 28 and 33. Statement 28 was about having

freedom and flexibility in the classroom and was ranked +4, *had most definitely influenced teacher retention*. Statement 33 was about selecting professional development and was ranked 0, *had neither influenced nor not influenced teacher retention*.

The distinguishing statements for Factor 2 correlated with Research Question 1 professional fulfillment included Statements 29 and 36. Statement 29 was about producing the desired effect even with student discipline issues and was ranked +2, *had influenced teacher retention*. Statement 36 indicated the administrator valued the teacher and was ranked -4, *had most definitely not influenced teacher retention*.

The distinguishing statements for Factor 3 correlated with Research Question 1 professional fulfillment included Statements 26 and 33. Statement 26 was about giving back to the community although it was in a rougher area of town and was ranked -3, *had definitely not influenced teacher retention*. Statement 33 was about selecting professional development that works for the teacher and was ranked -3, *had definitely not influenced teacher retention*.

The distinguishing statement for Factor 4 correlated with Research Question 1 professional fulfillment was Statement 31. Statement 31 was about enjoying the intellectual challenge of teaching and was ranked -3, *had definitely not influenced teacher retention*. Table 26 includes summaries of Research Question 1 professional fulfillment correlated with the distinguishing statements of each factor.

Table 26

*Professional Fulfillment Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 28. Freedom and flexibility in the classroom | +4 |
| 1 | 33. Able to select professional development that works | 0 |
| 2 | 29. Able to produce desired effect even with student discipline issues | +2 |
| 2 | 36. Administrator values teacher | -4 |
| 3 | 26. Able to give back to community although in a rougher area of town | -3 |
| 3 | 33. Able to select professional development that works | -3 |
| 4 | 31. Enjoy intellectual challenge of teaching | -3 |

*Research Question 2*

Research Question 2 was What effect do structural factor levels such as physical, emotional, and systemic structures have on teacher retention? Information specifically related to physical, emotional, and systemic structures and the distinguishing factor statements that emerged along with ranking of influence follows.

The distinguishing statements for Factor 1 correlated with Research Question 2 physical structures included Statements 2, 4, and 28. Statement 2 was about making a difference with students because of the school facility and was ranked -1, *had somewhat not influenced teacher retention*. Statement 4 was about providing an equitable education for students because of the school facility and was ranked -1, *had somewhat not influenced teacher retention*. Statement 28 was about freedom and flexibility in the classroom and was ranked 3, *had definitely influenced teacher retention*.

The distinguishing statements for Factor 2 correlated with Research Question 2 physical structures included Statements 2, 3, and 29. Statement 2 was about making a difference with students because of the school facility and was ranked +1, *had somewhat influenced teacher retention*. Statement 3 was about providing an equitable education for

all students because of adequate materials and was ranked +1, *had somewhat influenced teacher retention*. Statement 29 was about producing the desired effect even with student discipline issues and was ranked +2, *had influenced teacher retention*.

The distinguishing statement for Factor 3 correlated with Research Question 2 physical structures was Statement 26. Statement 26 was about giving back to the community although it is in a rougher area of town and was ranked -3, *had definitely not influenced teacher retention*.

The distinguishing statements for Factor 4 correlated with Research Question 2 physical structures included Statements 3, 14, and 15. Statement 3 was about providing an equitable education for all students because of adequate materials and was ranked +4, *had most definitely influenced teacher retention*. Statement 14 was about remaining in teaching because the school community was similar to the community where the teacher grew up and was ranked +4, *had most definitely influenced teacher retention*. Statement 15 indicated the teacher enjoyed being in school and was ranked -4, *had most definitely not influenced teacher retention*. Table 27 includes summaries of Research Question 2 physical structures correlated with the distinguishing statements of each factor.

Table 27

*Physical Structures Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 2. Make a difference with students because of adequate school facility | -1 |
| 1 | 4. Equitable education for students because of adequate school facility | -1 |
| 1 | 28. Freedom and flexibility in the classroom | +3 |
| 2 | 2. Make a difference with students because of adequate school facility | +1 |
| 2 | 3. Equitable education for students because of adequate materials | +1 |
| 2 | 29. Produce desired effect even with student discipline issues | +2 |
| 3 | 26. Give back to community although in a rougher area of town | -3 |
| 4 | 3. Equitable education for students because of adequate materials | +4 |
| 4 | 14. Community similar to community where teacher grew up | +4 |
| 4 | 15. Enjoy being in school | -4 |

The distinguishing statement for Factor 1 correlated with Research Question 2 emotional structures was Statement 17. Statement 17 was about feeling comfortable where the teacher works because of a supportive administrator and was ranked +4, *had most definitely influenced teacher retention*.

The distinguishing statements for Factor 2 correlated with Research Question 2 emotional structures included Statements 17 and 20. Statement 17 was about feeling comfortable where the teacher works because of a supportive administrator and was ranked -4, *had most definitely not influenced teacher retention*. Statement 20 was about the school having a supportive learning environment for teachers and was ranked -3, *had definitely not influenced teacher retention.*

The distinguishing statement for Factor 3 correlated with Research Question 2 emotional structures was Statement 6. Statement 6 was about helping young people grow because of supportive parents and was ranked +3, *had definitely influenced teacher retention*.

The distinguishing statements for Factor 4 correlated with Research Question 2 emotional structures included Statements 20 and 31. Statement 20 was about the school having a supportive learning environment for teachers and was ranked -1, *had somewhat not influenced teacher retention.* Statement 31 was about enjoying the intellectual challenge of teaching and was ranked -3, *had definitely not influenced teacher retention.* Table 28 includes summaries of Research Question 2 emotional structures correlated with the distinguishing statements of each factor.

Table 28

*Emotional Structures Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 17. Comfortable where teaching because of a supportive administrator | +4 |
| 2 | 17. Comfortable where teaching because of a supportive administrator | -4 |
| 2 | 20. School has supportive learning environment for teachers | -3 |
| 3 | 6. Help young people grow because of supportive parents | +3 |
| 4 | 20. School has supportive learning environment for teachers | -1 |
| 4 | 31. Enjoy intellectual challenge of teaching | -3 |

The distinguishing statements for Factor 1 correlated with Research Question 2 systemic structures included Statements 23, 24, 33, and 36. Statement 23 indicated being a teacher does not require too much time commitment compared with other jobs and was ranked -4, *had most definitely not influenced teacher retention*. Statement 24 indicated there was enough time to complete most teaching tasks during the teacher contract time and was ranked -4, *had most definitely not influenced teacher retention.* Statement 33 indicated the teachers were able to select the professional development that works for them and was ranked 0, *had neither influenced nor not influenced teacher retention*. Statement 36 indicated the administrator valued the individual as a teacher and was ranked +3, *had definitely influenced teacher retention*.

The distinguishing statement for Factor 2 correlated with Research Question 2 systemic structures included Statement 36. Statement 36 indicated the teachers were able to select the professional development that works for them and was ranked -4, *had most definitely not influenced teacher retention.*

The distinguishing statements for Factor 3 correlated with Research Question 2 systemic structures included Statements 23 and 33. Statement 23 indicated being a

teacher does not require too much time commitment compared with other jobs and was ranked +3, *had definitely influenced teacher retention*. Statement 33 indicated the teachers were able to select the professional development that works for them and was ranked -3, *had definitely not influenced teacher retention.*

The distinguishing statements for Factor 4 correlated with Research Question 2 systemic structures included Statements 9 and 10. Statement 9 indicated the teacher was able to serve students better because the pay structure and benefits were adequate and was ranked +1, *had somewhat influenced teacher retention*. Statement 10 indicated the teacher was able to provide an equitable education for all students because of standardized student testing and was ranked 0, *had neither influenced nor not influenced teacher retention*. Table 29 includes summaries of Research Question 2 systemic structures correlated with the distinguishing statements of each factor.

Table 29

*Systemic Structures Correlated With Distinguishing Statements of Factors*

| Factor | Statement | Rank |
|---|---|---|
| 1 | 23. Does not require too much time commitment compared with other jobs | -4 |
| 1 | 24. Time to complete most teaching tasks during the teacher contract time | -4 |
| 1 | 33. Able to select professional development that works | 0 |
| 1 | 36. Administrator values individual as a teacher | +3 |
| 2 | 36. Administrator values individual as a teacher | -4 |
| 3 | 23. Does not require too much time commitment compared with other jobs | +3 |
| 3 | 33. Able to select professional development that works | -3 |
| 4 | 9. Serve students better because pay structure and benefits are adequate | +1 |
| 4 | 10. Equitable education for students because standardized student testing | 0 |

Factors

The four emergent factors extracted from factor analysis were (a) empowerment with emotional support, (b) family lifestyle with intellectual growth, (c) family lifestyle with serving students, and (d) serving students with physical support. Each emergent factor will be outlined with variance, number of people who loaded on the factor, distinguishing characteristics, statements, and corresponding demographic information for those who loaded on the factor. The factors represent groupings of teachers who distributed the Q-sort statements similarly indicating what did or did not influence them to remain teaching in the classroom.

*Factor 1*

Factor 1 was empowerment with emotional support. Factor 1 included 34% of the variance and 29 of the 49 participants loaded on Factor 1 at a value equal to or greater than 0.5650 ($p < .05$). Five of the 29 participants who loaded on Factor 1 were positively significant only to this factor (17%).

The demographic characteristics of participants who loaded on this factor included 4 males (14%), 24 females (83%), and 1 individual of unknown gender (3%), which was fairly consistent with gender percentages of the entire sample.

Of the participants, 11 were in their 30s (38%), 9 were in their 40s (31%), 4 were in their 50s (14%), 4 were in their 60s (14%), and 1 was of unknown age (3%). These percentages slightly differed from the age percentages of the entire sample, with 16 participants in their 30s (33%), 17 in their 40s (35%), 9 in their 50s (18%), 6 in their 60s (12%), and 1 of unknown age (2%).

Race characteristics of participants who loaded on Factor 1 included 1 African American (3.3%), 26 Caucasian (90%), 1 Latino (3.3%), and 1 unknown (3.3%). The percentages differed from the race percentages of the entire sample, with 1 African American (2%), 43 Caucasian (88%), 3 Latino (6%), 1 other (2%), and 1 unknown (2%).

School area demographics of Factor 1 participants included 18 urban (62%), 8 suburban (28%), 1 rural (3%), and 2 unknown (7%), which was fairly consistent with entire sample percentages.

Grades taught by Factor 1 participants included 12 participants teaching kindergarten through 2nd grade (41%), 6 teaching 3rd through 5th grade (21%), 6 teaching 6th through 8th grade (21%), and 5 teaching 9th through 12th grade (17%), which was fairly consistent with entire sample percentages.

Years of teaching in the district of Factor 1 participants included 1 with 6 years (3%), 8 with 7 years (28%), 3 with 8 years (10%), 2 with 9 years (7%), 7 with 10 years (24.5%), 7 with 11 years (24.5%), and 1 unknown (3%). The percentages differed from the years of teaching in the district percentages of the entire sample, with 1 with 6 years (2%), 11 with 7 years (22%), 11 with 8 years (22%), 4 with 9 years (8%), 10 with 10 years (20%), 9 with 11 years (18%), and 1 unknown (2%). Total years teaching in public education of Factor 1 participants included 4 with 7 years (14%), 3 with 8 years (10%), 2 with 9 years (7%), 3 with 10 years (10%), 7 with 11 years (24%), 2 with 14 years (7%), 1 with 15 years (3%), 1 with 17 years (3%), 1 with 19 years (3%), 1 with 29 years (3%), 1 with 35 years (3%), 2 with 40 years (7%), and 1 with 45 years (3%), which was fairly consistent with the percentages of entire sample.

The education of Factor 1 participants included 1 with a bachelor's degree (3%), 2 with a bachelor's plus additional education (7%), 9 with a master's (31%), and 17 with a master's plus additional education (59%). The percentages differed from the education percentages of the entire sample, with 2 with bachelor's degrees (4%), 2 with bachelor's plus additional education (4%), 10 with master's (20%), 34 with master's plus additional education (69%), and 1 with a doctorate (2%).

Subjects taught by Factor 1 participants included the following: 18 taught all subjects (62%), 5 taught science (17%), 4 taught language arts (14%), 1 taught math (3.5%), and 1 taught history (3.5%), which was fairly consistent with the percentages of the entire sample. Table 30 includes Factor 1 loading participants with demographic information.

Table 30

*Factor 1 Loading Participants With Selected Demographics*

| Q-sort | Loading | Gender/age | Grade | Subject | Years teaching in the district/in public schools | School demographics |
|---|---|---|---|---|---|---|
| 3 | 0.6115 | M/52 | 6-8 | Science | 11/11 | Urban |
| 7 | 0.6446 | F/47 | 9-12 | Science | 7/17 | Suburban |
| 8 | 0.6271 | F/53 | K-2 | All | 7/7 | unknown |
| 10 | 0.7216 | M/63 | 9-12 | Science | 6/40 | Suburban |
| 12 | 0.6547 | F/34 | 3-5 | All | 8/8 | Urban |
| 13 | 0.8107 | M/43 | 3-5 | All | 11/11 | Urban |
| 14 | 0.5653 | F/33 | 6-8 | Math | 10/10 | Urban |
| 18 | 0.5650 | F/38 | K-2 | All | 10/14 | Suburban |
| 19 | 0.6198 | F/32 | K-2 | All | 10/10 | Urban |
| 20 | 0.6321 | F/37 | K-2 | All | 8/15 | Urban |
| 21 | 0.6233 | F/57 | K-2 | All | 10/19 | Urban |
| 22 | 0.7187 | F/45 | 3-5 | All | 7/7 | Suburban |
| 23 | 0.7120 | F/45 | 9-12 | History | 10/10 | Urban |
| 24 | 0.6823 | F/31 | 6-8 | Language arts | 7/8 | Urban |
| 25 | 0.7093 | F/67 | 3-5 | All | 10/45 | Urban |
| 26 | 0.6734 | F/32 | K-2 | All | 11/11 | Rural |
| 28 | 0.7613 | F/38 | 9-12 | Science | 7/7 | Urban |
| 31 | 0.7016 | F/50 | 6-8 | Language arts | 9/9 | Urban |
| 34 | 0.7504 | M/60 | 9-12 | Language Arts | 17/35 | Suburban |
| 35 | 0.7827 | F/36 | 6-8 | Science | 11/11 | Urban |
| 36 | 0.6443 | F/33 | 6-8 | Language arts | 11/11 | Urban |
| 39 | 0.8069 | F/41 | K-2 | All | 9/9 | Urban |
| 40 | 0.5873 | F/34 | 3-5 | All | 11/11 | Suburban |
| 41 | 0.6591 | F/45 | 3-5 | All | 7/7 | Suburban |
| 42 | 0.6310 | F/40 | K-2 | All | 8/8 | Urban |
| 43 | 0.6078 | ?/? | K-2 | All | 11/29 | Unknown |
| 45 | 0.6622 | F/65 | K-2 | All | 7/40 | Urban |
| 47 | 0.8392 | F/40 | K-2 | All | 10/11 | Suburban |
| 49 | 0.7715 | F/40 | K-2 | All | 7/14 | Urban |

Five of the 29 participants who loaded for Factor 1 were positively significant only to this factor (17%). Factor 1 had eight distinguishing statements, with six of the statements significant at *p* < .01. One statement ranked as *most definitely had influenced teacher retention* (+4): that the teachers were comfortable where they teach because of a supportive administrator. Two statements ranked as *most definitely had not influenced teacher retention* (-4): that being a teacher does not require too much time commitment compared with other jobs and that there is enough time to complete most teaching tasks during the teacher contract time. Two statements ranked as *definitely had influenced teacher retention* (+3): that the administrator values the teacher and that the teacher has freedom and flexibility in the classroom. Two statements ranked as *somewhat not influencing teacher retention* (-1): that the teacher was able to make a difference with students because the school facility was adequate and the teacher was able to provide an equitable education for all students because the school facility was adequate. One statement ranked as *neither influencing nor not influencing teacher retention* (0): that the teachers were able to select the professional development that works for them. Three statements were unique to Factor 1. One was positive about freedom and flexibility in the classroom. Two were negative about providing an equitable education because of adequate school facility and ability to complete most teaching tasks during contract time. Table 31 includes Factor 1 distinguishing statements. Appendix P includes individual free-writing comments from participants who loaded on Factor 1.

Table 31

*Factor 1 Distinguishing Statements*

| No. | Statement | Rank | Score |
|---|---|---|---|
| 17 | Comfortable where teaching because of supportive administrator | +4 | 1.58* |
| 36 | Administrator values individual as a teacher | +3 | 1.46* |
| 28 | Teacher has freedom and flexibility in the classroom | +3 | 1.46*[a] |
| 33 | Able to select professional development that works for individual | 0 | -0.31** |
| 2 | Make a difference with students because of adequate facility | -1 | -0.39* |
| 4 | Equitable education for students because of adequate facility | -1 | -0.45*[a] |
| 23 | Does not require too much time compared with other jobs | -4 | -1.68* |
| 24 | Enough time to complete most teaching tasks during contract time | -4 | -1.75*[a] |

[a]Statements are unique to Factor 1.
*$p < .01$. **$p < .05$.

*Factor 2*

Factor 2 was family lifestyle with intellectual growth. Factor 2 included 10% of the variance and 5 of the 49 participants loaded on this factor at a value equal to or greater than 0.6343 ($p < .05$).

Demographic characteristics of participants who loaded on Factor 2 included 5 females (100%). Three participants were in their 30s (60%) and 2 were in their 40s (40%). Race characteristics of participants who loaded on Factor 2 included 4 Caucasian (80%) and 1 other (20%). School area demographics of Factor 2 participants included 4 urban (80%) and 1 suburban (20%). Grades taught by Factor 2 participants included 3 teaching kindergarten through 2nd grade (60%), 1 teaching 3rd through 5th grade (20%), and 1 teaching 9th through 12th grade (20%). Years of teaching in the district for Factor 2 participants included 1 participant with 7 years (20%), 1 with 8 years (20%), 2 with 10 years (40%), and 1 with 15 years (20%). Total years teaching in public education for Factor 2 participants included 1 with 9 years (20%), 2 with 10 years (40%), 1 with 12

years (20%), and 1 with 15 years (20%). The education for Factor 2 participants included

5 master's degrees plus additional education (100%). Subjects taught by Factor 2

participants included the following: 4 taught all subjects (80%) and 1 taught science

(20%). Table 32 includes Factor 2 loading participants with selected demographics.

Table 32

*Factor 2 Loading Participants With Selected Demographics*

| Q-sort | Loading | Gender/age | Grade | Subject | Years teaching in the district/in public schools | School demographic |
|---|---|---|---|---|---|---|
| 15 | 0.7140 | F/39 | 3-6 | All | 7/9 | Urban |
| 16 | 0.8257 | F/36 | K-2 | All | 10/10 | Suburban |
| 17 | 0.6343 | F/43 | 9-12 | Science | 8/12 | Urban |
| 38 | 0.8249 | F/37 | K-2 | All | 15/15 | Urban |
| 48 | 0.6665 | F/42 | K-2 | All | 10/10 | Urban |

No participants who loaded for Factor 2 were positively significant only to this

factor. Factor 2 had six distinguishing statements, with two of the statements significant

at $p < .01$. Two statements ranked as *most definitely had not influenced teacher retention*

(-4): that the teachers were comfortable where they teach because of a supportive

administrator and that the administrator values the individual as a teacher. One statement

ranked as *definitely had not influenced teacher retention* (-3): that the school had a

supportive learning environment for teachers. One statement ranked as *had influenced*

*teacher retention* (+2): that the teacher was able to produce the desired effect even with

student discipline issues. Two statements ranked as *had somewhat influenced teacher*

*retention* (+1): that the teacher was able to make a difference with students because the

school facility was adequate and that the teacher was able to provide an equitable

education for all students because of adequate materials. One statement was unique to

Factor 2: a positive statement about being able to produce the desired effect even with

student discipline issues. Table 33 includes the distinguishing statements for Factor 2.

Appendix Q includes individual free-writing comments from participants who loaded on

Factor 2.

Table 33

*Factor 2 Distinguishing Statements*

| No. | Statement | Rank | Score |
|-----|-----------|------|-------|
| 29 | Able to produce desired effect even with student discipline issues | +2 | 0.95*# |
| 2 | Make a difference with students because of adequate facility | +1 | 0.42** |
| 3 | Provide equitable education because of adequate materials | +1 | 0.36** |
| 20 | School has a supportive learning environment for teachers | -3 | -1.63** |
| 17 | Comfortable because of a supportive administrator | -4 | -2.05* |
| 36 | Administrator values individual as a teacher | -4 | -2.06** |

[a]Statements are unique to Factor 2.
*$p < .01$. **$p < .05$.

*Factor 3*

Factor 3 was family lifestyle with serving students. Factor 3 included 6% of the

variance and 1 of the 49 participants loaded on this factor at a value equal to or greater

than 0.5013 ($p < .05$). Although only 1 participant loaded on Factor 3, because the

eigenvalue was greater than 2.00, the factor was included as a possible grouping of

teachers indicative of the population.

Demographic characteristics of the participant who loaded on Factor 3 were

Caucasian female with a master's degree plus additional education, age 36, teaching

language arts in K-2, with 7 years of district teaching and 13 years of total public

teaching experience. Table 34 illustrates the Factor 3 loading participant with selected

demographics. Appendix R includes individual free-writing comments from the

participant who loaded on Factor 3.

Table 34

*Factor 3 Loading Participant With Selected Demographics*

| Q-sort | Loading | Gender/age | Grade | Subject | Years teaching in the district/in public schools | School demographics |
|---|---|---|---|---|---|---|
| 11 | 0.5013 | F/36 | K-2 | Language arts | 7/13 | Unknown |

The participant who loaded for Factor 3 was positively significant to all factors.

Factor 3 had four distinguishing statements, with two of the statements significant at *p* <

.01. Two statements ranked as *definitely had influenced teacher retention* (+3): that the

teacher was able to help young people grow because of supportive parents and that being

a teacher does not require too much time commitment compared with other jobs. Two

statements ranked as *definitely had not influenced teacher retention* (-3): that the teachers

were able to select the professional development that works for them and that the teachers

were able to give back to the community although it is in a rougher area of town. Two of

the statements were unique to Factor 3 only: the statements were about helping students

grow because of supportive parents and about giving back to the community although it

is in a rougher area of town. Table 35 shows the distinguishing statements for Factor 3.

Appendix R includes the individual free-writing comments from the participant who

loaded on Factor 3.

Table 35

*Factor 3 Distinguishing Statements*

| No. | Statement | Rank | Score |
|---|---|---|---|
| 6 | Help students grow because of supportive parents | +3 | 1.40*[a] |
| 23 | Does not require too much time compared to other jobs | +3 | 1.40* |
| 33 | Able to select professional development that works for individual | -3 | -1.40** |
| 26 | Able to give back to community even though in a rough area | -3 | -1.40[a] |

[a]Statements are unique to Factor 3.
*$p < .01$. **$p < .05$.

## *Factor 4*

Factor 4 was serving students with physical support. Factor 4 included 5% of the variance and 1 of the 49 participants loaded on this factor at a value equal to or greater than 0.6106 ($p < .05$). The participant who loaded on Factor 4 was negatively loaded. Although only 1 participant loaded on Factor 4, because the eigenvalue was greater than 2.00, Factor 4 was included as a possible grouping of teachers indicative of the population.

Demographic characteristics of the participant who loaded on Factor 4 were as follows: Caucasian female with a master's degree plus additional education, age 60, teaching all subjects in K-2, with 7 years of district teaching and 7 years of total public teaching experience. Table 36 includes information about the Factor 4 loading participant with selected demographics.

Table 36

*Factor 4 Loading Participant With Selected Demographics*

| Q-sort | Loading | Gender/age | Grade | Subject | Years teaching in the district/in public schools | School demographic |
|---|---|---|---|---|---|---|
| 27 | -0.6106 | F/60 | K-2 | All | 7/7 | Urban |

The participant who loaded for Factor 4 was negatively loaded, which means that her perceptions are in reverse of the factor array. Factor 4 had seven distinguishing statements, with six of the statements significant at *p* < .01. Two statements ranked as *most definitely had influenced teacher retention* (+4): that the teacher was able to provide an equitable education for all students because there were adequate materials available and that the teacher remains because the teaching community is similar to where the teacher grew up. One statement ranked as *most definitely had not influenced teacher retention* (-4): that the teacher enjoyed being in school. Table 37 includes the distinguishing statements for Factor 4. Appendix S includes the individual free-writing comments from the participant who loaded on Factor 4 and Appendix T includes the individual free-writing comments from other participants who did not load on any particular factors.

Table 37

*Factor 4 Distinguishing Statements*

| No. | Statement | Rank | Score |
|-----|-----------|------|-------|
| 3 | Provide equitable education because of adequate materials | +4 | 1.87* |
| 14 | Teaching community similar to community where teacher grew up | +4 | 1.87*[a] |
| 9 | Able to serve students better because of adequate pay and benefits | +1 | 0.47*[a] |
| 10 | Provide equitable education because of standardized testing | 0 | 0.00*[a] |
| 20 | School has a supportive learning environment for teachers | -1 | -0.47** |
| 31 | Enjoy the intellectual challenge of teaching | -3 | -1.40*[a] |
| 15 | Enjoy being in school | -4 | -1.87*[a] |

[a]Statements are unique to Factor 4.
*p* < .01. **p* < .05.

Consensus Statements

Consensus statements were all non significant at 1% significance level, meaning that no universal statements were agreed or disagreed upon by the participants in the study. Three of the four statements were statistically nonsignificant at 5% significance level. Table 38 includes the consensus statements.

Table 38

*Consensus Statements*

| No. | Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | |
|---|---|---|---|---|---|---|---|---|
| | Rank | Score | Rank | Score | Rank | Score | Rank | Score |
| 8* | 1 | 0.72 | 0 | 0.32 | 0 | 0.00 | 3 | 1.40 |
| 12** | -1 | -0.62 | 0 | -0.18 | 0 | 0.00 | -2 | -0.94 |
| 32** | 1 | 0.49 | 0 | 0.30 | 0 | 0.00 | 1 | 0.47 |
| 35** | -2 | -0.88 | -1 | -0.69 | 0 | 0.00 | 0 | 0.00 |

*Nonsignificant at $p > .01$. **Nonsignificant at $p > .05$.

Statement 8 was about providing an equitable education for all students no matter what their background because of the school climate. Statement 12 was about the ability to serve students better because of adequate preservice training. Statement 32 was about receiving respect from others. Statement 35 was about the district treating the teacher as a professional.

The lack of significance with the consensus statements indicated the statements do not provide unique elements to any of the factors, yet universal aspects of the statements might make them applicable to participants who load on one of the four identified factors. Chapter 5 includes further discussion about the possible aspects of the statements.

Characteristics of Factors

Characteristics of each factor include the main characteristic agreement

statements, main characteristic disagreement statements, and statements neither

influencing nor not influencing retention.  These statements assist in interpretation of the

person types.

*Factor 1*

Factor 1 had eight distinguishing statements, with three ranked as positive main

characteristic statements (+4, +3, +3) and two ranked as negative main characteristic

statements (-4, -4; see Table 31).

*Main Characteristic Agreement Statements*

The main characteristic agreement statements were those participants who loaded

on Factor 1 ranked *most definitely* (+4) and *definitely* (+3) influenced retention. The

statements indicated a group of teachers desiring empowerment with emotional support

as economic and organizational reasons to remain in the classroom (see Table 39).

Table 39

*Factor 1 Main Characteristic Agreement Statements*

| No. | Statement | Rank |
|-----|-----------|------|
| 17 | Comfortable because of a supportive administrator | +4[a] |
| 18 | Happy because of supportive colleagues | +4 |
| 25 | Able to be creative designing lessons with materials available | +3 |
| 28 | Freedom and flexibility in the classroom | +3[a] |
| 36 | Administrator values me as a teacher | +3[a] |

[a]Distinguishing statements for Factor 1.

*Main Characteristic Disagreement Statements*

The main characteristic disagreement statements for Factor 1 were those

participants who loaded on Factor 1 ranked *most definitely* (-4) or *definitely* (-3) did not

influence teacher retention. The statements indicated systemic structures and lifestyle

needs challenged retention (see Table 40).

Table 40

*Factor 1 Main Characteristic Disagreement Statements*

| No. | Statement | Rank |
|-----|-----------|------|
| 24 | Time to complete most teaching tasks during contract time | -4[a] |
| 23 | Does not require too much time compared to other jobs | -4 |
| 16 | Don't have to spend too much time at the school | -3 |
| 11 | Nowhere else to go after many years of service | -3 |
| 10 | Provide equitable education because of standardized testing | -3 |

[a]Distinguishing statements for Factor 1.

*Statements Neither Influencing nor Not Influencing Retention*

The statements Factor 1 participants ranked as neither influencing nor not

influencing retention were mainly categorized as lifestyle, physical structures, and

systemic structures.  The statements are in Table 41.

Table 41

*Factor 1 Statements Neither Influencing nor Not Influencing Retention*

| No. | Statement | Rank |
|-----|-----------|------|
| 1 | Make a difference because of adequate materials | 0 |
| 3 | Provide equitable education because of materials | 0 |
| 13 | Job security | 0 |
| 19 | Better able to take care of family | 0 |
| 21 | Able to take off work for family or personal issues | 0 |
| 22 | Able to be at home with family more | 0 |
| 29 | Produce desired effect even with student discipline issues | 0 |
| 33 | Able to select professional development that works for me | 0[a] |

[a]Distinguishing statements for Factor 1.

*Factor 2*

Factor 2 had six distinguishing statements. Three were ranked as negative main

characteristic statements (-4, -4, -3; see Table 33).

*Main Characteristic Agreement Statements*

The main characteristic agreement statements ranked as *most definitely* (+4) and

*definitely* (+3) influencing teacher retention for Factor 2 participants were family lifestyle

with intellectual growth as economic and organizational reasons to remain teaching in the

classroom.  The statements are in Table 42.

Table 42

*Factor 2 Main Characteristic Agreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 22 | Able to be at home with family more | +4 |
| 31 | Enjoy the intellectual challenge of teaching | +4 |
| 19 | Better able to take care of family | +3 |
| 21 | Able to take off work for family or personal issues | +3 |
| 30 | Able to teach students although they are disadvantaged | +3 |

*Main Characteristic Disagreement Statements*

The main characteristic disagreement statements were those participants who

loaded on Factor 2 ranked *most definitely* (-4) or *definitely* (-3) did not influence teacher

retention. The statements indicated systemic structures, emotional needs, and lifestyle

needs challenged retention (see Table 43).

Table 43

*Factor 2 Main Characteristic Disagreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 36 | Administrator values me as a teacher | -4[a] |
| 17 | Comfortable because of a supportive administrator | -4[a] |
| 20 | School has a supportive learning environment for teachers | -3[a] |
| 16 | Don't have to spend too much time at the school | -3 |
| 10 | Provide equitable education because of standardized testing | -3 |

[a]Distinguishing statements for Factor 2.

*Statements Neither Influencing nor Not Influencing Retention*

The statements Factor 2 participants ranked as neither influencing nor not

influencing retention were mainly categorized as serving students, emotional structures,

and systemic structures. These statements are in Table 44.

Table 44

*Factor 2 Statements Neither Influencing nor Not Influencing Retention*

| No. | Statement | Rank |
|---|---|---|
| 1 | Make a difference because of adequate materials | 0 |
| 8 | Provide equitable education because of school climate | 0 |
| 11 | Nowhere else to go after many years of service | 0 |
| 12 | Serve students better because of adequate preservice training | 0 |
| 14 | Community where I teach similar to where I grew up | 0 |
| 18 | Happy because of supportive colleagues | 0 |
| 32 | Receive respect from others | 0 |
| 33 | Able to select professional development that works for me | 0 |

*Factor 3*

Factor 3 had four distinguishing statements. Two were ranked as positive main

characteristic statements (+3, +3) and two were ranked as negative main characteristic

statements (-3, -3; see Table 35).

*Main Characteristic Agreement Statements*

The main characteristic agreement statements ranked as those that *most definitely* (+4) and *definitely* (+3) influenced teacher retention for Factor 3 participants indicated family lifestyle with serving students as economic and organizational reasons to remain teaching in the classroom. The statements are in Table 45.

Table 45

*Factor 3 Main Characteristic Agreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 19 | Better able to take care of family | +4 |
| 22 | Able to be at home with family more | +4 |
| 2 | Make a difference because the school facility is adequate | +3 |
| 6 | Help students grow because of supportive parents | +3[a] |
| 23 | Does not require too much time compared with other jobs | +3[a] |

[a]Distinguishing statements for Factor 3.

*Main Characteristic Disagreement Statements*

The main characteristic disagreement statements for Factor 3 were those ranked *most definitely* (-4) and *definitely* (-3) did not influence teacher retention. The statements indicated systemic structures and lack of professional fulfillment challenged retention (see Table 46).

Table 46

*Factor 3 Main Characteristic Disagreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 11 | Nowhere else to go after many years of service | -4 |
| 10 | Provide equitable education because of standardized testing | -4 |
| 33 | Able to select professional development that works for me | -3[a] |
| 26 | Able to give back to community even though in rougher area | -3[a] |
| 9 | Serve students better because of pay structure and benefits | -3 |

[a]Distinguishing statements for Factor 3.

*Statements Neither Influencing nor Not Influencing Retention*

The statements Factor 3 participants ranked as neither influencing nor not influencing retention were categorized mainly as serving students and emotional structures. These statements are in Table 47.

Table 47

*Factor 3 Statements Neither Influencing nor Not Influencing Retention*

| No. | Statement | Rank |
|---|---|---|
| 5 | Help students grow because of supportive student learning environment | 0 |
| 7 | Make a difference because of positive induction and mentoring | 0 |
| 8 | Provide equitable education because of school climate | 0 |
| 12 | Serve students better because of adequate preservice training | 0 |
| 13 | Job security | 0 |
| 16 | Don't have to spend too much time at the school | 0 |
| 32 | Receive respect from others | 0 |
| 35 | The district treats me as a professional | 0 |

*Factor 4*

Factor 4 had seven distinguishing statements. Two of the main characteristic statements were ranked positively (+4, +4) and two of the main characteristic statements were ranked negatively (-4, -3; see Table 37).

*Main Characteristic Agreement Statements*

The main characteristic agreement statements ranked as those that *most definitely* (+4) and *definitely* (+3) influenced teacher retention for Factor 4 participants indicated serving students with physical support as economic and organizational reasons to remain teaching in the classroom. The statements are in Table 48.

Table 48

*Factor 4 Main Characteristic Agreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 3 | Provide equitable education because of materials | +4[a] |
| 14 | Community where I teach similar to where I grew up | +4[a] |
| 1 | Make a difference because of adequate materials | +3 |
| 2 | Make a difference because the school facility is adequate | +3 |
| 8 | Provide equitable education because of school climate | +3 |

[a]Distinguishing statements for factor.

*Main Characteristic Disagreement Statements*

The main characteristic disagreement statements for Factor 4 were those ranked

*most definitely* (-4) and *definitely* (-3) did not influence teacher retention. The statements

indicated lack of professional fulfillment, physical structures, and emotional needs not

being met challenged teacher retention (see Table 49).

Table 49

*Factor 4 Main Characteristic Disagreement Statements*

| No. | Statement | Rank |
|---|---|---|
| 27 | Receive satisfaction in fulfilling professional commitment | -4 |
| 15 | Enjoy being in school | -4[a] |
| 31 | Enjoy the intellectual challenge of teaching | -3[a] |
| 30 | Able to teach students although they are disadvantaged | -3 |
| 25 | Able to be creative designing lessons with materials available | -3 |

[a]Distinguishing statements for factor.

*Statements Neither Influencing nor Not Influencing Retention*

Statements Factor 4 participants ranked as neither influencing nor not influencing

retention were categorized mainly as lifestyle, systemic structures, and professional

fulfillment. These statements are in Table 50.

Table 50

*Factor 4 Statements Neither Influencing nor Not Influencing Retention*

| No. | Statement | Rank |
|---|---|---|
| 10 | Provide equitable education because of standardized testing | 0[a] |
| 16 | Don't have to spend too much time at the school | 0 |
| 17 | Comfortable because of a supportive administrator | 0 |
| 22 | Able to be at home with family more | 0 |
| 24 | Time to complete most teaching tasks during contract time | 0 |
| 26 | Able to give back to community although in rough area | 0 |
| 35 | The district treats me as a professional | 0 |
| 36 | Administrator values me as a teacher | 0 |

Summary

The purpose of the current Q-methodology study was to develop a better understanding of perceptions of the factors that influence the retention of veteran teachers. Chapter 4 outlined results of the data, including a summary of the demographic characteristics of participants, data analysis processes, results presented through the research questions, and results outlined through emergent factors.

The demographic characteristics included 49 participants constituting the P-sample of current classroom teachers hired into the district throughout a 5-year period from 1998 to 2002. They varied in years of service in the district from 6 through 16 and total years in public teaching from 7 through 30. The participants represented all geographic areas and all grade levels of the district located in the southwestern region of the United States. The participants included 7 males, 1 of unknown gender, and 41 females ranging in age from 30 to 67 years old. The majority of the participants were Caucasian with master's degrees and master's degrees plus additional education credits who had attended a 4-year university to receive their preservice training.

The data analysis process presented in chapter 4 included an outline of the correlation matrix, factor analysis, and emergent factors. The use of PQMethod 2.11 software (Schmolck, 2002) helped to create a 49 × 49 array correlation matrix to demonstrate how each participant completed the sort correlated with each other participant. The correlation matrix resulted in the data used for the factoring process.

Factor analysis consisted of creating an unrotated factor matrix with eigenvalues identified, varimax rotation to further clarify defining sorts, correlation between factor scores, and emergent factors. Seven centroids from the unrotated factor matrix were extracted with eigenvalues greater than 2.00. The top seven eigenvalues accounted for 70% of the variance. Varimax orthogonal rotation was implemented on the seven factors with eigenvalues greater than 2.00, resulting in four factors with significant loadings representing 55% of the total variance. Standard errors and factor characteristics indicated valid and reliable results. Completion of correlation between factor scores indicated participant Q-sorts that loaded on one factor identified most with that factor and no other factor.

The four emergent factors with eigenvalues greater than 2.00 defining reasons veteran teachers indicated influenced their retention were (a) empowerment with emotional support, (b) family lifestyle with intellectual growth, (c) family lifestyle with serving students, and (d) serving students with physical support. The analysis included a written summary and factor array for each emergent factor.

Chapter 4 included the results of the distinguishing statements from the four factors correlated with the research questions. Tables of factor statements that

corresponded to the personal factor levels and structural factor levels that influenced

teacher retention provided summary data. Statements and ranks were presented under

corresponding research question levels: serving students, fitting lifestyle, professional

fulfillment, physical structures, emotional structures, and systemic structures.

Four emergent factors were outlined with descriptions of the variance, how many

individuals loaded on the factor along with their demographic characteristics, how many

of those who loaded were positively or negatively significant to the factor, and which

statements were distinguishing at $p < .01$ or $p < .05$, as well as which statements were

unique to the factor.

Finally, chapter 4 included a presentation of the specific characteristics of each

factor with main characteristic agreement statements, main characteristic disagreement

statements, and statements neither influencing nor not influencing retention.

Chapter 5 includes a detailed discussion of each factor and interfactor

relationships. Factor 1, empowerment with emotional support, represented a group of

teachers who are best retained with a positive administrator, supportive colleagues, and

empowerment in the classroom. Factor 2, family lifestyle with intellectual growth,

represented a group of teachers who remain teaching in the classroom because of the

compatibility with their family lifestyle, the opportunities for intellectual growth, and the

ability to serve students. Factor 3, family lifestyle with serving students, represented a

group of teachers who remain teaching in the classroom for the compatibility with their

family lifestyle and the ability to serve students. Factor 4, serving students with physical

support, represented a group of teachers who are best retained serving students with

physical supports and in a community similar to where they grew up. Some ideas that occurred in multiple factors included time challenges, administrator support, and empowerment opportunities. Standardized testing was ranked negatively in three of the four factors. Recommendations, implications for social change, and suggestions for future research follow the interfactor discussions. Limitations are presented. Finally, conclusions are drawn based on the factor and interfactor findings.

CHAPTER 5: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Attrition of classroom teachers is a multifaceted staffing challenge compounded by low-income, low-achieving, and high minority student populations that requires attention (Alt & Henke, 2007; Barnes et al., 2007; Cochran-Smith, 2004b; Guarino et al., 2006; Hanushek et al., 2001, 2004a; Loeb et al., 2005; Wiegand, 2003). The educational, economic, and social disadvantages of attrition have resulted in elevated overall costs to severe levels across the United States (NCTAF, 2007; Shockley et al., 2006). Loeb and Reininger (2004) and Guarino et al. (2006) noted that, according to general economic theory, teacher attrition was due to the fact that overall compensation is not favorable enough to retain classroom teachers. Ingersoll (2002b, 2003a) reflected that, according to organizational theory, an unhealthy school climate also caused high attrition. Staff at the NCTAF repeatedly asked for quality teachers in all classrooms and contended teacher attrition was at a crisis level (1996, 2003). Staff at the NCTAF (2007) noted, "Teacher attrition has grown by 50 percent over the past fifteen years" (p. 1). Feistritzer and Haar (2005) reported "forty percent of the current public school teaching force expects not to be teaching" (p. 1) by 2010.

Previous studies concentrated on numbers of stayers, movers, and leavers (Marvel et al., 2007), costs of attrition (Barnes et al., 2007; Milanowski & Odden, 2007; NCTAF, 2007; Shockley et al., 2006), novice teachers (Darling-Hammond 2003; Ingersoll, 2003a; Johnson & Birkeland, 2003; Latham & Vogt, 2007; Norman & Ganser, 2004), and attributes and distribution of teachers affecting attrition (Lankford et al., 2002). Six

studies were presented that focused on the retention of veteran teachers and the factors that influenced them to remain in the classroom.

Previous researchers called for empirical, current studies to include factors influencing teacher retention (M. Allen, 2005; Boyd et al., 2003; Earley & Ross, 2006; Guarino et al., 2006). Researchers also requested that teacher retention studies include various states, urban contexts, teachers themselves, demographic information, personal and school climate factors, and all levels of educators (Edwards, 2003; Marston et al., 2004; Marston et al., 2006; Robbins-LaVicka, 2007; Wiegand, 2003). The current study fills a gap in the literature by focusing on the retention of veteran teachers in addition to the calls for research on a variety of factors that influence veteran teacher retention. The purpose of the current Q-methodology study was to increase understanding of personal and structural retention factors of veteran teachers in a large public school district in the southwestern region of the United States.

The main question that guided the current study was: What factors do veteran teachers use to explain their retention? The factors that constituted the concourse theoretical design and the research sub-questions were as follows:

1. What effect do personal factor levels such as serving students, fitting lifestyle, and professional fulfillment have on teacher retention?

2. What effect do structural factor levels such as physical, emotional, and systemic structures have on teacher retention?

Q-methodology was used to build a concourse, select a Q-sample, run the pilot study, select a P-sample, gather the Q-sorts, and complete data analysis. The

demographic characteristics of the 49 participants included classroom teachers hired into

the district throughout a 5-year period from 1998 to 2002. Service in the district ranged

from 6-16 years and total public teaching service ranged from 7-30 years. The

participants represented all geographic areas, all subject areas, and all grade levels of the

district located in the southwestern region of the United States. The participants included

7 males, 1 of unknown gender, and 41 females ranging in age from 30 to 67 years old.

Participants included 1 African American, 43 Caucasian, 3 Latino, 1 other, and 1

unknown. Participants represented varying preservice training as well as varying

educational degrees from bachelor's to doctorate.

Data analysis indicated four factors with eigenvalues greater than 2.00

representing four groups of veteran teachers and the factors that influenced them to

remain teaching. The four factors were (a) empowerment with emotional support, (b)

family lifestyle with intellectual growth, (c) family lifestyle with serving students, and (d)

serving students with physical support. Chapter 4 included an outline of the data from the

four factors and the corresponding research questions. Chapter 5 presents an

interpretation of the four factors, implications for social change, recommendations for

action, limitations of the study, suggestions for future research, and conclusions.

## Interpretation of Findings

The four factors extracted from data analysis represent groupings of teachers who

completed Q-sorts similarly. Because each participant completed the Q-sort of subjective

statements in a forced-choice distribution format, statistical analysis could be completed

on the data rendering "factor arrays or best-estimate Q sorts . . . [to be] subjected to

interpretation" (Watts & Stenner, 2005, p. 82). Interpretations for each factor that follow are "open to debate" (McKeown & Thomas, 1988, p. 66). McKeown and Thomas mentioned the transparency of the data as a virtue of Q-methodology interpretations. They noted, "Others are free to examine the factor arrays and arrive at their own independent conclusions" (McKeown & Thomas, p. 66).

*Factor 1—Empowerment With Emotional Support*

Factor 1, empowerment with emotional support, had the largest demonstrated variance and 29 of the 49 veteran teachers loaded on this factor (see chapter 4). Demographic characteristics of participants who loaded on Factor 1 included 4 males, 24 females, and 1 participant of unknown gender. Participants were from all age ranges, with race being 1 African American, 26 Caucasian, 1 Latino, and 1 unknown. Participants included individuals in all geographic areas of the district, teaching at all grade levels, and teaching all subjects. Participants who loaded on Factor 1 had higher percentages than the entire sample for teaching in the district 7, 10, and 11 years. With the exception of the 7 years of service, participants in Factor 1 had been teaching in the district longer than the entire sample percentages. More of the participants who loaded to Factor 1 had a bachelor's degree plus additional education and a master's degree compared with the entire sample, yet participants who loaded to Factor 1 had fewer master's degrees plus additional education than the entire sample. Participants who loaded to Factor 1 had not progressed as far in their education as the entire sample percentages.

*Factor 1 Main Characteristic Agreement Statements Discussion*

Factor 1 main characteristic agreement statements included a focus on a positive administrator, supportive colleagues, and empowerment in the classroom (see Table 39). Literature and participant statements agreeing or disagreeing with the perceptions of Factor 1 main characteristic agreement statements follow.

*Positive administrator*. Participants ranked having an administrator who is supportive and values the teacher as critical for Factor 1 participants to remain teaching in the classroom. Participant 8 stated,

> For my first 3 years of teaching I had the world's worst administrator and was very close to leaving the profession. Then I moved to a school with a great administrator—found a friend who mentored me—and now I love teaching and love my school. It's all about how we are treated!!!

Several studies concurred that a supportive administrator is important to teacher retention (M. Allen, 2005; Edwards, 2003; Guarino et al., 2006; Marston et al., 2006). Ingersoll (2003a) noted teacher attrition had a link to job dissatisfaction and one reason for job dissatisfaction was "lack of support from the school administration" (p. 16). Consistent with organizational theory, a strong, positive, supportive leader provides the direction for a thriving community. Loeb and Reininger (2004) noted, "Principals strongly affect the working conditions in a school; some principals are able to create environments that teachers find favorable, regardless of the characteristics of the student body or limited resources" (p. iii).

Positive administrators listen to their classroom teachers, valuing their opinions and abilities. Participant 6 stated, "It is so important to feel valued and our opinions

matter." Marston et al. (2004) concurred, "Teachers wanted two-way communication with their administrators and wanted to have their opinions valued" (p. 486).

Other roles veteran teachers desired of administrators included "recognition and respect, especially from the principal" (Wiegand, 2003, p. 163). Marston et al. (2004) outlined additional requests of administration from veteran teachers:

> The roles teachers wanted administrators to play included providing leadership; setting the tone/climate of the school; providing support for teachers in the form of positive feedback, disciplinary matters, resources, professional growth, hiring competent staff, and getting rid of incompetent teachers; participating in classrooms; and serving as a buffer between the teachers, parents, and community. (p. 486)

Wiegand (2003) reported the impact of the principal on retention was more intense for newer teachers and teachers at high poverty schools. Teachers for Factor 1 in the current study reported administrators affected retention although they were veterans. The current study did not include the poverty of students. Marston et al. (2004) reported elementary teachers valued a good administrator more than high school teachers. In the present study, participants who loaded on Factor 1 included teachers at all grade levels desiring a quality administrator.

*Supportive colleagues.* Factor 1 participants indicated supportive colleagues were crucial to veteran teacher retention. Other researchers agreed (Brunetti, 2001; Edwards, 2003; Feistritzer & Haar, 2005; Johnson & Birkeland, 2003; Marston et al., 2006; Milner & Hoy, 2003; Nieto, 2003). Robbins-LaVicka (2004) contended, "Positive experiences and colleague support remain relatively important in a persisting teacher's perception of their desire to remain in the classroom" (p. 120). Wiegand (2003) concurred, "Site

veteran teachers believe 'collegial friendships' [influenced] them to choose to stay at their schools" (p. 159).

Marzano (2003) defined collegiality as "the manner in which staff members in the school interact and the extent to which they approach their work as professionals" (p. 60). Further research indicated supportive colleagues have professional interactions, respect and trust each other, and have a mutual commitment for high achievement (Hord, 2004; Marzano; Newmann, 2002). Newmann noted teachers have "shared understanding of high-level outcomes" (p. 29) for all students involving "professional norms of high expectations, respect, and caring among students and staff" (p. 29). Hord agreed that colleagues who share ideals for school improvement and student success provide powerful and supportive professional learning communities through respectful and trustworthy relationships.

*Empowerment in the classroom.* Factor 1 participants placed empowerment as a factor significantly important to their retention. They wanted freedom and flexibility in the classroom and the ability to design lessons. Participant 25 noted, "I have a caring, fair administrator who allows me to try new ideas to teach the [curriculum]." Participant 20 stated, "I feel schools need more local control to adequately meet the needs of their students . . . . I think [the district] is too big to meet the needs of children in all areas." Researchers concurred that empowerment is a factor in teacher retention (M. Allen, 2005; Guarino et al., 2006; Loeb et al., 2005; Marvel et al., 2007; Olsen, & Anderson, 2007; Slye, 2000; T. Smith & Rowley, 2005). Ingersoll (2003a) noted one reason teachers experienced dissatisfaction with teaching was the "lack of teacher influence over

decision-making" (p. 16). Wiegand (2003) concurred, "The veteran teacher prefers more involvement in school management" (p. 163).

*Factor 1 Main Characteristic Disagreement Statements Discussion*

Factor 1 main characteristic disagreement statements were time challenges, nowhere else to go, and standardized testing (see Table 40). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 1 main characteristic disagreement statements follow.

*Time challenges*. Factor 1 participants noted the major challenge of remaining in teaching was time. They do not have time during the contract day to complete their teaching tasks, teaching takes more time than other careers, and they have to spend too much time at school. Participant 18 stated, "Teacher prep time is often inadequate, especially when used up for meetings and duties." Other researchers confirmed similar time concerns of teachers (Edwards, 2003; Ingersoll, 2001, 2003a, 2004; Johnson & Birkeland, 2003; Loeb et al., 2005; Marvel et al., 2007; Miller, 2002; Olsen & Anderson, 2007).

Marston et al. (2004) reported time challenges interfered with teacher's lifestyles, According to Marston et al. (2004), "Not only did teachers report on how time-consuming the work can be, but teachers in all groups also admitted how hard teaching can be on their families and family life. This was a prominent theme in the data" (p. 486). In a later study, Marston et al. (2006) confirmed the findings with different groups of participants: "Both groups expressed how time-consuming and challenging the profession was for them and their families" (p. 126). Nieto (2003) concurred,

This is the one issue on which almost all agree: There simply is not enough time in the day to do all that they need to do. Aside from the typical obligations to plan curriculum and grade papers, more and more teachers are understanding the need to collaborate with peers, engage in intellectual inquiry, and keep abreast of the latest research and trends. But most schools do little to help these things happen. (p. 396)

*Nowhere else to go*. Factor 1 participants noted teaching was a choice by negating the statement that they did not have anywhere else to go. Participant 7 stated, "I have come to realize teaching is my calling. I have taught in THE worst conditions and THE best—neither has made me love teaching any less. 'Teacher' is a PART of me. I could never truly leave it!" Several participants stated teaching was a second career of choice. Participant 37 stated, "Teaching is a second career and I've always enjoyed letting people know. 'Those who can do, teach.'" Participant 30 concurred, "The main reason I stay in teaching is because teaching is a choice not a job. Also I have more fun than not. Which is a good way to spend the day."

The finding that participants teach by choice and not because they have nowhere else to go is contrary to some prior research that indicated some veteran teachers remained in teaching simply because they had nowhere else to go after they had served many years in the classroom (Marston et al., 2006; Wiegand, 2003). Wiegand questioned why some teachers remain at all:

The fact that some teachers, in open-ended questions, wrote about their resentment of schools, leadership, and even the students and parents, left this researcher feeling their stress, frustration, and anger, and wondering why they continued to be in education at all . . . Teachers mentioned their anger over workloads, some showed callousness in their discussion of students' problems, and some demonstrated little tolerance for discipline issues. (p. 160)

*Standardized testing*. Factor 1 participants noted standardized testing was a negative for remaining in teaching, especially when the testing was meant to have a link to equitable education. Participant 5 stated, "I think the questions could be influenced by the area one teaches in . . . as well as if the school is making AYP [adequate yearly progress]. My school is in the east region and we're a [needy] school so my opinions might have been different if I taught at a high achieving school in a different area." Guarino et al. (2006) reported standardized testing may affect teacher retention: "A tentative finding was that accountability policies might lead to increased attrition in low-performing schools" (p. 201). Edwards (2003) reported similar results, "Participants in this study noted increased stress because of testing and accountability" (p. 101). Other researchers agreed standardized testing affected retention (Jones & Egley, 2007; Michelli, 2006; Miller, 2002; T. Smith & Rowley, 2005; Valli & Buese, 2007). Loeb et al. (2005) noted the "appropriateness of tests teachers are required to administer (the most negatively rated variable by the overall sample of California teachers)" (p. 65-66) impacted retention.

Accountability policies, standardized testing of students, and the appropriateness of the high-stakes tests negatively affect teacher retention, especially in schools with lower performing students where teachers have higher attrition rates. When high stakes tests are further considered as a performance rating of the teacher, retention suffers. Feistritzer and Haar (2005) noted, "Public school teachers are strongly opposed to using 'academic progress of students as measured by standardized test scores' to determine whether or not a teacher is qualified to teach" (p. 2). Figure 2 is a visual representation of

significant positive and negative elements influencing veteran teacher retention for Factor

1 participants.
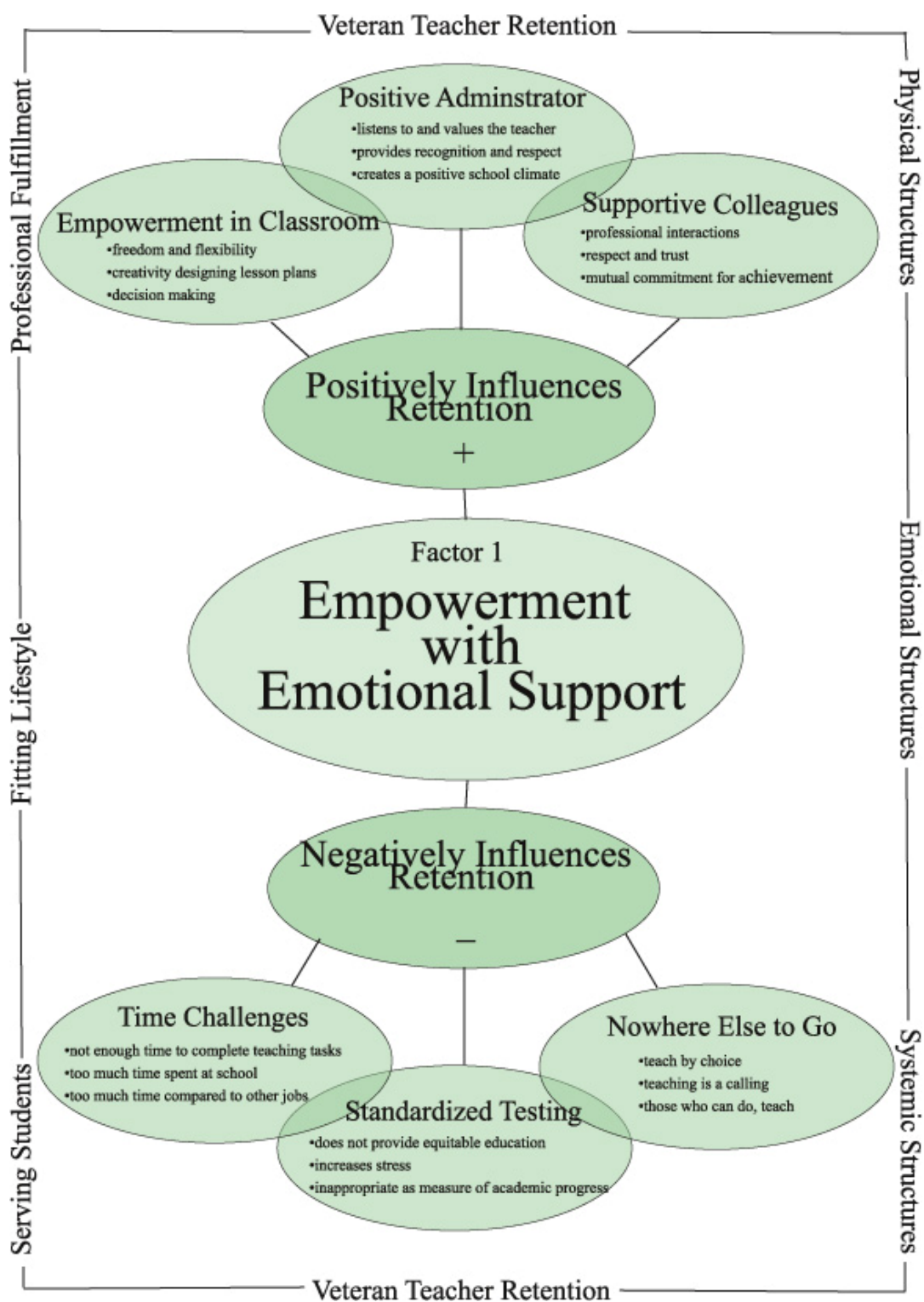
*Figure 2.* Empowerment with emotional support; visual representation.

*Factor 1 Statements Neither Influencing nor Not Influencing Retention Discussion*

Factor 1 statements participants ranked as neither influencing nor not influencing retention were materials, job security, family lifestyle, student characteristics, and professional development (see Table 41). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 1 neutral statements follow.

*Materials*. Factor 1 participants ranked making a difference because of adequate materials and providing equitable education because of materials as not influential in retention. Prior research indicated materials were important in teacher retention (Cochran-Smith, 2004a, 2004b; Darling-Hammond, 2003; Hanushek et al., 2004a, 2004b; Johnson & Birkeland, 2003; Nichols, 2002). Loeb et al. (2005) noted,

> Among the strongest predictors of [teacher retention] is a factor representing teacher ratings of their school conditions including on one hand tangible supports for teaching in the form of teachers' working conditions, physical facilities, and availability of textbooks and technology. (p. 65)

It is possible Factor 1 participants placed materials in the not influential in retention factor because the district provides district-adopted textbooks as well as a $100 debit card to spend on classroom materials for each teacher every year.

*Job security*. Factor 1 participants ranked job security as not influential in their retention. The finding was consistent with prior research with high school teachers from California who ranked job security as not as significant in their job satisfaction, yet inconsistent with prior research with elementary teachers from Pennsylvania who ranked job security as more significant in their job satisfaction (Marston et al., 2004, 2006). Miller (2002) contended job security was more influential in retention among veteran teachers than time compatibility, contrary to Factor 1 participants in the current study.

Moore (2004) also indicated job security was important for male early childhood teachers.

Although job security was influential in other studies, it was not as influential as other factors within the studies. For example, Moore (2004) compared five main factors. Veteran teachers ranked service oriented as most significant in their retention, followed by personal experience; economic, including job security; time compatibility; and social status. It is possible Factor 1 participants ranked job security as neutral because they feel secure in their jobs and other issues were more important.

*Family lifestyle*. Contrary to prior research, Factor 1 participants ranked family lifestyle as not influential in retention. Edwards (2003) reported veteran teachers had both teenagers and aging parents at home who needed time and attention. Ingersoll (2001, 2002b, 2003a) noted family issues affected retention, especially childbirth and rearing, health problems, and family moves. Stinebrickner (2002) concurred, "A large amount of teacher attrition is directly related to changes in teachers' family situation with the birth of new children playing an especially important role" (p. 212). Other researchers noted similar results (Alt & Henke, 2007; Marvel et al., 2007; Robbins-LaVicka, 2007; Shin & Moon, 2006). The present study did not include the collection of demographic data with regard to the number of children, aging parents, or whether a participant was considering a new child, yet a large majority (49%) of the participants from Factor 1 were in their 30s and 40s. It is possible that Factor 1 participants ranked family lifestyle as not significant in retention because of integrating family lifestyle with a teaching career, as some researchers recorded (Marston et al., 2004, 2006).

*Student characteristics—Discipline*. Factor 1 participants ranked the ability to produce the desired effect, even with student discipline issues, as not influential in their retention. Ingersoll (2003a) countered, "Of those who depart because of job dissatisfaction, [they] most often link their turnover to . . . student discipline problems" (p. 16). It is possible that participants ranked the issue as neutral because they believe they meet the needs of the student no matter what, as Participant 9 stated: "It is about reaching kids, making a connection, and the challenge to reach those who do not want to be reached." Alt and Henke (2007) indicated teachers were "more satisfied with the learning environment at their school than with aspects such as parent support, pay, and students' motivation to learn" (p. 45).

*Professional development*. Much literature includes citations of professional development and particularly choice in professional development as important in teacher retention (Alvy, 2005; Grossman, Thompson, & Valencia, 2001; Jones & Egley, 2007: Loeb et al., 2005; Michelli, 2006; NCTAF, 2003; Nickson & Kritsonis, 2006; Nieto, 2003; T. Smith & Rowley, 2005). Factor 1 participants in the present study ranked professional development as not influential in their retention. Perhaps Factor 1 participants felt their professional development was not relative as Edwards (2003) indicated: "Relevant staff development was frequently mentioned as a priority" (p. 101). Participant 2 in the present study stated staff development days were a "waste of time."

*Relationship to Research Questions*

For factor 1 participants, a supportive administrator who values the teacher, supportive colleagues, teaching as a career choice, and empowerment through creative

designing of lessons and freedom and flexibility in the classroom were significant positive retention factors. Time issues such as time to complete teaching tasks, time comparisons to other jobs, and spending too much time at school were significant negative retention factors. Standardized testing was also a significant negative retention factor. Serving students, fitting lifestyle, professional fulfillment, physical, emotional, and systemic factors positively and negatively affect teacher retention.

*Factor 2—Family Lifestyle With Intellectual Growth*

Factor 2 was family lifestyle with intellectual growth. Demographic characteristics of participants who loaded on Factor 2 included 5 participants who ranged from 36 to 43 years old. They were females; 4 were Caucasian and 1 indicated other race. School area demographics for participants who loaded on Factor 2 were 4 urban and 1 suburban, with all grade level groupings being represented except middle school and all subjects being taught. Years teaching in the district for Factor 2 participants ranged from 7 to 15, and total years teaching in public education ranged from 9 to 15. All Factor 2 participants had a master's degree plus additional education.

*Factor 2 Main Characteristic Agreement Statements Discussion*

Factor 2 main characteristic agreement statements were family lifestyle, intellectual challenge, and serving students, regardless of their background (see Table 42). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 2 main characteristic agreement statements follow.

*Family lifestyle.* Family lifestyle compatibility ranked as significant in retention for Factor 2 participants. The ability to be at home with family, take care of family, and

take off work for family or personal issues was important in the retention of Factor 2 participants. Prior literature indicated family lifestyle impacted retention (Alt & Henke, 2007; Edwards, 2003; Ingersoll, 2001, 2002b, 2003a; Marston et al., 2006; Marvel et al., 2007; Robbins-LaVicka, 2007; Shin & Moon, 2006; Stinebrickner, 2002). Marston et al. (2004) noted, "Even though teachers reported that their jobs eroded the time they could spend with their families, there were teachers in all groups that spoke about teaching as integrated with their lives and families" (p. 487). M. Allen (2005) concurred, "One of the reasons for women's strong interest in teaching as a profession is—and likely will continue to be—the opportunity it affords to take time out to raise a family" (p. v).

*Intellectual challenge*. Factor 2 participants ranked the intellectual challenge of teaching as significant in their retention. Participant 4 stated, "My passion for learning and knowledge is what keeps me going whether it is in a classroom or in life." Participant 37 stated, "Teaching is a vocation of service, whereby the instructor should be challenging him or herself to be a better person and teacher continuously. Children need and deserve adult role models who embrace lifelong learning." Prior researchers agreed that intellectual challenge was important in teacher retention (Cochran-Smith, 2004a, 2004b; Edwards, 2003; Marvel et al., 2007; Nieto, 2003). Edwards (2003) contended many veterans needed a challenge, such as changing grade levels or working outside of the home once the children were gone.

*Serving students no matter their background*. Factor 2 participants ranked the ability to teach students although they may be disadvantaged (for example, on free or reduced lunch, learning disabled, or an English language learner) as significant for

teacher retention. Participant 21 stated, "My experience and background in teaching has been mostly with special education. I have taught severe emotionally challenged, early childhood autism, learning disabilities." Participant 9 wrote, "'Passing the Dream' Torch Personal Meaning is the key to staying in the classroom. It is about reaching kids, making a connection." Participant 41 noted, "To get the 'A-ha' moment. To see a child 'get it.' To help a child believe they can do it." Researchers concurred that altruistic reasons teachers give for serving students are critical for teacher retention (Cochran-Smith, 2004; Edwards, 2003; Feistritzer & Haar, 2005; Miller, 2002; Nieto, 2003). Research indicated teacher attrition increased with higher levels of disadvantaged students at the school (M. Allen, 2005; Guarino et al., 2006; Hanushek et al., 2004b; Ingersoll 2003a; Lankford et al., 2002; Loeb et al., 2005; Zeichner, 2003).

*Factor 2 Main Characteristic Disagreement Statements Discussion*

Factor 2 main characteristic disagreement statements were negative administrator, learning environment, time challenges, and standardized testing (see Table 43). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 2 main characteristic disagreement statements follow.

*Negative administrator*. Factor 2 participants ranked an administrator as supportive and valuing the teacher as significantly negative in their retention. Factor 2 participants noted how destructive a poor administrator can be to teaching and learning. Participant 6 stated,

> There is also an issue which no one likes to talk about—and that is intimidation/harassment by administrators toward teachers. This is a huge, on-going problem that regional [superintendents] and district officials ignore. Teachers do not file grievances or fight back because of further harassment. I

witness it every day. Administrators have also contributed to the problem of creating such a nepotistic atmosphere that it alienates good teachers and encourages bad behavior, unprofessionalism and unethical behavior among admin/staff. Incompetent classroom teachers are given jobs and held to different standards because of nepotism.

Participant 3 commented, "I doubt if many people flourish with so little guidance."

Participant 17 purported,

The majority of administrators are not interested in the students but in playing whatever politics they need to in order to leave the school environment and move into the main office so they can have a tiny bit of power in order to feel good about themselves.

Participant 34 stated, "No matter what the job, everyone likes to be appreciated. We are all in this together!" Blasé and Blasé (2002) contended mistreatment of teachers was "extremely harmful to teachers' professional and personal lives" (p. 714):

Beyond the teachers' responses of shock and disorientation, humiliation, loneliness, and injured self-esteem, principal mistreatment seriously damaged in-school relationships, damaged classrooms, and frequently impaired all-school decision making. In addition, principals' abuse of teachers resulted in severe psychological, emotional problems including chronic fear, anxiety, anger, and depression; a range of physical/psysiological problems; and adverse personal family outcomes. (p. 715, typographical error in original)

Participant 9 stated, "Having a dream/vision is the energy for leaders. We want leaders in our community who solve problems and not make problems." Participant 38 suggested a system change where teachers anonymously evaluate administrators:

It would greatly impact student achievement and teacher retention if there was a way for teachers to evaluate administrators in an anonymous forum. Teachers are afraid of retaliation and therefore keep quiet when new administrators are placed mid-year; teachers should be able to let someone, who will make a difference, know before the school hits rock bottom and all teachers want to leave the building.

The importance of a supportive administrator who values the teacher is critical to teacher retention, as demonstrated by Factor 1 participants ranking the administrator statements as +4, *most definitely have influenced retention,* and Factor 2 participants ranking the administrator factor as -4, *most definitely have not influenced retention.* Prior research confirms this finding (M. Allen, 2005; Edwards, 2003; Guarino et al., 2006; Ingersoll, 2003a; Loeb & Reininger, 2004; Marston et al., 2004, 2006; Wiegand, 2003).

*Learning environment.* Factor 2 participants negatively ranked the school having a supportive learning environment for teachers, consistent with Blasé and Blasé (2002), who indicated a negative administrator damaged school climate factors. Because Factor 2 participants ranked the administrator as a negative influence, the ability of a negative administrator to create a positive learning environment decreases. Drago Severson and Pinto (2006) contended that administrators are able to assist in creating a positive learning environment through "the reduction of teacher isolation as a means toward improving collegiality, collaboration, and adult development. . . . Principals . . . build a climate supportive of teacher learning and collegiality" (p. 139). Yet, a negative administrator does just the opposite. Research studies indicated the administrator has a powerful influence on teacher retention through the learning environment created (Ingersoll, 2001; Johnson & Birkeland, 2003; Loeb & Reininger, 2004; NCTAF, 2003, 2007; Nichols, 2002).

*Time challenges.* Similar to Factor 1 participants, Factor 2 participants ranked having to spend too much time at school as negatively impacting retention. Research indicated support for the claim (Edwards, 2003; Ingersoll, 2001, 2003a; Johnson &

Birkeland, 2003; Loeb et al., 2005; Marston et al., 2004, 2006; Marvel et al., 2007;

Miller, 2002; Nieto, 2003). Because Factor 2 participants ranked spending too much time

at school as *definitely not influencing retention* and time to complete most teaching tasks

during contract time as *somewhat not influencing retention*, participants may have

decreased desires to spend time at the school. Blasé and Blasé (2002) noted,

"Mistreatment . . . in conjunction with the cumulative effects of long-term stress, tend to

result in chronic fear and depression" (p. 716).

  *Standardized testing*. Standardized testing was a negative influence to retention

for Factor 1,2, and 3 participants. With Factor 2 participants ranking an intellectual

challenge in teaching as an important factor for retention along with ranking standardized

testing as a negative factor in retention, it is possible that Factor 2 participants indicated

standardized testing is serving to diminish the intellectual challenge of teaching. Nieto

(2006) concurred, "Evidence is mounting that the testing frenzy—a direct result of the

call for 'high standards'—is actually limiting the kinds of pedagogical approaches

teachers use, as well as constricting the curriculum" (p. 387). Several researchers have

reported standardized testing affects retention, especially at low-poverty, high-minority

schools (Edwards, 2003; Feistritzer & Haar, 2005; Jones & Egley, 2007; Loeb et al.,

2005; Michelli, 2006; Miller, 2002; Valli & Buese, 2007).

  Figure 3 includes a visual representation of significant positive and negative

elements influencing veteran teacher retention for Factor 2 participants.

*Factor 2 Statements Neither Influencing nor Not Influencing Retention Discussion*

Factor 2 statements that participants ranked as neither influencing nor not influencing retention included materials, school climate, nowhere to go, preservice training, similar community, colleagues, respect, and professional development (see Table 44). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 2 neutral statements follow.

*Materials*. Factor 1 and Factor 2 participants ranked materials as not influencing retention. This is contrary to prior research (Cochran-Smith, 2004a, 2004b; Darling-Hammond, 2003; Hanushek et al., 2004a, 2004b; Ingersoll, 2004; Johnson & Birkeland, 2003; Loeb et al., 2005; Nichols, 2002). It is possible teachers ranked this factor as neutral because the school district provides adopted curriculum textbooks for each classroom and provides each teacher with $100 debit card each year to be used for classroom materials.

*School climate*. Factor 2 participants ranked providing an equitable education because of school climate as *neither influencing nor not influencing* teacher retention. This finding contrasts with Factor 2 participants' choice of the school having a supportive learning environment for teachers ranked as *most definitely not influencing* teacher retention. It is also not consistent with Factor 2 participants' choice of enjoying the intellectual challenge of teaching as *most definitely does influence* teacher retention. Research indicates a positive school climate influences teacher retention (Marston et al., 2006; Miller, 2002; Moore, 2004; Wiegand, 2003).
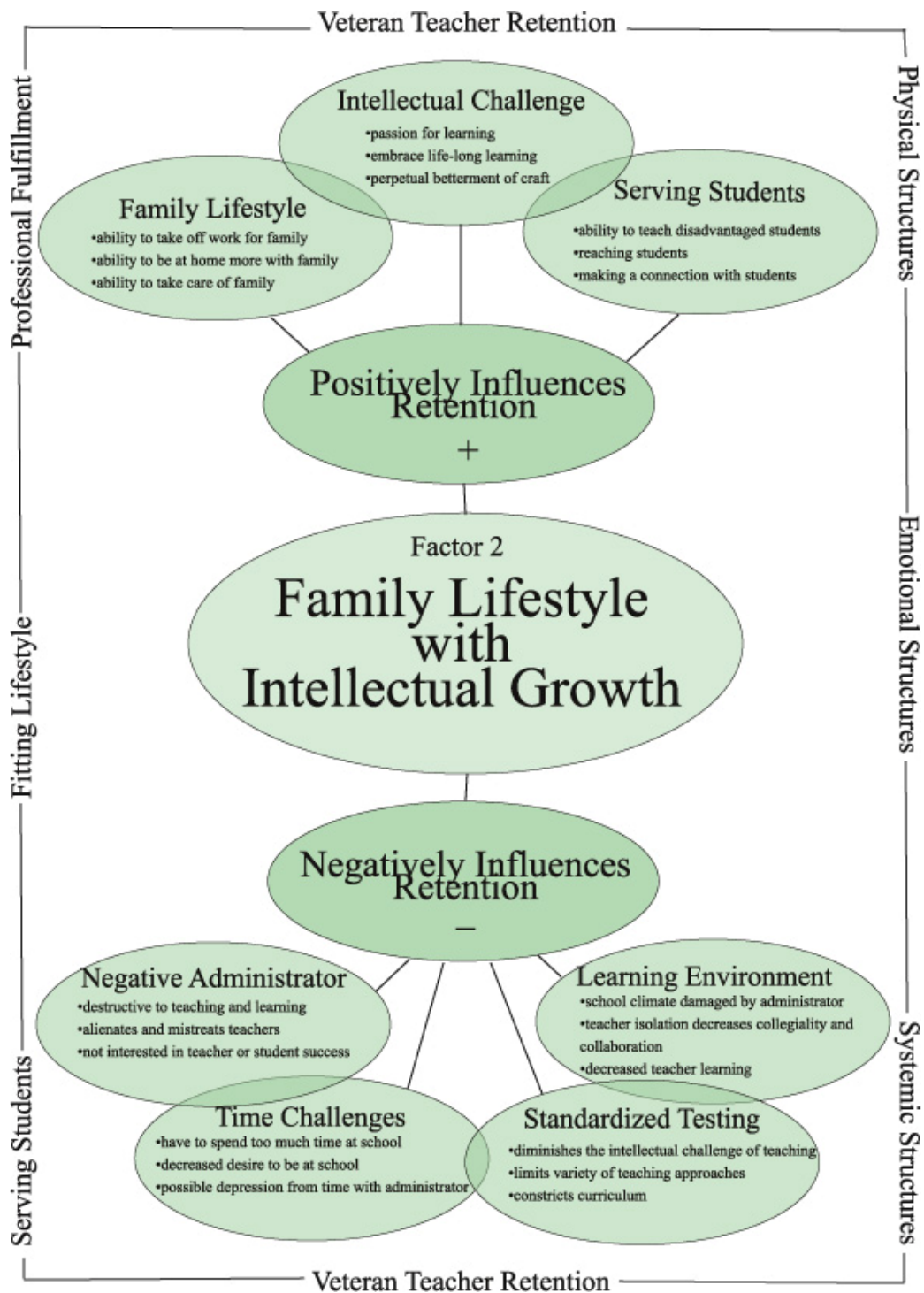
*Figure 3.* Family lifestyle with intellectual growth; visual representation.

Participant 13, who loaded on Factor 1 with a positive administrator, agreed with prior literature: "The school's climate has made the biggest difference for me. I had an option to leave five years ago and chose to stay—simply because of my current school." The conflicting ranking of school climate statements, intellectual challenge, and supportive learning environment for teachers along with the negative ranking of the administrator may indicate Factor 2 participants are ambivalent to equitable education because of emotional issues associated with a negative administrator. Nieto (2003) noted that veteran teachers were happy with their choice of teaching as a profession and passionate about providing equitable educational opportunities for their students. Yet, if Factor 1 participants feel abused by administrators or are in a chronic state of depression from negative administrators, perhaps their focus is less on the students and more on their own survival. This might explain the conflicting ranking of statements.

*Nowhere to go*. Unlike Factor 1 participants who adamantly noted teaching was a choice, Factor 2 participants ranked nowhere else to go after many years of service as neither influencing nor not influencing retention. Participant 48 stated,

> I would no longer be with the district if it were not for my children being enrolled in school here and that my husband has only 2 years left before he can retire with 30 years in PERS. The new teachers have the right idea: work the required years for the sign-on bonus and then leave. I plan on leaving the year my husband retires.

Ranking of nowhere to go as neutral may indicate that Factor 2 participants feel they could pursue other careers, yet perhaps a family lifestyle and serving students keep them teaching.

*Preservice training*. Factor 2 participants ranked preservice training as neither influencing nor not influencing teacher retention. This finding is contrary to prior literature, which indicated preservice training serves to influence retention (M. Allen, 2005; Darling-Hammond, 2000, 2003; Darling-Hammond et al., 2002; Guarino et al., 2006; Laczko-Kerr & Berliner, 2002; Latham & Vogt, 2007; Michelli, 2006; NCTAF, 2003). Perhaps preservice training is not as influential for the retention of veteran teachers as it is for the retention of new teachers because much of the prior literature concerned with preservice training included a focus on novice teachers.

*Similar community*. Factor 2 participants ranked remaining in teaching because the community where they teach is similar to the community where they grew up as neither influencing nor not influencing teacher retention. This is contrary to prior literature indicating teachers prefer teaching locations "similar to those where they grew up" (Boyd et al., 2003, p. 12) or "close to where they grew up or in schools similar to the ones they attended as students" (Loeb & Reininger, 2004, p. iii). The school district of the current study is unique because its leadership has consistently imported teachers from across the nation to meet the demands of a rapidly growing community. Yet, Factor 2 participants did not find proximity an issue in their retention. The study did not involve gathering demographic data from participants related to similar community, so the participants may have been from varying communities or similar communities.

*Colleagues*. Factor 2 participants ranked supportive colleagues as neutral for retention. This is contrary to prior research, which indicated supportive colleagues served to influence teacher retention (Brunetti, 2001; Edwards, 2003; Feistritzer & Haar, 2005;

Johnson & Birkeland, 2003; Marston et al., 2004, 2006; Milner & Hoy, 2003; Nieto, 2003; Wiegand, 2003). Perhaps participants ranked colleagues as not influential in retention because they ranked family as significant. Perhaps support for Factor 2 participants comes from their families more than from their colleagues. Edwards (2003) reported veteran teachers gained support from their families.

*Respect*. Contrary to prior literature, Factor 2 participants ranked respect from others as neither influencing nor not influencing retention. Prior literature included an emphasis on the importance of respect in teacher retention (L. Allen, 2006; Alvy, 2005; Edwards, 2003; Ingersoll, 2001; Miller, 2002; Milner & Hoy, 2003; NCTAF, 2003; Robbins-LaVicka, 2007; Weaver, 2006; Wiegand, 2003). Much of the literature indicated respect was situated with administrators and colleagues. Perhaps Factor 2 participants read the statement as general public respect instead of respect from an administrator or colleagues because other statements referred to administrators and colleagues.

*Professional development*. Factor 2 participants ranked the ability to select professional development as neutral in retention, similar to Factor 1 participants. This is contrary to prior research, which indicated choice in professional development was influential in teacher retention (Alvy, 2005; Edwards, 2003; Grossman et al., 2001; Jones & Egley, 2007; Loeb et al., 2005; Marvel et al., 2007; Michelli, 2006; NCTAF, 2003; Nickson & Kritsonis, 2006; Nieto, 2003; Robbins-LaVicka, 2007; T. Smith & Rowley, 2005).

*Relationship to Research Questions*

For Factor 2 participants, being able to maintain a family lifestyle, the intellectual challenge of teaching, and serving students who are disadvantaged were significant positive retention factors. A negative administrator, having to spend too much time at school, standardized testing, and a negative learning environment for teachers were significant negative retention factors. Serving students, fitting lifestyle, professional fulfillment, physical, emotional, and systemic factors positively and negatively affect teacher retention.

### Factor 3—Family Lifestyle With Serving Students

Factor 3 was family lifestyle with serving students. Demographic characteristics of the participant who loaded on Factor 3 were as follows: a Caucasian female with a master's degree plus additional education, age 36, teaching language arts in K-2, with 7 years of district teaching and 13 years of total public teaching experience.

*Factor 3 Main Characteristic Agreement Statements Discussion*

Factor 3 main characteristic agreement statements included a focus on family lifestyle, serving students with an adequate facility and parent support, and time comparison (see Table 45). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 3 main characteristic agreement statements follow.

*Family lifestyle*. Factor 3 ranked family lifestyle as important, similar to Factor 2 participants. The ability to take care of family and be at home with family more was influential in teacher retention for Factor 3 participants. Robbins-LaVicka (2007)

reported family lifestyle influenced teacher retention across all three of the study's

extracted factors. Prior literature supports the finding as outlined in Factor 1 (Edwards,

2003; Ingersoll, 2001, 2002b, 2003a; Marston et al., 2004, 2006; Marvel et al., 2007;

Shin & Moon, 2006).

*Serving students with adequate facility and parent support*. The importance of

being able to serve students and make a difference in the lives of students coupled with

an adequate facility and parental support significantly impacts teacher retention for

Factor 3 participants. Participants 9, 17, 23, 27, and 37 commented on service for

students as an important retention factor. Participant 23 wrote,

> I enjoy being in school and having the opportunity to make a positive difference
> in the lives of my students. I remain in teaching because of the students. I love
> seeing them grow as individuals. It is so rewarding to catch that moment when the
> light goes on and you know they got it  . . . and now they can see the purpose of
> the lesson!!

Participant 25 stated, "You never know when a teachable moment occurs or you see the

smile of a student who understands the concept." Research indicates support for the

importance of serving students with an adequate facility and parental support for teacher

retention (M. Allen, 2005; Buckley et al., 2004; Edwards, 2003; Ingersoll 2003a; Loeb et

al., 2005; Miller, 2002; Nieto, 2003; Schneider, 2003; Zeichner, 2003). Miller (2002)

noted all three categories of teachers ranked serving students as the most influential in

retention. Buckley, Schneider, and Shang (2004) reported parental involvement and the

quality of the school facility were significant for teacher retention.

*Time comparison*. Factor 3 participants indicated teaching does not require too

much time compared with other jobs. Several participants commented on teaching as a

second career that provided a broader appreciation for teaching and comparisons to other

careers. Because Factor 3 participants ranked better able to take care of family and ability

to be at home with family as significant to retention, perhaps they ranked *does not*

*require too much time compared with other jobs* as influential to retention because they

can be home with their family more. Participant 28 wrote, "9-month contract (summers

off) is a huge factor for me—definitely a reason I switched careers." Prior studies noted

the ability to have time off from work during breaks in the school year such as holidays

and the ability to have similar schedules to family influenced retention (Edwards, 2003;

Marston et al., 2004, 2006).

*Factor 3 Main Characteristic Disagreement Statements Discussion*

Factor 3 main characteristic disagreement statements were nowhere else to go,

standardized testing, professional development, giving back to the community, and pay

structure (see Table 46). Literature and participant statements indicating agreement or

disagreement with the perceptions of Factor 3 main characteristic disagreement

statements follow.

*Nowhere else to go*. Factor 3 participants noted similar rankings as Factor 1

participants, indicating the belief that teaching was a choice or a mission or a calling and

thus negating the statement the teacher had nowhere else to go. Participant 30 stated,

"The main reason I stay in teaching is because teaching is a choice not a job." Robbins-

LaVicka (2007) noted some teachers remained in teaching because they felt they had to,

whereas others remained in teaching because they wanted to. Teachers who wanted to

stay in teaching "initially, and specifically, chose the teaching profession and did not

arrive in the classroom by default" (Robbins-LaVicka, p. 123). That teaching was a

choice, a calling, or a mission was consistent with the results of prior research (M. Allen,

2005; Darling-Hammond, 2003; Edwards, 2003; Feistritzer & Haar, 2005; Figlio, 2002;

Guarino et al., 2006; Hanushek et al., 2001, 2004a, 2004b; Ingersoll, 2001, 2002b, 2003a;

Jones & Egley, 2007; Loeb et al., 2005; Marston et al., 2004, 2006; Marvel et al., 2007;

Michelli, 2006; Miller, 2002; Shin & Moon, 2006; Valli & Buese, 2007; Wiegand, 2003).

*Standardized testing*. As with Factor 1 and Factor 2 participants, Factor 3

participants ranked standardized testing as challenging for teacher retention. T. Smith and

Rowley (2005) noted,

> If states want federal money for education, then they must put into place
> accountability policies that, in the short term publicly shame schools with large
> numbers of low performing students and, in the longer term, threaten schools that
> do not improve with closure or reconstitution. (p. 147)

Not only do many teachers disagree with shaming schools, but also they find teaching to

a test instead of teaching for learning counters their philosophy of teaching. Valli and

Buese (2007) noted,

> We find that rapid-fire, high-stakes policy directives promote an environment in
> which teachers are asked to relate to their students differently, enact pedagogies
> that are often at odds with their vision of best practice, and experience high levels
> of stress. The summative effect of too many policy demands coming too fast often
> resulted in teacher discouragement, role ambiguity, and superficial responses to
> administrative goals. (p. 520)

That standardized testing negatively affects teacher retention was consistent with

the results of prior literature (Edwards, 2003; Feistritzer & Haar, 2005; Jones & Egley,

2007; Loeb et al., 2005; Michelli, 2006; Miller, 2002).

*Professional development*. Unlike Factor 1 and 2 participants, Factor 3 participants ranked the ability to select professional development as negatively impacting teacher retention. Participant 2 stated, "I do not feel the district treats me as a professional (excessive meetings, no time to work in my classroom on staff development days, waste of time staff development, etc.)." This may indicate that Factor 3 participants would prefer to select professional development that works for them instead of being assigned professional development or staff development courses by the district or the administrator. Research confirms the importance of choice in professional development (Alvy, 2005; Edwards, 2003; Grossman et al., 2001; Jones & Egley, 2007; Loeb et al., 2005; Michelli, 2006; NCTAF, 2003; Nickson & Kritsonis, 2006; Nieto, 2003; T. Smith & Rowley, 2005).

*Giving back to the community*. The ability to give back to the community although in a rougher area of town was unique to Factor 3 participants. That it was ranked negatively may indicate the participants either do not feel they have the opportunity to give back to the community because their community is not in a rougher area, they are in a rougher area and are still not able to give back to the community, or they are not as interested in serving disadvantaged students as other students because the *ability to teach students although they are disadvantaged* also ranked negatively (Table 22). That Factor 3 teachers are interested in serving students, yet not necessarily disadvantaged students, seems contradictory. The idea is also contrary to the results of some previous research. Nieto (2003) and Wiegand (2003) noted teachers enjoyed the satisfaction that comes with assisting disadvantaged students. Other researchers

contended that student characteristics, such as low income and low achieving, negatively

affected teacher retention (M. Allen, 2005; Guarino et al., 2006; Hanushek et al., 2001,

2004)

*Pay structure*. Factor 3 participants ranked the ability to serve students better

because the pay structure and benefits are adequate as negatively impacting veteran

teacher retention. Participant 2 stated,

> Although the pay scale is not adequate, I do like that I know where I stand—that
> I'm getting the same salary as my coworkers—that I know what to do to get a
> raise without having to beg my boss for one (as in other professions), etc.

Pay impacting teacher retention was consistent throughout prior literature (M. Allen,

2005; Buckley et al., 2004; Darling-Hammond, 2003; Feistritzer & Haar, 2005; Figlio,

2002; Guarino et al., 2006; Hanushek et al., 2001, 2004a, 2004b; Ingersoll, 2003a; Loeb

et al., 2005; Loeb & Reininger, 2004; Marvel et al., 2007; Michelli, 2006; Miller, 2002),

with the exception of Robbins-LaVicka (2007), who indicated the pay structure was

similar to that of other occupations in the area.

Researchers also noted teachers' altruistic reasons for teaching and working

conditions at the school may, in some cases, trump the negatives of teacher pay (M.

Allen, 2005; Darling-Hammond, 2003; Feistritzer & Haar, 2005; Loeb & Reininger,

2004). Participant 17 stated,

> Teachers remain because of the students. That's why I stay in teaching. I stay
> because if I can reach one student a year I have my 'job satisfaction.' . . . I enjoy
> what I do so I guess that with all the [swear word] and budget cuts going on,
> somehow [we] teachers will do what we need to in order to educate the kids."

Another negative pay structure issue for Factor 3 participants was extracurricular duty pay. Participant 18 commented on pay discrepancies between high school and elementary teachers for extra duties. She stated she worked many more hours than her husband, a high school teacher, yet she did not receive the extra pay he received. Participant 18 noted, "Discrepancies between job responsibilities and extra pay for extracurricular duties between secondary and elementary teachers is unfair." No research was found that indicated agreement or disagreement with this finding.

Figure 4 includes a visual representation of significant positive and negative elements influencing veteran teacher retention for Factor 3 participants.

*Factor 3 Statements Neither Influencing nor Not Influencing Retention Discussion*

Factor 3 statements that participants ranked as neither influencing nor not influencing retention were school climate, preservice training, job security, time, and respect (see Table 49). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 3 neutral statements follow.

*School climate.* The finding that school climate did not impact teacher retention for Factor 3 participants was the same as for Factor 2 participants. This was contrary to prior research (Alt & Henke, 2007; Brunetti, 2001; Guarino et al., 2006; Hanushek et al., 2004a, 2004b; Ingersoll, 2001; Johnson & Birkeland, 2003; Loeb & Reininger, 2004; Marston et al., 2004, 2006; Miller, 2002; Moore, 2004; NCTAF, 2003, 2007; Nichols, 2002; Nieto, 2003; Wiegand, 2003). Perhaps with Factor 3 participants who ranked family lifestyle most influential in their retention, efforts for a comfortable climate include a focus on the home environment instead of the school environment.
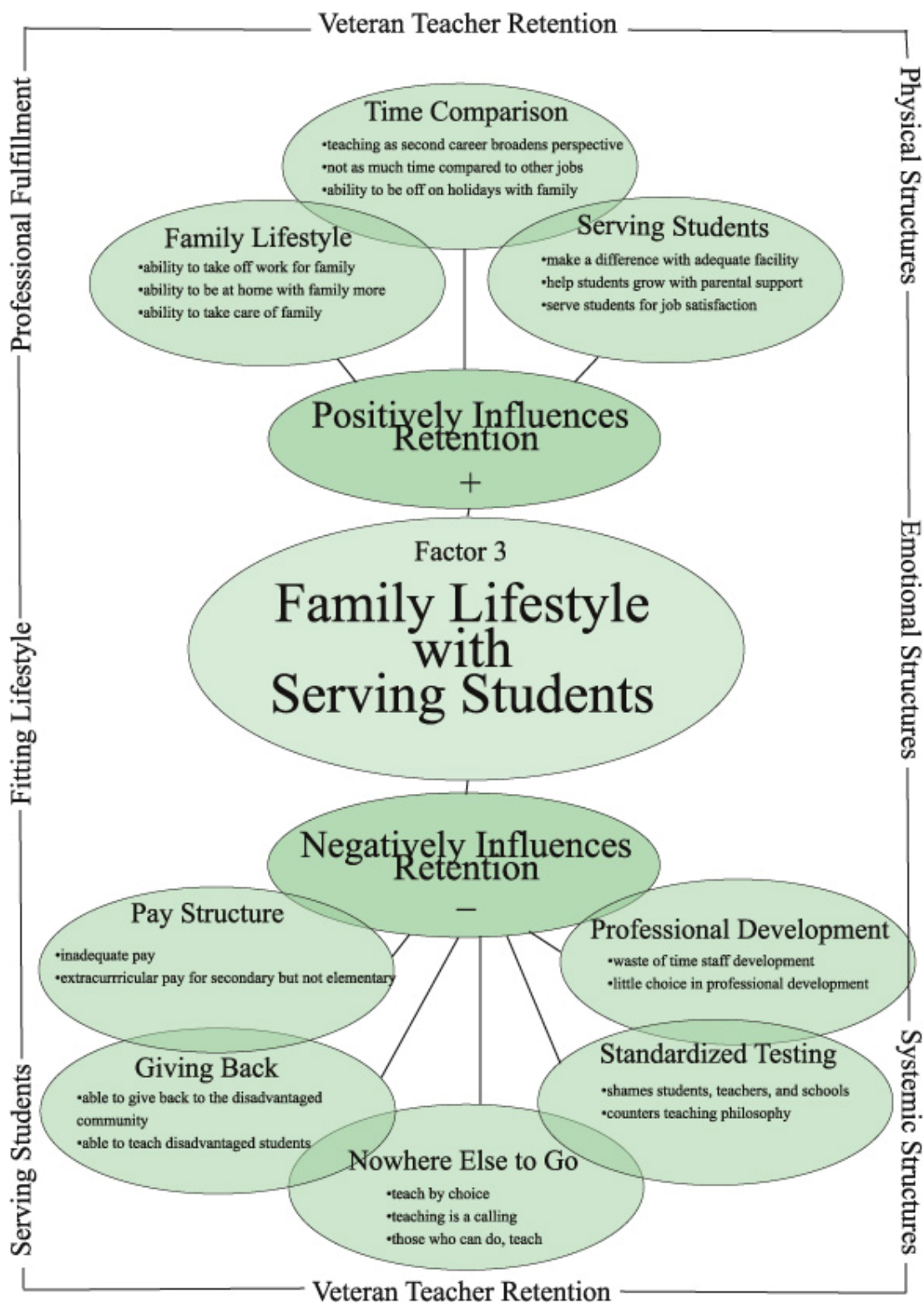
Figure 4. Family lifestyle with serving students; visual representation.

*Preservice training.* Preservice training neither influencing nor not influencing retention for Factor 3 participants mirrored Factor 2 participants and was contrary to prior research (M. Allen, 2005; Darling-Hammond, 2003; Gillis, 2004; Guarino et al., 2006; Ingersoll, 2001, 2003a, 2004; Ingwalson, 2006; Johnson & Birkeland, 2003; Lazovsky & Reichenberg, 2006; Michelli, 2006; NCTAF, 2003; Miller, 2002; Nickson & Kritsonis, 2006; Norman & Ganser, 2004).

*Job security.* Job security ranked as neutral for Factor 3 participants, just as for Factor 1 participants. The finding was consistent with some prior research (Marston et al., 2004, 2006). In other studies, job security was not as significant as other factors (Marston et al., 2006; Miller, 2002; Moore, 2004; Wiegand, 2003).

*Time.* Factor 3 participants ranked that they did not have to spend too much time at the school as neutral. This is contrary to Factor 1 participants, Factor 2 participants, and prior research (Ingersoll, 2003a; Johnson & Birkeland, 2003; Loeb et al., 2005; Marston et al., 2004, 2006; Marvel et al., 2007; Miller, 2002; Nieto, 2003). Perhaps the focus on spending time with family for Factor 3 participants results in an incentive to not spend as much time at school to get home sooner and be with family.

*Respect.* Factor 3 participants ranked the district treats me as a professional as neither influencing nor not influencing teacher retention. This finding is contrary to prior research, which indicated respect for teachers was influential in retention (L. Allen, 2006; Alvy, 2005; Edwards, 2003; Ingersoll, 2001; Michelli, 2006; Miller, 2002; Milner & Hoy, 2003; NCTAF, 2003; Weaver, 2006). Robbins-LaVicka (2007) posited veteran teachers' "choice to remain in the classroom stemmed from the level of appreciation they

received from others" (p. 129). Some participants also countered that the district staff do not treat them as professionals. Participant 48 stated, "I plan on leaving the year my husband retires. Hopefully to a more teacher friendly district." Participant 2 stated, "I do not feel the district treats me as a professional."

Participant 29 noted the superintendent was "approachable and listened to suggestions made by staff members." Perhaps Factor 3 participants ranked respect as neutral because they are at more suburban schools where they get support from parents, as indicated by their placing supportive parents as positively influencing teacher retention.

*Relationship to Research Questions*

For Factor 3 participants, the ability to take better care of family and be at home with family more were significant positive retention factors. The ability to make a difference because of an adequate school facility, to help students grow because of supportive parents, and that teaching does not require as much time as other jobs were significant positive retention factors. Standardized testing, nowhere else to go after many years of service, the ability to select professional development, the ability to give back to the community although it was in a rough area, and the ability to serve students better because of pay structure and benefits were significant negative retention factors. Serving students, fitting lifestyle, professional fulfillment, and physical, emotional, and systemic factors positively and negatively affect teacher retention.

*Factor 4—Serving Students With Physical Support*

Factor 4 was serving students with physical support. Demographic characteristics of the participant who negatively loaded on Factor 4 were as follows: a Caucasian female with a master's degree plus additional education, age 60, teaching all subjects in K-2, with 7 years of district teaching and 7 years of total public teaching experience.

*Factor 4 Main Characteristic Agreement Statements Discussion*

Factor 4 main characteristic agreement statements included a focus on serving students by making a difference and equitable education, physical support structures such as materials and facilities, and similar community (see Table 50). Literature and participant statements indicating agreement or disagreement with the perceptions of factor 4 main characteristic agreement statements follow.

*Serving students—Making a difference and equitable education.* Factor 4 participants ranked the ability to make a difference and provide an equitable education for all students because of adequate materials and school climate significant for teacher retention. Participant 9 stated, "It is about teaching the 'self power' involved in considering choice making. It is about seeing an eyebrow rise and then seeing the gleam in an eye that had not uncovered a dream." Participant 23 stated, "I enjoy being in a school and having the opportunity to make a positive difference." Participant 27 wrote, "Kids—very important." Participant 37 remarked, "Teaching is a vocation of service." Participant 46 stated, "I enjoy the rhythm of the school years, a definite beginning and a definite end. Also the feeling of accomplishment at the end of the year."

Prior research confirmed serving students by making a difference in their lives and providing an equitable education positively impacted teacher retention (Darling-Hammond, 2003; Guarino et al., 2006; Marston et al., 2004, 2006). Miller (2002) reported all groups of teachers "overwhelmingly ranked service-oriented as the most influential factor motivating them to remain in teaching" (p. 111). Service-oriented teachers sensed they made a difference for students, they had a call to teach, and they enjoyed "working with children" (Miller, p. 111). Nieto (2003) noted teachers entered the field to serve students. Teachers wanted to provide equity for their students and wanted to "live a life of service committed to the ideals of democracy, fair play, and equality" (p. 393). Nieto further noted teachers remain because they want "to be part of a meaningful and worthwhile endeavor; and . . . [to have an] impact on the future" (p. 394). Feistritzer and Haar (2005) contended, "The number one reason teachers teach is because they want to help young people learn and develop" (p. 3).

*Physical support structures—Materials and facilities*. Factor 4 participants ranked adequate and available materials and an adequate school facility as important to teacher retention. Buckley et al. (2004) reported similar results: "Most teaching takes place in a specific physical location (a school building) and the quality of that location can affect the ability of teachers to teach, teacher morale, and the very health and safety of teachers" (p. 4). Other researchers concurred that adequate materials and facilities were important to teacher retention (Darling-Hammond, 2003; Hanushek et al., 2004a, 2004b; Ingersoll, 2004; Johnson & Birkeland, 2003; Loeb et al., 2005; Loeb & Reininger, 2004; Nieto, 2003).

*Similar community*. Factor 4 participants noted the importance of teaching in a similar community as one where they grew up as significantly impacting teacher retention. This is consistent with prior literature, which indicated teachers wanted to teach "in regions that are similar to those where they grew up" (Boyd et al., 2003, p. 12; Loeb & Reininger, 2004, p. iii). Other researchers concurred that both similarity to the area where the teacher grew up and proximity to where they currently reside are important in teacher retention (Feistritzer & Haar, 2005; Loeb & Reininger; Marvel et al., 2007).

*Factor 4 Main Characteristic Disagreement Statements Discussion*

Factor 4 main characteristic disagreement statements were personal satisfaction, intellectual challenge with creativity, and student characteristics (see Table 49). Literature and participant statements indicating agreement or disagreement with the perceptions of Factor 4 main characteristic disagreement statements follow.

*Personal satisfaction.* Factor 4 participants ranked receiving satisfaction in fulfilling a professional commitment at the school as negatively impacting retention. These teachers do not enjoy being in school. That the participants selected serving students and altruistic reasons as positives for remaining in teaching, yet selected professional fulfillment and enjoyment of teaching as negatives, indicates an interesting contradiction. Nieto (2003) noted along with a strong love of respectfully helping students learn and grow, the teachers also experienced anger and desperation. Nieto contended, "They were impatient with the arbitrariness of 'the system'; they were baffled at school policies made by people far removed from the daily realities of classroom life; they were indignant at being treated as if they were children" (p. 393). Perhaps Factor 4

participants feel some of this anger and desperation that gets in the way of them best serving students and limits their satisfaction in fulfilling their professional commitment. Olsen and Anderson (2007) contended that urban educators were willing to remain in teaching, at least part time, as long as they could progress in further professional fulfillment.

Wiegand (2003) reported that teachers who were satisfied with their jobs had "a sense of personal feeling of connection to the school, a sense of comfort at the school, and the sense that 'it takes work' to remain at a school" (p. 161). Yet, some teachers in the study were not satisfied with teaching although they remained. Wiegand attributed their lack of satisfaction to burnout, which occurs among 33 to 45 year olds.

Other researchers noted that teachers reported overall satisfaction with their choice of teaching as a career and teachers enjoyed being at the school for students (Brunetti, 2001; Ingersoll, 2001, 2003a; Loeb et al., 2005; Marston et al., 2004, 2006; Miller, 2002).

*Intellectual challenge with creativity*. Unlike Factor 1 participants, who ranked creativity as positively impacting retention, and unlike Factor 2 participants, who ranked the intellectual challenge of teaching as positively impacting retention, Factor 4 participants ranked the intellectual challenge of teaching and the ability to be creative designing lessons as negatively impacting retention, indicating Factor 4 participants are not given the opportunity to be creative and expand intellectually and they would like to do so; otherwise they would likely have ranked the statements as neutral. Prior literature

indicated the intellectual challenge of teaching and creativity in teaching is important in teacher retention (Cochran-Smith, 2004a, 2004b; Edwards, 2003; Nieto, 2003).

*Student characteristics*. Factor 4 participants ranked the ability to teach students although they may be disadvantaged (for example, on free or reduced lunch, learning disabled, or an English language learner) as negatively impacting teacher retention. This was contrary to Factor 2 participants, who ranked the statement as positively impacting teacher retention. It also seems contrary to Factor 4 participants, who indicated making a difference in students' lives was significantly positive for teacher retention. Yet, prior literature indicated student characteristics, and especially disadvantaged characteristics, affect teacher retention (M. Allen, 2005; Ingersoll, 2003a; Loeb et al., 2005; Miller, 2002; Nieto, 2003; Zeichner, 2003). Participant 20 stated, "I think there should be more support for inclusive practices for children in special education. Physical support, philosophical support and training for all teachers." Participant 34 noted, "The increase in emotionally troubled students is increasing dramatically. What are we doing to offer support?" Perhaps Factor 4 participants feel less adequate or unable to serve disadvantaged students so they ranked the factor negatively.

Figure 5 includes a visual representation of significant positive and negative elements influencing veteran teacher retention for Factor 4 participants.

*Factor 4 Statements Neither Influencing nor Not Influencing Retention Discussion*

Factor 4 statements that participants ranked as neither influencing nor not influencing retention were standardized testing, time, administrator, family lifestyle, give back to the community, and treatment as a professional (see Table 50). Literature and

participant statements indicating agreement or disagreement with the perceptions of

Factor 4 neutral statements follow.
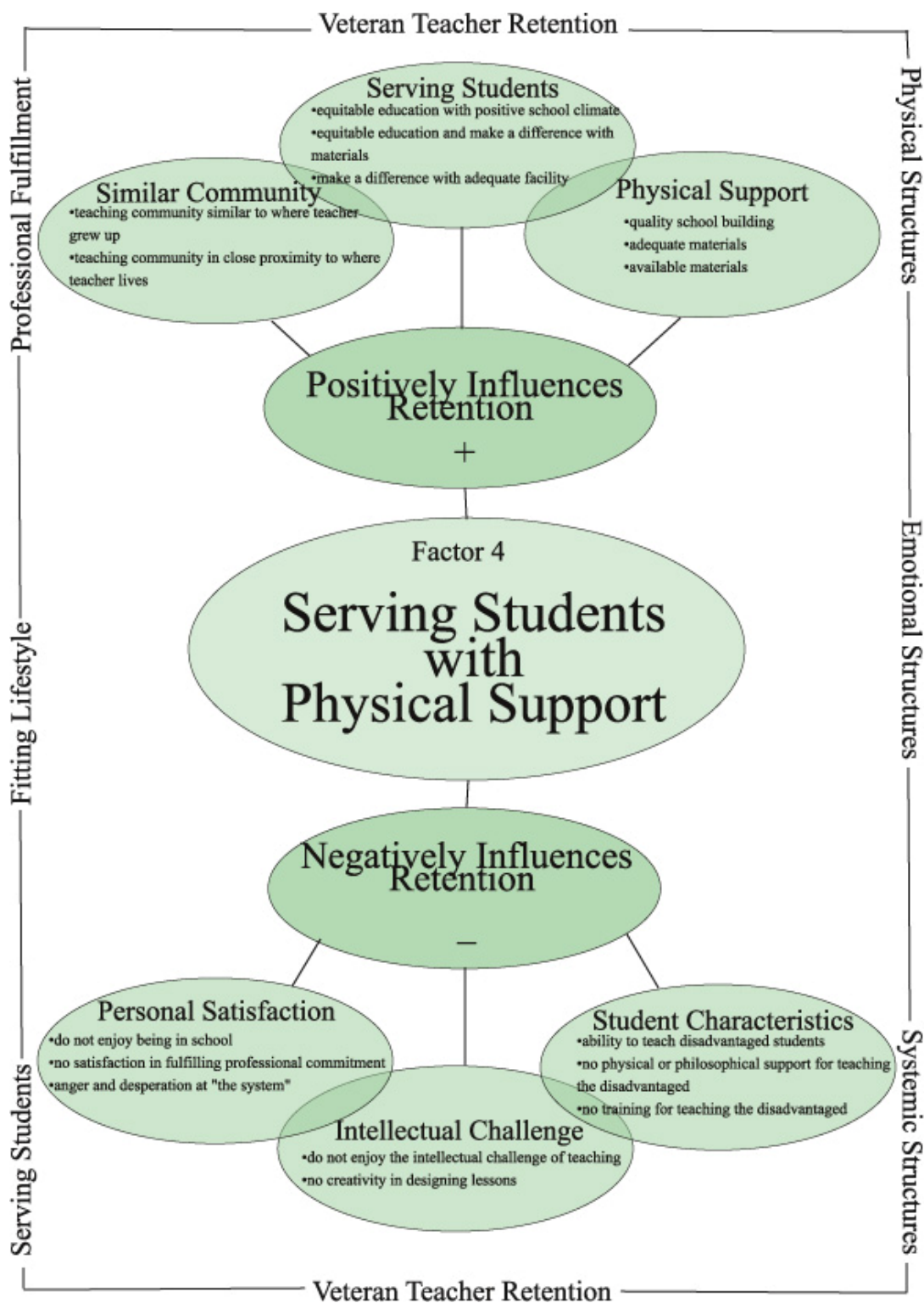
*Figure 5.* Serving students with physical support; visual representation.

*Standardized testing*. Factor 1, 2, and 3 participants all ranked standardized testing as negatively impacting teacher retention, consistent with prior research (Edwards, 2003; Feistritzer & Haar, 2005; Jones & Egley, 2007; Loeb et al., 2005; Michelli, 2006; Miller, 2002; Valli & Buese, 2007). Yet, Factor 4 participants placed standardized testing as not influencing teacher retention. This could be because Factor 4 participants ranked service to students as important and standardized testing does not necessarily serve students well (T. Smith & Rowley, 2005).

*Time*. Factor 4 participants ranked that they did not have to spend too much time at the school as neutral, which was the same ranking Factor 3 participants gave. This is contrary to Factor 1 participants, Factor 2 participants, and prior research (Ingersoll, 2003a; Johnson & Birkeland, 2003; Loeb et al., 2005; Marston et al., 2004, 2006; Marvel et al., 2007; Miller, 2002; Nieto, 2003). Perhaps Factor 4 participants' focus on serving students creates the bridge to not thinking too much time is spent at school.

*Administrator*. Factor 4 participants ranked the administrator as neutral in teacher retention. This ranking is contrary to Factor 1 and 2 participants, who ranked the administrator as critical in teacher retention. This finding is also contrary to prior literature, which indicated the administrator is significant in teacher retention (L. Allen, 2006; M. Allen, 2005; Alvy, 2005; Edwards, 2003; Guarino et al., 2006; Ingersoll, 2003a; Marston et al., 2004, 2006; Miller, 2002; Nieto, 2003; Wiegand, 2003).

Because Factor 4 participants ranked serving students as impacting retention, the neutral ranking of an administrator impacting retention may have a link to a sense that the students are the reason teachers stay in the classroom, not the administrators. Participant

17 wrote, "When asked why I remain as a teacher, it has nothing to do with the school or the administrators. . . . Administration comes and goes but the teachers remain."

*Family lifestyle*. Factor 4 participants ranked the ability to be at home with family more as neutral in retention, similar to Factor 1 participants. This is contrary to prior research (Ingersoll, 2001, 2003a; Johnson & Birkeland, 2003; Loeb et al., 2005; Marston et al., 2004, 2006; Marvel et al., 2007; Miller, 2002). Again, the focus on students may have had an influence on the choice to rank family issues as neutral.

*Give back to the community*. Factor 4 participants ranked the ability to give back to the community although it is in a rougher area of town as neutral in impacting teacher retention. This was contrary to Factor 3 participants, who ranked giving back to the community as negatively impacting teacher retention. This is also contrary to prior research, which indicated the ability to give back to a community influenced teacher retention (Nieto, 2003; Wiegand, 2003).

*Treatment as a professional*. Similar to Factor 3 participants, Factor 4 participants ranked being treated as a professional by the district as neutral for influencing teacher retention. This is contrary to prior research, which indicated the importance of being treated as a professional was significant to retention (Alvy, 2005; Edwards, 2003; Ingersoll, 2001, Michelli, 2002; Nieto, 2003; Wiegand, 2003). Perhaps Factor 4 participants' focus on serving students serves to override any unprofessional actions by the district, because they ranked satisfaction in fulfilling professional commitment as negatively affecting retention. Perhaps Factor 4 participants feel they are treated professionally enough, making this an insignificant issue in their retention.

*Relationship to Research Questions*

For Factor 4 participants, adequate materials, an adequate facility, and the school climate assisted in providing an equitable education and making a difference in student lives were all significant positive retention factors. Teaching in a community similar to where participants grew up was significant for retention. The ability to be creative designing lessons, teach students although they are disadvantaged, enjoying the intellectual challenge of teaching, being satisfied in fulfilling professional commitment, and enjoying being in school were significant negative retention factors. Serving students, fitting lifestyle, professional fulfillment, and physical and emotional factors positively and negatively affect teacher retention.

## Interfactor Relationships

Four emergent factors represented groupings of teachers in the district and the statements that are important to their retention: empowerment with emotional support, family lifestyle with intellectual growth, family lifestyle with serving students, and serving students with physical support. Across the four emergent factors, the following categories surfaced as significantly impacting teacher retention.

Standardized testing significantly impacted teacher retention. Participants ranked standardized testing as a negative influence for retention in three of the four factors. Some veteran teacher retention is negatively impacted from what teachers perceive as inequitable and inappropriate standardized testing—stress increases, intellectual challenges diminish, teaching approaches are limited, curriculum is constricted, and teaching philosophy is countered.

Time issues significantly impact teacher retention. Time issues occurred in three of the four factors, with some ranked as positively affecting teacher retention and some as negatively affecting teacher retention. Spending too much time at school occurred in Factor 1 and 2 as negatively impacting teacher retention. That teaching does not require too much time compared with other jobs occurred in Factor 1 as negatively impacting teacher retention and in Factor 3 as positively affecting teacher retention. Teachers who must spend excessive time at school to complete teaching tasks compromise their retention. For some veteran teachers, prior experiences in other professions assist them in accepting time demands in teaching as comparable to or better than time demands in other careers.

The administrator has a significant impact on teacher retention, as indicated by a strong positive influence in Factor 1 and strong negative influence in Factor 2. A positive administrator listens to and values the teacher, provides recognition and respect, and creates a positive school climate increasing teacher retention. A negative administrator is destructive to teaching and learning, alienates and mistreats teachers, and is not interested in teacher or student success decreasing teacher retention.

Empowerment and creativity in the classroom significantly impacts teacher retention, as indicated by the statement of having freedom and flexibility in the classroom ranking as a strong positive influence for Factor 1. Creativity in the classroom ranked as a strong positive influence for Factor 1, whereas creativity in the classroom ranked as a strong negative influence for Factor 4.

Teachers knowing that they want to teach instead of that they have to teach significantly impacts retention. Factor 1 and 3 participants ranked the statement that teachers remain in teaching because they have nowhere else to go after many years of service as negatively impacting teacher retention. Because the statement is in the negative and the ranking was negative, this indicated the choice of teaching as a career influenced the retention of teachers: they *want* to teach; they do not *have* to teach.

Family lifestyle statements consisting of being able to better take care of family and being able to be at home more with family significantly impact teacher retention. Both statements ranked as positively influencing teacher retention in Factor 2 and Factor 3.

Serving students by being able to teach students although they may be disadvantaged (for example, on free or reduced lunch, learning disabled, or an English language learner) significantly influences teacher retention. Factor 2 participants ranked serving disadvantaged students as positively impacting teacher retention. The ability to teach disadvantaged students and make a connection with students positively influences teacher retention. The ability to make a difference for students because of adequate school facilities and materials significantly impacts teacher retention. Factor 3 and 4 participants ranked making a difference with adequate school facilities as positively influencing teacher retention. Parental support and job satisfaction also aide in serving students and thus influence teacher retention. Factor 4 participants negatively ranked serving disadvantaged students as impacting teacher retention. Perhaps no physical or

philosophical support or training in how to make a difference or serve the disadvantaged student negatively impacts teacher retention.

The intellectual challenge of teaching significantly impacts teacher retention. Factor 2 participants ranked this as positively influencing teacher retention, whereas Factor 4 participants ranked this as negatively influencing teacher retention. Factor 2 participants had a passion and perpetual desire for learning addressed through teaching, thus positively impacting teacher retention. Factor 4 participants did not enjoy the intellectual challenge of teaching perhaps because they had no opportunities to be creative in designing lessons and stretching their intellectual abilities.

Recommendations for Action

The following recommendations for action are based upon the four emergent factors: empowerment with emotional support, family lifestyle with intellectual growth, family lifestyle with serving students, and serving students with physical support. The recommendations are based on statements in the factor arrays veteran teachers ranked as the factors that *most definitely* or *definitely* influenced or did not influence teacher retention (+4, +3, -4, -3).

*Standardized, high-stakes testing support*. Modify the federal statute judging students, teachers, and schools by single measures of student performance and comparing one set of students to a different set of students instead of monitoring progress of students over multiple years. Hold parents just as accountable as students, teachers, and schools for the academic progress of their children. In the meantime, provide teachers support for standardized, high-stakes testing. This could be done with school-wide programs with a

focus on the major strands covered by the tests. Before- and after-school tutoring

programs and before- and after-school computer clubs that target lacking skills could be

addressed. Alignment of curriculum with interim tests and assistance with interim tests

and evaluation of the data may also result in support. At the school site, include other

ways of demonstrating student growth and provide support for gathering the data,

perhaps by a dedicated individual on site who meets with students bimonthly for progress

monitoring, runs the data on the computer, and provides the report summaries to the

teacher for ongoing student assessment. The site administrator could provide reports of

progress for groupings of students throughout the years, comparing same-student scores

over time instead of comparing one year's group of students to the next year's different

group of students.

*Time support*. Provide 1 day per quarter or trimester when teachers can work in

their classrooms or adjust staff development days to include time to work in classrooms.

Provide the time for grade levels and subject-specific teachers to coordinate work, such

as common assessments, homework preparation, and daily assignments.  This time could

be during common preparation periods or staff development/teacher work time. Maintain

an aide, mature student volunteers, or parent volunteers who can make copies, grade

objective assignments, or provide other clerical assistance such as filing or organizing

student portfolios for teachers in an effort to alleviate time constraints of teachers.

*Positive, supportive administrator*. Provide a positive, supportive administrator

focused on helping teachers and students succeed. Any action the administrator takes

should not be instigated until it is measured against the positive and supportive influences

for teacher and student success criteria. Require administrator ongoing coursework for better management techniques, such as less micromanaging and more focused positive school climate strategies. Suggested school changes from the administrator can be considered thoroughly by staff and through review of the research literature prior to implementation. Major changes considered could be trial tested with a few teachers who have an interest in providing a test run of the proposed changes. Evaluations of administrators by staff could take place as often as evaluations of staff by administrators and in a similar format, thus making administrators accountable to staff just as staff is accountable to administrators. The administrator could celebrate teacher choices to be in teaching and teacher successes through listening to and considering ideas presented by the teachers for additional growth in the classroom and in the school community. Empowerment and creative ideas that benefit the school climate and have the potential to help teachers and students succeed can be rewarded with implementation and support for success.

*Family lifestyle support*. Administrators and colleagues should understand family lifestyle considerations, such as the birth of a new baby, the care of an elderly parent, or the desire to spend quality and quantity time with family members. Teachers should not feel pressure to take on additional responsibilities that will take extra time away from family needs.

*Serving students support and disadvantaged student support*. Celebrate teachers' desire to serve students by providing recognition for efforts and ongoing discussions of what has worked along with growth made by both the teachers and the students. Allow

teachers the ability to share ideas at staff or grade-level meetings and to be the experts presenting classroom successes. Find out what the teachers' needs are regarding disadvantaged students. If teachers report needing more information regarding a certain disability, provide that information in a way that works for the teachers, whether through reading articles, having the site special education experts explain the condition and strategies to accommodate the student with the disability, visiting other classrooms or schools to see their successes, or enrolling in beneficial coursework. Create open communication between staff and university professors for ongoing emotional and professional support in working with disadvantaged students.

*Intellectual challenge support*. Provide opportunities for increased knowledge of teaching as a craft, such as time to observe others, current literature on subjects of interest, the ability to try something new in the classroom that has been successful elsewhere, or action research support. Listen to what topics are of most interest to teachers and align ongoing professional development to match the topics. Create a partnership with university professors on topics of interest and provide the time for interaction between classroom teachers as experts and university professors as experts.

*Colleague support with positive learning environment (school climate)*. Provide common preparation times between grade-level or subject-level teachers for increased interaction and positive learning communities. Allow grade-level or subject-level teachers the ability to specify what their grade-level meetings or subject-level encounters should look like. Provide support for specific direction teachers choose to go, including tangible and physical supports. Create inviting physical facility areas where teachers

congregate, such as the lounge or workroom. Allow classrooms, grade levels, or subject levels to adopt an area of the campus so teachers and students can work together to keep their area clean and manicured. Dedicate some staff meeting time for celebrating accomplishments of colleagues and the positive direction in which groups of teachers are moving.

*Physical materials and facilities support.* Bimonthly or once per quarter or trimester, evaluate the physical materials available to teachers and students for equity, academic success, and upkeep. Modify or make adjustments deemed essential to teachers. Bimonthly or once per quarter or trimester, evaluate the physical facilities for cleanliness, proper working condition, and beautification. Modify or make adjustments deemed essential to teachers.

*Financial compensation and benefits with community involvement.* Provide as much financial compensation and benefits as possible in an equitable and transparent system as currently established. Continue the $100 educational materials debit card. Create partnerships between schools and businesses for additional support in beautification of facilities, additional educational materials, organizational supplies, volunteer hours, and interaction between students and community members. Provide support to teachers for collecting monies available and time to write minigrants to obtain available funds. Structure parent volunteers for maximum benefit of all teachers and volunteer time. For example, set up a central location where teachers can send some materials to be copied, collated, graded, or organized. Volunteers provide the service and teachers pick items up when completed. Coordinate volunteer time in the classroom

working with students so that teachers and students who have the most needs get serviced. Praise all volunteer efforts with snacks, thank you notes, letters from teachers and students, and special recognition.

*Initial placement in area similar to where the teacher grew up*. Allow more flexibility for teachers on initial placement to designate not only the geographical area that would be their preference, but also the school dynamics and climate along with the surrounding community that would best fit their lifestyle and professional goals. For example, a teacher might say, "I grew up in a diverse neighborhood and enjoyed the varied interactions." Or, "I would feel more comfortable working in a suburb at this time." Or, "I want to make a difference with students who are more disadvantaged who could really use someone who cares about their future."

Implications for Social Change

The purpose of the current study was to develop a better understanding of factors veteran teachers indicated influence their retention. With a clearer understanding of veteran teacher perspectives, positive action can follow to alleviate high teacher attrition. Although the data are not generalizable, other studies might result in further information on keeping quality teachers in the classroom where they can positively impact students.

Staff at preservice institutions can use the information in the current study to better understand possible long-term goals and directions of future teachers in their institutions. Faculty at universities with students seeking administrative positions can have a better understanding of veteran teacher needs and guide future administrators to practices that will positively impact veteran teacher retention.

The leadership of national education cabinet members, panels, organizations, and boards, as well as state and district organizations and boards, can use the information in the current study to better understand possible policy redirections, such as modification of standardized testing practices, pay structures, and increased teacher responsibilities without increased teacher time to complete added tasks.

District employees can use the increased information on veteran teacher retention to consider adjustments to policies, physical structures, school environments, administrator and teacher placements, and empowerment options.

Administrators can use study information to reassess personal and professional practices, open clearer communication with staff, value and empower veteran teachers, and increase positive efforts at the school site.

Veteran teachers can reflect on perceptions of why they remain teaching and recommit to the personal and professional goals. They can open better communication with colleagues, including the site administration, for practices that would best fit personal and professional fulfillment.

<div style="text-align:center">Limitations</div>

The current Q-methodology study resulted in additional information into the factors veteran teachers indicated influenced their retention, yet the study had limitations. Because of the use of Q-methodology, the study is not generalizable. Although the information contained herein may be beneficial to staff at preservice institutions, recruitment departments, district office departments, state and local school boards, superintendents, area directors, and other administrative personnel within districts for

providing better steps to retaining teachers, the results are only applicable to the large district in the southwestern portion of the United States where the study took place. Also, no assumptions can be made that the groupings indicated in the study constitute all possible groupings of veteran teachers and the reasons they might indicate influence their decisions to remain teaching in the classroom.

Because participants self-reported all demographic data, participants may not have given valid information or may have been confused as to how to report certain demographic information, such as years of service, grade levels taught, or subjects taught. Demographic data reported by participants placed a majority of the veteran teachers who participated as Caucasian and female, in their 30s or 40s, teaching all subjects in an urban area, and with a master's degree plus additional education. The factors influencing retention may have been different for the study if participants who did not fit into the majority categories had completed the Q-sorts.

Although great care was taken to create a concourse from the review of the literature that was comprehensive, specialists viewed the Q-statements, and a pilot was completed, participants might have placed other statements as more significant or less significant than the statements selected. Because Q-method involves creating Q-statements from intersecting research question concepts, the combination may have influenced a choice that provided more significance or less significance than possible if the statements had not been intersected.

The study involved the assumption that participants would thoughtfully complete the Q-sort with attention to what influenced their retention; however, participants may

not have fully understood the directions or applied additional conditions of instruction as they sorted.

Because data collection occurred from February to March 2009 during a national economic crisis, current concerns with huge bailouts, difficulty in paying house mortgages, possible teacher salary reductions, and other national economic issues might have influenced some of the participants' choices.

Future Research

The intent of the current Q-methodology study was to determine factors that veteran teachers with 6-16 years of experience teaching in the same district indicated kept them in the classroom. The study took place in a large district in the southwest region of the United States. One possibility for future research would be duplicating the study in other regions with districts smaller or larger in size to determine whether similar factors might emerge.

Although all teachers hired between 1998 and 2002 were invited to participate, the race and gender demographics of teachers who chose to participate in the current study were mainly Caucasian and female. Similar studies could include a focus on veteran teachers of varying races. Other studies could include a focus on male veteran teachers and their perceptions of what factors keep them in the classroom.

Veteran teachers in the current study had 6-16 years of experience teaching in the school district and were hired between 1998 and 2002. Future studies could include different groupings of veteran teachers, such as those with 10-20 or 15-25 years of experience or those with 20-30 years of experience teaching in the same district.

Participants in the current study included prekindergarten through 12th-grade teachers. Future Q-methodology, qualitative, or quantitative studies could include a focus on just primary grade veteran teachers, just middle school veteran teachers, or just high school veteran teachers.

Veteran teachers in the current study self-reported urban, suburban, and rural school demographics. Based on self-reporting, the majority of the participants worked in an urban setting. Future studies could include a focus on one type of setting or quantify the urban, suburban, and rural school demographics to determine whether certain groupings of teachers fall within a certain school demographic pattern.

Since four factors were extracted using Q-methodology in the current study, a qualitative research study could result in a deeper probe into the factors extracted, exploring reasons for participants' specific retention choices.

Information reported in the current study could function in the creation and piloting of a quantitative survey study, which then could be used to determine whether factors in the current study are relevant to larger groups of veteran teachers, varying areas across the nation, or different groupings of veteran teachers such as those who teach music, those who teach science, and so forth.

Participants in the current study emphasized the importance of administrators affecting veteran teacher retention. The use of Q-methodology, quantitative, and qualitative studies could help to determine specific factors veteran teachers desire in an administrator for retention of the veteran teachers.

The current study included a concourse with serving students, fitting lifestyle, and professional fulfillment intersecting physical structures, emotional structures, and systemic structures. Other Q-methodology studies could include the factors identified as most significant in the current study and the creation of a concourse focused specifically on those factors. For example, family issues, administrator issues, and empowerment issues could intersect with time issues, standardized testing issues, and serving students issues.

Because three of the four factors in the current study included standardized testing as a significant negative factor in retention of veteran teachers, further studies could address what veteran teachers perceive as limitations, challenges, or changes posed by standardized testing in the education field.

Three of the four factors in the current study included time issues as significant factors in veteran teacher retention. Further research could expand the understanding on the issue of time. For example, a qualitative study could help to clarify perceptions of time issues and how teachers modify their teaching, lifestyles, or professional desires to complete the many teaching tasks. A quantitative study could result in the determination of global issues that might be addressed nationally. A Q-methodology study could indicate specific groupings of participants and their perceptions regarding time issues.

## Conclusions

High teacher attrition causes economic, academic, and organizational burdens. Retention of quality teachers alleviates such challenges. The results of the current study served to support and counter prior literature in identifying factors veteran teachers

indicated affected their retention. The study served to support economic theory and organizational theory that teachers want to remain teaching in the classroom when both economic and organization structures are most appealing.

Four factors emerged representing groupings of teachers and factors that significantly affect their retention: empowerment with emotional support, family lifestyle with intellectual growth, family lifestyle with serving students, and serving students with physical support. Empowerment with emotional support represented a grouping of teachers who teach by choice and indicate a positive administrator who supports, values, and empowers them along with supportive colleagues as significantly and positively impacting their retention. Conversely, empowerment with emotional support represented a grouping of teachers who reported inequitable standardized testing and time challenges significantly and negatively impacting their retention.

Family lifestyle with intellectual growth represented a grouping of teachers who have a strong family lifestyle yet enjoy the intellectual challenge of teaching. Inequitable standardized testing, time challenges, and a negative administrator result in an unsupportive learning environment and negatively impacting teacher retention.

Family lifestyle with serving students represented a grouping of teachers who teach by choice and have a strong family lifestyle. Yet, these teachers want to serve students with facility and parent support. Inadequate pay and inequitable standardized testing negatively compromise their retention.

Serving students with physical support represent a grouping of teachers who want to serve students and make a difference in their lives with physical structure supports

such as adequate materials, physical facility, and school climate. The challenges in being able to be creative and intellectually challenged compromise fulfilling their professional commitment and bring no joy in being at the school, thus negatively affecting their retention.

Interfactor perceptions generated overlapping factors among the four extracted factors that affect veteran teacher retention, such as the administrator, empowerment, the intellectual challenge of teaching, standardized testing, time issues, teaching as a choice, family lifestyle, serving students, and an adequate facility.

For better retention of veteran teachers represented by the groups in the current study and interfactor perceptions, site administrators would do well to review and implement research documenting the most effective administrator practices. Veteran teachers in the current study needed positive, supportive administrators who valued and respected their opinions. Empowerment from the administrator through freedom and flexibility in the classroom and the ability to creatively educate youth were significant factors contributing to veteran teacher retention. Empowerment and support from the administrator and colleagues result in the ability of veteran teachers to pursue positive intellectual challenges. The administrator has an important role in creating a school environment where professional interaction among colleagues can ensue with respect, trust, and mutual commitment to attain high achievement for all.

Veteran teachers realize standardized testing requires modification to provide a more equitable and better representation of student, teacher, and site growth. The

application of high-stakes testing for inequitable comparisons by veteran teachers serves to compromise retention.

Time issues require frequent addressing and review. Veteran teachers spend too much time at school completing tasks that cannot be completed during teacher contract time. Classroom teachers receiving more responsibilities with no time considerations might compromise veteran teacher retention.

Many veteran teachers in the current study taught by choice. They enjoyed the intellectual challenge of teaching, providing an equitable education for students, and making a difference in students' lives. Empowerment provided them freedom and flexibility to be creative in designing lessons and serving students.

Family lifestyle was an important retention factor for veteran teachers. The ability to be at home with family, take care of family, and take off for family or personal issues was significant.

Many veteran teachers want to serve students. Serving students significantly impacts veteran teacher retention. Some teacher groups want to provide an equitable education for students with adequate materials and a positive school climate, make a difference with adequate materials and facilities, and help young people grow with parental support.

Increased understanding of the various veteran teacher groupings and the factors influencing retention may lead to modification of current practices and policies.  These adjustments may increase veteran teacher retention causing a decrease in financial and emotional attrition challenges as well as an increase in academic student success.

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APPENDIX A: REQUEST FOR VETERAN TEACHERS

Dear CCSD Educator,

Below you will find a letter inviting you to participate in a research study. Participation in this study is completely **voluntary**. Materials associated with this research do not reflect the views or opinions of CCSD or the CCSD Department of Research and School Improvement. Please note that this study has been approved by CCSD's Research Review Committee and by the Institutional Review Board at Walden University. Approval by the CCSD Research Review Committee indicates that the research proposal was reviewed and authorized by a five-member committee with regard to research design, protection of human subjects, and appropriateness of the proposed research in CCSD. Committee approval does not indicate that the project is sponsored by CCSD. Please read below for a description of the study and participation instructions.

As always, should you have questions or concerns, please feel free to contact me.

Thank you,

Judet R. Diaz
Coordinator, Research and School Improvement
Clark County School District
4260 Eucalyptus Avenue, Annex C
Las Vegas, NV 89121
office: 702-855-7783 x5367
fax: 702-799-0292
email: jroqueta@interact.ccsd.net

## REQUEST FOR VETERAN TEACHERS

Dear Experienced Teacher,

As educators, we know the importance of having a quality teacher in every classroom. Yet, many teachers choose not to remain in teaching. I commend you on your willingness to continue teaching and provide that positive academic and social experience for the students in your care. I am interested in knowing what factors

influence your choice to remain teaching in the classroom. I am conducting a research study to determine those factors that might influence retention of teachers. This is not a study associated with the school district, although permission has been granted for me to use the district e-mail system for requesting your assistance in the research. You were included in the possible teachers to assist in the research because you have been teaching in the classroom for over five years in the district. Your participation is voluntary. Yet, the more participant perspectives I am able to correlate, the more accurate picture I can organize of what motivates teachers to remain in the classroom. Your responses will remain anonymous to all but me and my research assistant. The records will be kept at a secure location, in a lockable filing cabinet, and away from any school district sites. Once the data is collected and analyzed, I can present the summarized information to principals, districts, state, and national agencies, as well as preservice universities. I am hoping that with this information, policies and procedures can be put into place to better the teaching profession in ways that teachers feel is most important.

If you are interested in providing your perspectives on what factors most influence you to remain teaching, please reply to this email with your name, location, and best times and places to meet. You may either come to my school, I can meet you at your school, or we can meet at a mutually agreed upon public location such as McDonalds or Burger King. The entire process will take approximately one hour to one and a half hours based on how much you wish to interact with the information. I look forward to getting your perspectives so that I can include them in the overall picture of factors that influence teacher retention.

Respectfully,
Theresa H. Corry
theresahcorry@hotmail.com
(702) 837-5785

APPENDIX B: Q-SAMPLE FROM CONCOURSE THEORETICAL DESIGN

ad.  Serving Students and Physical Structures

1. I am able to "make a difference" with students because there are adequate materials available (Darling-Hammond, 2003; Hanushek, Kain, & Rivkin, 2004a, 2004b; Johnson & Birkeland, 2003; Loeb, Darling-Hammond, & Luczak, 2005; Nichols, 2002).

2. I am able to "make a difference" with students because the school facility is adequate (Buckley, Schneider, & Shang, 2004; Hanushek, Kain, & Rivkin, 2004a, 2004b; Loeb, Darling-Hammond, & Luczak, 2005).

3. I am able to provide an equitable education for all students because there are adequate materials available (Cochran-Smith, 2004a, 2004b; Darling-Hammond, 2003; Hanushek, Kain, & Rivkin, 2004a, 2004b; Johnson & Birkeland, 2003; Loeb, Darling-Hammond, & Luczak, 2005; Nichols, 2002; Nieto, 2003).

4. I am able to provide an equitable education for all students because the school facility is adequate (Cochran-Smith, 2004a, 2004b; Hanushek, Kain, & Rivkin, 2004a, 2004b; Loeb, Darling-Hammond, & Luczak, 2005; Nieto, 2003).

ae.  Serving Students and Emotional Structures

5. I am able to help young people grow because of the supportive student learning environment where I teach (Alt & Henke, 2007; Brunetti, 2001; Hanushek, Kain, & Rivkin, 2004a, 2004b; Ingersoll, 2001; Johnson & Birkeland, 2003; Loeb & Reininger, 2004; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Miller, 2002; NCTAF, 2003, 2007; Nichols, 2002)

6. I am able to help young people grow because of supportive parents (Edwards,  2003, Loeb, Darling-Hammond, & Luczak, 2005; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Miller, 2002).

7. I am able to "make a difference" because I received positive induction and mentoring when I entered the school district (Allen, 2005; Darling-Hammond, 2003; Gillis, 2004; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2003a, 2004; Ingwalson, 2006; Johnson & Birkeland, 2003; Lazovsky & Reichenberg, 2006; Michelli, 2006; NCTAF, 2003; Nickson & Kritsonis, 2006; Norman & Ganser, 2004).

8. I am able to provide an equitable education for all students no matter what their background because of the school climate where I work (Alt, 2007; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2001; Loeb & Reininger, 2004; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Miller, 2002;

Nieto, 2003).

af.  Serving Students and Systemic Structures

9.  I am able to serve students better because the pay structure and benefits are adequate (Allen, 2005; Darling-Hammond, 2003; Feistritzer & Haar, 2005; Figlio, 2002; Guarino, Santibanez, & Daley, 2006; Hanushek, Kain, & Rivkin, 2001, 2004a, 2004b; Ingersoll, 2003a; Loeb, Darling-Hammond, & Luczak, 2005; Loeb & Reininger, 2004; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Michelli, 2006; Miller, 2002).

10.  I am able to provide an equitable education for all students because of standardized student testing (Edwards, 2003; Feistritzer & Haar, 2005; Jones & Egley, 2007; Loeb, Darling-Hammond, & Luczak, 2005; Michelli, 2006; Miller, 2002; Valli & Buese, 2007).

11.  I remain in teaching because I have nowhere else to go after many years of service (Marston, Courtney, & Brunetti, 2006; Wiegand, 2003).

12.  I am able to serve students better because my preservice training was adequate (Allen, 2005; Darling-Hammond, 2000; Darling-Hammond, Chung, & Frelow, 2002; Darling-Hammond, 2003; Guarino, Santibanez, & Daley, 2006; Laczko, Kerr, & Berliner, 2002; Latham & Vogt, 2007, Michelli, 2006; NCTAF, 2003).

bd.  Fitting Lifestyle and Physical Structures

13.  I stay in teaching because of the job security (Marston, Courtney, & Brunetti, 2006; Miller, 2002; Moore, 2004; Wiegand, 2003).

14.  I remain in teaching because the community where I teach is similar to the community where I grew up (Boyd, Lankford, Loeb, & Wyckoff, 2003; Loeb & Reininger, 2004).

15.  I enjoy being in school (Brunetti, 2001; Ingersoll, 2001, 2003a; Loeb, Darling Hammond, & Luczak, 2005; Miller, 2002; Olsen & Anderson, 2007; Wiegand, 2003).

16.  I don't have to spend too much time at the school facility (Ingersoll, 2003a; Johnson & Birkeland, 2003; Loeb, Darling-Hammond, & Luczak, 2005; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Miller, 2002; Nieto, 2003).

be.  Fitting Lifestyle and Emotional Structures

17. I am comfortable where I teach because I have a supportive administrator (Allen, 2005; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2003a; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Wiegand, 2003).

18. I am happy where I teach because I have supportive colleagues (Brunetti, 2001; Edwards, 2003; Feistritzer & Haar, 2005; Johnson & Birkeland, 2003; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Milner & Hoy, 2003; Nieto, 2003; Wiegand, 2003).

19. I am able to better take care of my family because I am a teacher (Edwards, 2003; Ingersoll, 2003a; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Shin & Moon, 2006).

20. The school where I teach has a supportive learning environment for teachers (Drago Severson & Pinto, 2006; Ingersoll, 2001; Johnson & Birkeland, 2003; Loeb & Reininger, 2004; NCTAF, 2003, 2007; Nichols, 2002).

bf. Fitting Lifestyle and Systemic Structures

21. I am able to take off work in order to take care of family or personal issues (Edwards, 2003; Ingersoll, 2001, 2002b; Marston, Brunetti, & Courtney, 2004; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Shin & Moon, 2006).

22. I am able to be at home with my family more because I am a teacher (Ingersoll, 2001, 2003a; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006).

23. Being a teacher does not require too much time commitment compared to other jobs (Edwards, 2003; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006).

24. I have enough time to complete most of my teaching tasks during the teacher contract time (Ingersoll, 2001, 2003a; Johnson & Birkeland, 2003; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Miller, 2002; Nieto, 2003).

cd. Professional Fulfillment and Physical Structures

25. I am able to be creative designing lessons with materials available (Allen, 2005; Loeb, Darling-Hammond, & Luczak, 2005; Slye, 2000).

26. I am able to give back to the community even though it is in a rougher area of town (Nieto, 2003; Wiegand, 2003).

27. I receive satisfaction in fulfilling a professional commitment at the school (Ingersoll, 2001, 2003a; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Nieto, 2003).

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28. I have freedom and flexibility in the classroom (Allen, 2005; Brunetti, 2001; Darling-Hammond & Sykes, 2003; Earley & Ross, 2006; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2003a; Marston, Brunetti, & Courtney, 2004; Marston, Courtney, & Brunetti, 2006; Marvel, Lyter, Peltola, Strizek, & Morton, 2007; Slye, 2000).

ce. Professional Fulfillment and Emotional Structures

29. I am able to produce the desired effect even with student discipline issues (Ingersoll, 2001, 2003a; Miller, 2002).

30. I am able to teach students even though they may be disadvantaged (for example, on free or reduced lunch, learning disabled, or an English language learner) (Allen, 2005; Ingersoll, 2003a; Miller, 2002; Nieto, 2003; Zeichner, 2003).

31. I enjoy the intellectual challenge of teaching (Cochran-Smith, 2004a, 2004b; Edwards, 2003; Nieto, 2003).

32. I receive respect from others (Allen, 2006; Alvy, 2005; Ingersoll, 2001; Miller, 2002; Milner & Hoy, 2003; NCTAF, 2003; Nieto, 2003; Weaver, 2006).

cf. Professional Fulfillment and Systemic Structures

33. I am able to select the professional development that works for me (Alvy, 2005; Edwards, 2003; Grossman, Thompson, & Valencia, 2001; Jones & Egley, 2007; Loeb, Darling-Hammond, & Luczak, 2005; Michelli, 2006; NCTAF, 2003; Nickson & Kritsonis, 2006; Nieto, 2003; Smith & Rowley, 2005).

34. I have opportunities for career advancement if I want them (Edwards, 2003; Feistritzer & Haar, 2005; Ingersoll, 2001, 2003a; Olsen & Anderson, 2007).

35. The district treats me as a professional (Alvy, 2005; Edwards, 2003; Ingersoll, 2001; Michelli, 2006; Miller, 2002).

36. My administrator values me as a teacher (Allen, 2004; Alvy, 2005; Edwards, 2003; Miller, 2002; Nieto, 2003; Wiegand, 2003).

## Conditional IRB Approval-Theresa Corry

From:
    **jenny.sherer@waldenu.edu** on behalf of **IRB@waldenu.edu**

Sent: Tue 11/11/08 2:24 PM

To:    theresahcorry@hotmail.com

Cc:    DoctoralStudy@waldenu.edu; msimon@waldenu.edu

Dear Ms. Corry,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Factors Affecting Retention of Veteran Classroom Teachers: A Q Method Study." conditional upon the approval of community research partner, as documented in a letter of cooperation or data use agreement. Walden's IRB approval only goes into effect once the Walden IRB confirms receipt of that letter of cooperation or data use agreement.

Your approval # is 11-11-08-0335865. You will need to reference this number in your doctoral study and in any future funding or publication submissions.

Your IRB approval expires on November 10, 2009. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application materials that have been submitted as of this date. If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting  the IRB Request for Change in Procedures Form.  You will receive an IRB approval status update within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval.  Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you a made commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization.  Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu: http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data.  If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may not begin the research phase of your dissertation, however, until you have received the **Notification of Approval to Conduct Research** (which indicates that your committee and Program Chair have also approved your research proposal). Once you have received this notification by email, you may begin your data collection.

Sincerely,
Jenny Sherer, M.Ed.
Operations Manager
Office of Research Integrity and Compliance
irb@waldenu.edu
Tollfree : 800-925-3368 ext. 2396
Fax: 626-605-0472
Office address for Walden University:
155 5th Avenue South, Suite 200
Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link:
http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

# APPENDIX D: DISTRICT APPROVAL

SUPERINTENDENT'S SCHOOLS, *Research and School Improvement*

4260 Eucalyptus Ave – Annex C• LAS VEGAS, NV 89121 • (702) 799-5195 • FAX (702) 799-0292

## CCSD

### CLARK COUNTY
### SCHOOL DISTRICT

February 11, 2009

Theresa H. Corry
2411 Goldfire Circle
Henderson, NV 89052

Dear Theresa:

The Research Review Committee of the Clark County School District has reviewed your request entitled: *Factors Affecting Retention of Veteran Classroom Teachers: A Q-Method Study*. The committee is pleased to inform you that your proposal has been approved with the following provisos:

1. Participation is strictly and solely on a voluntary basis,
2. No personal identifying information will be requested on any data collection forms. If the researcher elects to use pseudo names along with a crosswalk linking pseudo names to actual names, the researcher will store the crosswalk and the data in separate locations. Note: This proviso does not pertain to consent forms, where participants are required to provide their name and signature.

This research protocol is approved for a period of one year from the approval date. The expiration of this protocol is February 10, 2010. If the use of human subjects described in the referenced protocol will continue beyond the expiration date, you must provide a letter requesting an extension *one month* prior to the expiration date. The letter must indicate whether there will be any modifications to the original protocol. If there is any change to the protocol it will be necessary to request additional approval for such change(s) in writing through the Research Review Committee.

**Please provide a copy of your research findings to this office upon completion.** We look forward to the results. If you have any questions or require assistance please do not hesitate to contact Judet Diaz at 855-7783 or e-mail at jroqueta@interact.ccsd.net.

Sincerely,

Arlene Lewis
Director
Research and School Improvement
Chair, Research Review Committee

AL:ck

Cc: Kaweeda Adams
Judet Diaz
Research Review Committee

*Main Office:* 5100 WEST SAHARA AVENUE • LAS VEGAS, NEVADA 89146 • TELEPHONE (702) 799-5000

## Notification of Approval to Conduct Research-Theresa Corry

From: **jenny.sherer@waldenu.edu** on behalf of **IRB@waldenu.edu**

Sent: Thu 2/12/09 9:43 PM

To: theresahcorry@hotmail.com

Cc: DoctoralStudy@waldenu.edu; msimon@waldenu.edu

Dear Ms. Corry,

This email is to serve as your notification that Walden University has approved BOTH your doctoral study proposal and your application to the Institutional Review Board. As such, you are approved by Walden University to conduct research.

Please contact the correct Research Office at doctoralstudy@waldenu.edu if you have any questions.

Congratulations!

Jenny Sherer
Operations Manager, Office of Research Integrity and Compliance

Leilani Endicott
IRB Chair, Walden University

| | |
|---:|:---|
| **Date :** | Fri, Feb 20, 2009 11:41 AM CST |
| **From :** | **IRB@waldenu.edu** |
| **To :** | theresa.corry@waldenu.edu |
| **Reply To :** | IRB@waldenu.edu |
| **CC :** | msimon@waldenu.edu |
| **Subject :** | **Request for Change in Procedure** |

Dear Ms. Corry,

This e-mail serves to inform you that your request for a change in procedures, submitted on 2/20/09 has been approved. You may implement the requested changes effective immediately. The approval number for this study will remain the same.

Sincerely,
Jenny Sherer, M.Ed.
Operations Manager
Office of Research Integrity and Compliance
irb@waldenu.edu

Tollfree : 800-925-3368 ext. 2396
Fax: 626-605-0472
Office address for Walden University:
155 5th Avenue South, Suite 100
Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application,  may be found at this link:
http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

APPENDIX F: INFORMED CONSENT

Informed Consent Form for

**Factors Affecting Retention of Veteran Classroom Teachers: A Q Method Study**

As a veteran teacher who has been teaching in the classroom for longer than five years, you are invited to participate in a research study to explore factors that influence your decision to remain in teaching. Please read this form and ask any questions you have before agreeing to be part of the study.

***Purpose of the Study:*** The purpose of this study is to explore factors that veteran teachers state are influential at keeping them teaching in the classroom.

***Research Question for the Study***: What factors do veteran teachers use to explain their retention?

***Researcher and Contacts for the Study***: This study is being conducted by Theresa H. Corry, who is a doctoral student at Walden University. She can be contacted at (702) 837-5785 or theresahcorry@hotmail.com. Her research doctoral chair is Marilyn Simon, Ph.D. who can be contacted at (858) 259-0345 or marilyn.simon@waldenu.edu. If you want tot talk privately about your rights as a participant, you can call Dr. Lewilani Endicott. She is the Director of the Research Center at Walden University. Her phone number is 1-800-925-3368, extension 1210..

***Procedures for the Participant***: If you agree to be in this study, you will be asked to provide demographic data for correlation with other participants. (This information will be kept confidential.) You will be given 36 opinion statements that you will sort according to whether or not that statement matches what influences you most or least to remain teaching in the classroom. After sorting, you will record your answers. Finally, you will have the option of making additional written comments on the answer sheet after sorting the cards.

***Duration for the Participant and the Study***: It will take you approximately one to one and a half hours to complete the sort and record the data. The study itself will end on or before June 30, 2009.

***Risks to the Participant of the Study***: The risks include possible emotional, mental, or physical strain from comparing, sorting, and reacting with the statements on the cards. This possible risk is most likely minimal and temporary.

***Benefits of the Study to the Participant and Others***: The benefits to you of participating in the study include personal understandings of factors that may or may not influence your desire to remain teaching in the classroom. The benefits of the study to society

include a possible increased understanding of the factors that influence teachers to remain in the classroom. With this information, local administrators, district personnel, area superintendents, school board members, state agencies, and national agencies may provide policies that provide increased incentives for retention of veteran teachers.

*Compensation for the Participant*: None

*Confidentiality of Participants in the Study*: The informed consent will be kept in a locked filing cabinet apart from the research data at a secure location away from any school district site. All demographic and sort data information will be kept confidential. The raw data will be kept in a locked filing cabinet at a secure location away from any district premises. The researcher will be the only one with access to the raw data. To ensure anonymity, the participant will select a Pseudo Name of his or her choice or none at all to write on the demographic record and sort record. When the research is written, the Pseudo Names will be transferred to numbers so that no identifying names, Pseudo Names, or locations will be present for anyone reading the research. The coded numbers will be entered into a statistics software package for evaluation of the data. The entire research proposal has gone through the Institutional Review Board (IRB) for strict adherence to ethical standards. Published documents will not have reference to individuals by name. All records will be destroyed after five years.

*Voluntary Nature of the Study*: Your decision to participate in the study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. Specifically, this will not affect your current or future relationship with the school district for which you presently work. If you decide to participate, you are free to withdraw at any time with no repercussions from the researcher or the school district.

*Questions from the Participant*: You may ask any questions you have at any time prior to or after signing this informed consent. You will receive a copy of this informed consent.

I, _____, have read and understand the above information. I have had all questions answered by the researcher, and I am aware that I may call or email the researcher with additional questions I may have in the future. I am 18 years of age or older, and I give my consent to participate in the study titled *Factors Affecting Retention of Veteran Classroom Teachers: A Q Method Study.*

_____  _____
Signature of Participant                                                       Date of Signature


_____  _____
Signature of Researcher                                                       Date of Signature

APPENDIX G: DEMOGRAPHIC DATA SHEET

Demographic Data Sheet

**Directions**: Thank you for taking the time to complete this demographic data sheet, Q-sort, and recording on the answer sheet. The entire process will take approximately one to one and one half hours to complete.

Pseudo Name: _____

Gender:        Male        Female                    Age: _____

Race and/or Ethnicity:        African American (Black)        Asian (or Polynesian)

                              Caucasian (White)               Latino (Hispanic)

                              Native American                 Other _____

School where you are presently teaching: _____

Grade Level(s) taught: _____

Subject(s) taught: _____

Year you were hired in the school district: _____

How many years you have been teaching in the district: _____

How many years you have been teaching (including previous public teaching

experience): _____

Highest Level of Education:   Bachelor                     Bachelor plus

                             Master                       Master plus

                             Doctorate                    Doctorate plus

What school or training did you attend or receive to prepare for teaching:

                    On the job                  Teaching school

                    Two year university          Four year university

                    Five year university

Q-Sort Instructions for

**Factors Affecting Retention of Veteran Classroom Teachers: A Q Method Study**

***Condition of Instructions***:  Thank you for performing this Q-Sort. The researcher will lay out a large matrix for sorting from -4, indicating that the item has significantly not impacted your decision to remain in teaching, to +4, indicating that the item has significantly impacted your decision to remain in teaching. Under each category heading will also be the number indicating how many cards can be placed into that category.

You will be provided with 36 cards. Each card will have a random number and an opinion statement written on it that may or may not be a factor that is influential for your decision to remain teaching in the classroom. As you work with the cards, you may switch them at any time from any piles or from the categories on the matrix where you have placed them to any other piles or any other categories on the matrix. You may ask the researcher questions about how to complete the Q-sort at any time during the Q-sort.

1.  Read through the cards and place them into three piles.
        Left Pile - The pile of cards you place on the left are those statements that have not influenced your decision to remain teaching in the classroom.
        Middle Pile – The pile in the middle are those statements that have neither influenced nor not influenced your decision to remain teaching in the classroom or those cards with statements that you are uncertain about or feel ambivalent about.
        Right Pile – The pile of cards you place on the right are those statements that have influenced your decision to remain teaching in the classroom.

2.  Pick up the cards on the right and select two cards with statements that have most definitely influenced your decision to remain teaching in the classroom. Place those two cards under the heading +4. Return the cards not selected to the pile on the right.

3.  Pick up the cards on the left and select two cards with statements that have most definitely not influenced your decision to remain teaching in the classroom. Place those two cards under the heading -4. Return the cards not selected to the pile on the left.

4.  Pick up the cards on the right and select three cards with statements that have definitely influenced your decision to remain teaching in the classroom. Place those three cards under the heading +3. Return the cards not selected to the pile on the right.

5.  Pick up the cards on the left and select three cards with statements that have definitely not influenced your decision to remain teaching in the classroom. Place those three cards under the heading -3. Return the cards not selected to the pile on the left.

6.  Pick up the cards on the right and select four cards with statements that have influenced your decision to remain teaching in the classroom. Place those four cards under the heading +2. Return the cards not selected to the pile on the right.

7.  Pick up the cards on the left and select four cards with statements that have not influenced your decision to remain teaching in the classroom. Place those four cards under the heading -2. Return the cards not selected to the pile on the left.

8.  Pick up the cards on the right (and as needed from the middle) and select five cards that have somewhat influenced your decision to remain teaching in the classroom. Place those five cards under the heading +1. Return the cards not selected to the pile in the middle.

9.  Pick up the cards on the left (and as needed from the middle) and select five cards that have somewhat not influenced your decision to remain teaching in the classroom. Place those five cards under the heading -1. Return the cards not selected to the pile in the middle.

10.  Place all remaining cards from the middle pile under the heading 0.

11.  Review your choices to make sure that you have an array of those statements that were least influential in your decision to remain teaching in the classroom from the far left to those that were most influential in your decision to remain teaching in the classroom on the far right. Switch any cards as needed to best fit your personal opinion about what influenced you most and least to remain in teaching.

12.  When the matrix fits your opinions about what statements were least to most influential for your decision to remain teaching in the classroom, record the number of the card in each category onto the Answer Sheet matrix of the same category.

13.  Write any additional comments that you would like to on the Answer Sheet.

14.  Return the answer sheet to the researcher.

Thank you again for your participation in this research study. I hope you have enjoyed reflecting on factors that have influenced your decision to remain in the teaching profession.

# APPENDIX I: Q-SORT ANSWER SHEET

| Least Significant | | | | Neutral | | | | Most Significant | |
|---|---|---|---|---|---|---|---|---|---|
| -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 | Ranks |
| two | three | Four | five | eight | five | four | three | two | # of cards |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Additional Comments to be Written Here:

_____

_____

_____

# APPENDIX J: CORRELATION MATRIX

```
Correlation Matrix Between Sorts


SORTS      1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   26   27   28   29   30

  1  1   100   45   44   61   -1   33   24   37   11   19  -12   38   28   50   27   14   33   33   36   48   42   45   39   47   31   29   22   27   24   35
  2  2    45  100   24   52   37   12   17   32    8   36   -3    4   32   32  -12    0   11    6   24   47   21   40   47   29   14   31   14   29   52   12
  3  3    44   24  100   29   -6   12   13   29   27   31   12   49   39   30   17  -14   -9   46   53   50   46   38   48   34   42   68   31   47   57   -1
  4  4    61   52   29  100  -16   56   25    8   14   41  -12   20   13   47   42   29   23   16    6   38   24   14   28   39   22   28   13   10   20   17
  5  5    -1   37   -6  -16  100  -46    4   16  -17   -4   17  -14    3   -3  -47  -17  -19  -12   -2    4    7    9   -7  -24    9  -16    7    7   32    5
  6  6    33   12   12   56  -46  100   16   -4    6   24    3   12    0   10   42   28   33    6    5    3    8   -1  -11    4   -2   19   -2   -9   -6    3
  7  7    24   17   13   25    4   16  100   33   47   71   26   47   54   26   40   14   52   26   32   22   30   54   36   41   62   29   28   61   29   20
  8  8    37   32   29    8   16   -4   33  100   28   28    0   49   55   41   -6  -24   -3   31   40   54   33   52   45   20   54   41   10   39   39   32
  9  9    11    8   27   14  -17    6   47   28  100   50   -1   32   57   43   14  -39   19   48    3   28   59   34   41   47   51   31   52   47   12   11
 10 10    19   36   31   41   -4   24   71   28   50  100    9   46   60   40   30  -11   32   36   32   30   41   51   41   51   52   43   28   54   37   17
 11 11   -12   -3   12  -12   17    3   26    0   -1    9  100   14   11   -6   26   15    9    7   41   -1   12    6   15    7    6   14   16   17    3    3
 12 12    38    4   49   20  -14   12   47   49   32   46   14  100   39   32   34  -19   15   41   43   34   32   61   34   31   54   57    3   49   22   24
 13 13    28   32   39   13    3    0   54   55   57   60   11   39  100   51   10  -21   24   49   49   41   52   53   51   51   58   57   49   68   38   12
 14 14    50   32   30   47   -3   10   26   41   43   40   -6   32   51  100    1  -24    4   48   19   49   60   36   49   51   49   21   21   22    7   24
 15 15    27  -12   17   42  -47   42   40   -6   14   30   26   34   10    1  100   53   47   -1   27    2    5   10   19   34   21   21   22   28  -18   30
 16 16    14    0  -14   29  -17   28   14  -24  -39  -11   15  -19  -21  -24   53  100   43  -35   20   -5  -32  -26   -1   13  -14  -25   -4    4  -12   20
 17 17    33   11   -9   23  -19   33   52   -3   19   32    9   15   24    4   47   43  100  -14   25    5  -14    9   11   31    1    3   37   34    5   34
 18 18    33    6   46   16  -12    6   26   31   48   36    7   41   49   48   -1  -35  -14  100   19   17   56   54   31   36   45   46   18   24    8    6
 19 19    36   24   53    6   -2    5   32   40    3   32   41   43   49   19   27   20   25   19  100   46   20   38   52   48   32   46   23   64   47   15
 20 20    48   47   50   38    4    3   22   54   28   30   -1   34   41   49    2   -5    5   17   46  100   47   39   71   55   46   32   14   35   51    6
 21 21    42   21   46   24    7    8   30   33   59   41   12   32   52   60    5  -32  -14   56   20   47  100   46   49   46   61   29   24   31    9   -4
 22 22    45   40   38   14    9   -1   54   52   34   51    6   61   53   36   10  -26    9   54   38   39   46  100   54   37   71   47    4   58   28   15
 23 23    39   47   48   28   -7  -11   36   45   41   41   15   34   51   49   19   -1   11   31   52   71   49   54  100   74   49   41   29   58   31   12
 24 24    47   29   34   39  -24    4   41   20   47   51    7   31   51   51   34   13   31   36   48   55   46   37   74  100   39   21   36   52   16   22
 25 25    31   14   42   22    9   -2   62   54   51   52    6   54   58   49   21  -14    1   45   32   46   61   71   49   39  100   31    6   55   29   19
 26 26    29   31   68   28  -16   19   29   41   31   43   14   57   57   21   21  -25    3   46   46   32   29   47   41   21   31  100   26   51   49  -12
 27 27    22   14   31   13    7   -2   28   10   52   28   16    3   49   21   22   -4   37   18   23   14   24    9   29   36    6   26  100   57   22    7
 28 28    27   29   47   10    7   -9   61   39   47   54   17   49   68   22   28    4   34   24   64   35   31   58   58   52   55   51   57  100   47   11
 29 29    24   52   57   20   32   -6   29   39   12   37    3   22   38    7  -18  -12    5    8   47   51    9   28   31   16   29   49   22   47  100   -6
 30 30    35   12   -1   17    5    3   20   32   11   17    3   24   12   24   30   20   34    6   15    6   -4   15   12   22   19  -12    7   11   -6  100
 31 31    36   51   28   53   -6   14   34   31   47   57   -1   34   57   44   37   -9   23   30   25   37   29   51   55   55   49   49   34   52   22   29
 32 32     7   18   34   12   17    6   61   31   57   57   43   35   63   21   22  -24   16   42   38   21   44   46   32   27   46   48   62   61   35  -11
 33 33    18    1   20   20  -20   28   52   35   35   60   29   60   41   41   28  -22   14   38   33   12   32   47   23   32   36   47   19   46   11   -3
 34 34    24   37   40   26   17    5   51   46   50   72    3   38   63   31    6  -25    7   46   38   63   53   47   46   52   56   39   28   48   51   12
 35 35    39   37   56   30  -17   22   44   49   37   56    1   61   67   18   20   -4   31   37   59   45   28   47   44   50   36   70   29   61   55   12
 36 36    49   11   56   27  -29   10   30   35   19   30   17   40   50   46   40   28   32   26   76   63   35   34   68   68   46   39   26   54   29   17
 37 37    25    8   26   19  -15   -4   27   24   66   44  -15   19   55   54   -3  -35   -2   60    8   36   56   31   29   54   39   26   38   30   17    3
 38 38    32   14    4   41  -29   31   47   -3    4   31   19   12   21    3   69   69   74   -9   39    3  -13    9   25   44   16   11   15   32    4   41
 39 39    29   47   49   28    9   17   46   61   51   64    8   43   69   28    9  -22    4   49   39   54   49   62   53   40   56   61   26   55   51   23
```

Correlation Matrix Between Sorts

```
SORTS      1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   26   27   28   29   30


40 40     51   43   36   42   -7   34   19   33   17   37    8   28   46   21   24   14   17   43   44   28   34   27   21   43   18   48   12   26   33   26
41 41     25   27   33   24    8    3   59   42   39   50   29   64   46   34   22  -16    9   27   36   41   54   56   38   31   51   49   20   57   28   -8
 42 42    30    4   36   -4   -7   -8   46   49   39   29   -4   68   52   25    6   -9   19   39   51   35   32   62   44   34   62   46    8   69   28   13
 43 43    29   47   45   36   -3   33   26   59   15   37   11   33   53   21   27   11   18   18   58   36    6   29   43   26   28   62   31   52   44   19
 44 44    12   22    7   -6   21   -6   17   30    1    3   40   31    2    2   -4  -19   -6   -5   16   25   21   32   19   -7   12   25   -9   14   17   -7
 45 45    46   28   28   36  -17   13   38   41   65   41  -17   37   51   40   23  -12   21   34   22   39   50   37   49   56   43   31   44   51   13   31
 46 46    46   17   -1   36    1   35   15    4   11    6   11   -1    7   22   33   24   26   18    6   -4   26    3   -9   11    0   -3   38    8  -17   16
 47 47    51   46   55   26   14   -4   41   63   41   53    6   58   63   37   14  -21    6   59   49   48   49   72   53   47   59   59   24   60   51   38
 48 48    31    3    2   41  -21   64   24    9  -17   21   21   23   -1    8   43   49   26   12   26    3    3   11    3   14   17    8  -36   -8  -17   34
 49 49    37   29   30   19   -1   -4   39   57   57   46    9   39   76   52   19  -18   12   51   43   46   59   56   65   53   56   43   43   54    9   28
```

Correlation Matrix Between Sorts

```
SORTS     31   32   33   34   35   36   37   38   39   40   41   42   43   44   45   46   47   48   49


 1  1     36    7   18   24   39   49   25   32   29   51   25   30   29   12   46   46   51   31   37
 2  2     51   18    1   37   37   11    8   14   47   43   27    4   47   22   28   17   46    3   29
 3  3     28   34   20   40   56   56   26    4   49   36   33   36   45    7   28   -1   55    2   30
 4  4     53   12   20   26   30   27   19   41   28   42   24   -4   36   -6   36   36   26   41   19
 5  5     -6   17  -20   17  -17  -29  -15  -29    9   -7    8   -7   -3   21  -17    1   14  -21   -1
 6  6     14    6   28    5   22   10   -4   31   17   34    3   -8   33   -6   13   35   -4   64   -4
 7  7     34   61   52   51   44   30   27   47   46   19   59   46   26   17   38   15   41   24   39
 8  8     31   31   35   46   49   35   24   -3   61   33   42   49   59   30   41    4   63    9   57
 9  9     47   57   35   50   37   19   66    4   51   17   39   39   15    1   65   11   41  -17   57
10 10     57   57   60   72   56   30   44   31   64   37   50   29   37    3   41    6   53   21   46
11 11     -1   43   29    3    1   17  -15   19    8    8   29   -4   11   40  -17   11    6   21    9
12 12     34   35   60   38   61   40   19   12   43   28   64   68   33   31   37   -1   58   23   39
13 13     57   63   41   63   67   50   55   21   69   46   46   52   53    2   51    7   63   -1   76
14 14     44   21   41   31   18   46   54    3   28   21   34   25   21    2   40   22   37    8   52
15 15     37   22   28    6   20   40   -3   69    9   24   22    6   27   -4   23   33   14   43   19
16 16     -9  -24  -22  -25   -4   28  -35   69  -22   14  -16   -9   11  -19  -12   24  -21   49  -18
17 17     23   16   14    9   31   32   -2   74    4   17    9   19   18   -6   21   26    6   26   12
18 18     30   42   38   36   37   26   60   -9   49   43   27   39   18   -5   34   18   59   12   51
19 19     25   38   33   38   59   76    8    9   39   44   36   51   58   16   22    6   49   26   43
20 20     37   21   12   63   45   63   36    3   54   28   41   35   36   25   39   -4   48    3   46
21 21     29   44   32   53   28   35   56  -13   49   34   54   32    6   21   50   26   49    3   59
22 22     51   46   47   47   47   34   31    9   62   27   56   62   29   32   37    3   72   11   56
23 23     55   32   23   46   44   68   29   25   53   21   38   44   43   19   49   -9   53    3   65
24 24     55   27   32   52   50   68   54   44   40   43   31   34   26   -7   56   11   47   14   53
```

```
25 25        49   46   36   56   36   46   39   16   56   18   51   62   28   12   43    0   59   17   56
26 26        49   48   47   39   70   39   26   11   61   48   49   46   62   25   31   -3   59    8   43
27 27        34   62   19   28   29   26   38   15   26   12   20    8   31   -9   44   38   24  -36   43
28 28        52   61   46   48   61   54   30   32   55   26   57   69   52   14   51    8   60   -8   54
29 29        22   35   11   51   55   29   17    4   51   33   28   28   44   17   13  -17   51  -17    9
30 30        29  -11   -3   12   12   17    3   41   23   26   -8   13   19   -7   31   16   38   34   28
31 31       100   41   34   51   46   39   37   37   57   46   29   33   53    2   55   11   62   12   62
32 32        41  100   54   59   46   21   43   11   56   25   62   28   38   12   32   22   48   -9   54
33 33        34   54  100   34   37   31   38    8   37   26   63   37   29   34   17   21   39   20   32
34 34        51   59   34  100   63   32   57    8   79   47   52   33   38    8   51    4   68    6   57
35 35        46   46   37   63  100   48   37   32   70   65   51   54   61    9   52    8   71   17   52
36 36        39   21   31   32   48  100   24   47   32   39   26   54   44    7   29    1   41   25   47
37 37        37   43   38   57   37   24  100   -6   46   36   36   21   -2  -13   46   24   51  -19   52
38 38        37   11    8    8   32   47   -6  100    7   37    9   14   34  -22   17   18   15   51   16
39 39        57   56   37   79   70   32   46    7  100   53   44   44   57   19   51    1   81   21   66
40 40        46   25   26   47   65   39   36   37   53  100   29   22   49    4   35   32   68   37   36
41 41        29   62   63   52   51   26   36    9   44   29  100   43   26   46   36   24   53   -2   37
42 42        33   28   37   33   54   54   21   14   44   22   43  100   31   22   47  -14   53   12   53
43 43        53   38   29   38   61   44   -2   34   57   49   26   31  100    3   30   14   47   31   43
44 44         2   12   34    8    9    7  -13  -22   19    4   46   22    3  100    8    9   21  -12   15
```

Correlation Matrix Between Sorts

```
SORTS        31   32   33   34   35   36   37   38   39   40   41   42   43   44   45   46   47   48   49

45 45        55   32   17   51   52   29   46   17   51   35   36   47   30    8  100   24   54   -3   69
46 46        11   22   21    4    8    1   24   18    1   32   24  -14   14    9   24  100   16   16   22
47 47        62   48   39   68   71   41   51   15   81   68   53   53   47   21   54   16  100   10   63
48 48        12   -9   20    6   17   25  -19   51   21   37   -2   12   31  -12   -3   16   10  100    6
49 49        62   54   32   57   52   47   52   16   66   36   37   53   43   15   69   22   63    6  100
```

## APPENDIX K: UNROTATED FACTOR MATRIX

Unrotated Factor Matrix
Factors

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| SORTS | | | | | | | | |
| 1 | 0.5603 | 0.3135 | 0.0666 | -0.4451 | 0.1615 | -0.0298 | 0.1980 | 0.2230 |
| 2 | 0.4595 | 0.0102 | -0.2298 | -0.5309 | -0.1765 | 0.4002 | 0.2668 | 0.0169 |
| 3 | 0.6115 | -0.0948 | -0.2387 | -0.1782 | 0.0691 | -0.0432 | -0.4045 | 0.2933 |
| 4 | 0.4305 | 0.4738 | 0.2062 | -0.4165 | 0.1528 | 0.2956 | 0.0337 | 0.1169 |
| 5 | -0.0385 | -0.4162 | -0.3278 | -0.1267 | -0.2416 | 0.3324 | 0.5668 | -0.0212 |
| 6 | 0.1675 | 0.5910 | 0.1499 | -0.0744 | 0.4145 | 0.3555 | -0.2242 | 0.0005 |
| 7 | 0.6446 | 0.1722 | 0.0323 | 0.4690 | -0.0493 | 0.0773 | 0.2915 | -0.1862 |
| 8 | 0.6271 | -0.2271 | -0.2462 | -0.1583 | 0.1412 | -0.0930 | 0.2046 | -0.1740 |
| 9 | 0.6077 | -0.2489 | 0.5227 | 0.2101 | -0.1531 | -0.0123 | -0.0824 | -0.0925 |
| 10 | 0.7216 | 0.0602 | 0.1280 | 0.1822 | -0.0106 | 0.2227 | 0.0051 | -0.2439 |
| 11 | 0.1510 | 0.1203 | -0.2920 | 0.5013 | 0.0387 | 0.1808 | 0.1865 | 0.4134 |
| 12 | 0.6547 | -0.0144 | -0.1734 | 0.2503 | 0.4254 | -0.1937 | -0.0124 | -0.0909 |
| 13 | 0.8107 | -0.1529 | 0.0652 | 0.0912 | -0.2101 | 0.0084 | -0.0944 | -0.1142 |
| 14 | 0.5653 | -0.0897 | 0.3899 | -0.2749 | 0.1491 | -0.1537 | 0.1920 | 0.2330 |
| 15 | 0.3179 | 0.7140 | 0.1317 | 0.3212 | 0.0591 | -0.0412 | -0.0415 | 0.0905 |
| 16 | -0.1181 | 0.8257 | -0.1680 | 0.0036 | -0.1763 | -0.0884 | 0.1246 | 0.1040 |
| 17 | 0.2710 | 0.6343 | 0.0638 | 0.2536 | -0.3272 | 0.0197 | 0.1438 | -0.1284 |
| 18 | 0.5650 | -0.2480 | 0.3138 | -0.0271 | 0.3320 | -0.0391 | -0.2084 | -0.0012 |
| 19 | 0.6198 | 0.2100 | -0.4893 | 0.0860 | -0.1154 | -0.1880 | -0.1062 | 0.2381 |
| 20 | 0.6321 | -0.1073 | -0.1680 | -0.4030 | -0.0724 | -0.1981 | 0.0837 | 0.2752 |
| 21 | 0.6233 | -0.3033 | 0.3508 | -0.0770 | 0.2148 | -0.0224 | 0.1226 | 0.3325 |
| 22 | 0.7187 | -0.2026 | -0.1151 | 0.0740 | 0.2377 | -0.1124 | 0.2397 | -0.1478 |

Unrotated Factor Matrix (continued)

Factors

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| SORTS | | | | | | | | |
| 23 | 0.7120 | -0.0369 | -0.0844 | -0.1546 | -0.2108 | -0.3460 | 0.0829 | 0.2439 |
| 24 | 0.6823 | 0.2110 | 0.2493 | -0.1141 | -0.2350 | -0.2959 | -0.0151 | 0.1829 |
| 25 | 0.7093 | -0.1622 | 0.0434 | 0.1042 | 0.1600 | -0.2604 | 0.2392 | -0.1348 |
| 26 | 0.6734 | -0.0877 | -0.2779 | 0.0497 | 0.1770 | 0.1730 | -0.4525 | 0.0246 |
| 27 | 0.4292 | -0.0060 | 0.2714 | 0.1898 | -0.6106 | 0.2494 | -0.1262 | 0.2562 |
| 28 | 0.7613 | -0.0160 | -0.1859 | 0.3087 | -0.3441 | -0.0861 | -0.0097 | -0.0019 |
| 29 | 0.4835 | -0.2028 | -0.5317 | -0.2101 | -0.2656 | 0.2425 | -0.1535 | -0.0272 |
| 30 | 0.2482 | 0.3581 | 0.0799 | -0.1702 | -0.0403 | -0.1850 | 0.4153 | -0.3857 |
| 31 | 0.7016 | 0.1268 | 0.1552 | -0.1531 | -0.1363 | 0.0689 | 0.0204 | -0.1910 |
| 32 | 0.6517 | -0.1926 | 0.0606 | 0.4593 | -0.1671 | 0.3860 | -0.0401 | 0.0851 |
| 33 | 0.5648 | -0.0109 | 0.0682 | 0.4585 | 0.3911 | 0.1481 | -0.0334 | 0.0940 |
| 34 | 0.7504 | -0.2085 | 0.0300 | -0.0715 | -0.1133 | 0.1745 | 0.0092 | -0.1745 |
| 35 | 0.7827 | 0.0857 | -0.2108 | -0.0308 | -0.0289 | 0.0894 | -0.3235 | -0.1779 |
| 36 | 0.6443 | 0.3027 | -0.1629 | -0.0555 | -0.0902 | -0.4832 | -0.1460 | 0.3333 |
| 37 | 0.5545 | -0.3007 | 0.5716 | -0.0624 | -0.0552 | 0.0209 | -0.1604 | 0.0351 |
| 38 | 0.3178 | 0.8249 | -0.0385 | 0.1290 | -0.2325 | -0.0871 | 0.0563 | -0.1172 |
| 39 | 0.8069 | -0.1685 | -0.1002 | -0.1147 | 0.0358 | 0.1816 | -0.0572 | -0.2765 |
| 40 | 0.5873 | 0.2712 | -0.0508 | -0.3003 | 0.1369 | 0.2721 | -0.1677 | -0.0707 |
| 41 | 0.6591 | -0.1650 | -0.0822 | 0.3347 | 0.2051 | 0.1805 | 0.1841 | 0.2077 |
| 42 | 0.6310 | -0.1176 | -0.2017 | 0.1993 | 0.1086 | -0.4665 | -0.0006 | -0.1861 |
| 43 | 0.6078 | 0.2430 | -0.3674 | -0.1442 | -0.0706 | 0.2008 | -0.2093 | -0.1115 |
| 44 | 0.2002 | -0.2392 | -0.3734 | 0.1825 | 0.2917 | 0.1145 | 0.3933 | 0.3210 |
| 45 | 0.6622 | -0.0058 | 0.3567 | -0.1277 | -0.1392 | -0.1040 | 0.0531 | -0.1119 |
| 46 | 0.1961 | 0.3211 | 0.3729 | -0.0220 | 0.0797 | 0.4353 | 0.2542 | 0.3237 |
| 47 | 0.8392 | -0.1498 | -0.1098 | -0.1626 | 0.0709 | 0.0539 | 0.0568 | -0.1822 |

Unrotated Factor Matrix (continued)
            Factors

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| SORTS | | | | | | | | |
| 48 | **0.1813** | **0.6665** | **-0.0952** | **-0.0610** | **0.4907** | **-0.0174** | **0.0789** | -0.1863 |
| 49 | **0.7715** | **-0.1264** | **0.2172** | **-0.0205** | **-0.1071** | **-0.1451** | **0.1219** | -0.0286 |
| Eigenvalues | | | | | | | | |
| | **16.7081** | **4.9525** | **3.1087** | **2.8620** | **2.4287** | **2.3032** | **2.0278** | 1.8584 |
| % expl.Var. | | | | | | | | |
| | **34** | **10** | **6** | **6** | **5** | **5** | **4** | 4 |

# APPENDIX L: FACTOR ARRAYS

Factor Q-Sort Values for Each Statement

Factor Arrays

| No. | Statement | No. | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 1 | Make a difference because of adequate materials | 1 | 0 | 0 | 2 | 3 |
| 2 | Make a difference because the school facility is adequate | 2 | -1 | 1 | 3 | 3 |
| 3 | Provide equitable education because of materials | 3 | 0 | 1 | -2 | 4 |
| 4 | Provide equitable education because of adequate school facil | 4 | -1 | 1 | 1 | 1 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 1 | -2 | 0 | -1 |
| 6 | Help students grow due to supportive parents | 6 | -1 | -2 | 3 | -1 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -2 | -1 | 0 | 2 |
| 8 | Provide equitable education because of school climate | 8 | 1 | 0 | 0 | 3 |
| 9 | Serve students better because of pay structure and benefits | 9 | -2 | -2 | -3 | 1 |
| 10 | Provide equitable education because of standardized testing | 10 | -3 | -3 | -4 | 0 |
| 11 | Nowhere else to go after many years of service | 11 | -3 | 0 | -4 | 1 |
| 12 | Serve students better because of adequate preservice training | 12 | -1 | 0 | 0 | -2 |
| 13 | Job security | 13 | 0 | 2 | 0 | 2 |
| 14 | Community where I teach similar to where I grew up | 14 | -2 | 0 | -2 | 4 |
| 15 | Enjoy being in school | 15 | 2 | 1 | 1 | -4 |
| 16 | Don't have to spend too much time at the school | 16 | -3 | -3 | 0 | 0 |
| 17 | Comfortable because of a supportive administrator | 17 | 4 | -4 | -1 | 0 |
| 18 | Happy because of supportive colleagues | 18 | 4 | 0 | 2 | -1 |
| 19 | Better able to take care of family | 19 | 0 | 3 | 4 | -2 |
| 20 | School has a supportive learning environment for teachers | 20 | 2 | -3 | 2 | -1 |
| 21 | Able to take off work for family or personal issues | 21 | 0 | 3 | 2 | 1 |
| 22 | Able to be at home with family more | 22 | 0 | 4 | 4 | 0 |
| 23 | Does not require too much time compared to other jobs | 23 | -4 | -1 | 3 | -1 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -4 | -1 | -1 | 0 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 3 | 2 | -1 | -3 |
| 26 | Able to give back to community even though in rough area | 26 | 1 | 2 | -3 | 0 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 1 | -2 | 1 | -4 |
| 28 | Freedom and flexibility in the classroom | 28 | 3 | 1 | -1 | -2 |
| 29 | Produce desired effect even with student discipline issues | 29 | 0 | 2 | -1 | -2 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 2 | 3 | -2 | -3 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 2 | 4 | 1 | -3 |
| 32 | Receive respect from others | 32 | 1 | 0 | 0 | 1 |
| 33 | Able to select professional development that works for me | 33 | 0 | 0 | -3 | 2 |
| 34 | Opportunities for career advancement if I want them | 34 | -1 | -1 | 1 | 2 |
| 35 | The district treats me as a professional | 35 | -2 | -1 | 0 | 0 |
| 36 | Administrator values me as a teacher | 36 | 3 | -4 | -2 | 0 |

Variance =  4.444  St. Dev. =  2.108

Factor Q-Sort Values for Statements sorted by Consensus vs. Disagreement (Variance across normalized Factor Scores)

| | | | Factor Arrays | | | |
|---|---|---|---|---|---|---|
| No. | Statement | No. | 1 | 2 | 3 | 4 |
| 32 | Receive respect from others | 32 | 1 | 0 | 0 | 1 |
| 12 | Serve students better because of adequate preservice trainin | 12 | -1 | 0 | 0 | -2 |
| 35 | The district treats me as a professional | 35 | -2 | -1 | 0 | 0 |
| 4 | Provide equitable education because of adequate school facil | 4 | -1 | 1 | 1 | 1 |
| 21 | Able to take off work for family or personal issues | 21 | 0 | 3 | 2 | 1 |
| 13 | Job security | 13 | 0 | 2 | 0 | 2 |
| 8 | Provide equitable education because of school climate | 8 | 1 | 0 | 0 | 3 |
| 34 | Opportunities for career advancement if I want them | 34 | -1 | -1 | 1 | 2 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 1 | -2 | 0 | -1 |
| 1 | Make a difference because of adequate materials | 1 | 0 | 0 | 2 | 3 |
| 16 | Don't have to spend too much time at the school | 16 | -3 | -3 | 0 | 0 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -4 | -1 | -1 | 0 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -2 | -1 | 0 | 2 |
| 29 | Produce desired effect even with student discipline issues | 29 | 0 | 2 | -1 | -2 |
| 10 | Provide equitable education because of standardized testing | 10 | -3 | -3 | -4 | 0 |
| 9 | Serve students better because of pay structure and benefits | 9 | -2 | -2 | -3 | 1 |
| 2 | Make a difference because the school facility is adequate | 2 | -1 | 1 | 3 | 3 |
| 18 | Happy because of supportive colleagues | 18 | 4 | 0 | 2 | -1 |
| 26 | Able to give back to community even though in rough area | 26 | 1 | 2 | -3 | 0 |
| 33 | Able to select professional development that works for me | 33 | 0 | 0 | -3 | 2 |
| 6 | Help students grow due to supportive parents | 6 | -1 | -2 | 3 | -1 |
| 28 | Freedom and flexibility in the classroom | 28 | 3 | 1 | -1 | -2 |
| 22 | Able to be at home with family more | 22 | 0 | 4 | 4 | 0 |
| 11 | Nowhere else to go after many years of service | 11 | -3 | 0 | -4 | 1 |
| 3 | Provide equitable education because of materials | 3 | 0 | 1 | -2 | 4 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 1 | -2 | 1 | -4 |
| 20 | School has a supportive learning environment for teachers | 20 | 2 | -3 | 2 | -1 |
| 23 | Does not require too much time compared to other jobs | 23 | -4 | -1 | 3 | -1 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 3 | 2 | -1 | -3 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 2 | 3 | -2 | -3 |
| 15 | Enjoy being in school | 15 | 2 | 1 | 1 | -4 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 2 | 4 | 1 | -3 |
| 19 | Better able to take care of family | 19 | 0 | 3 | 4 | -2 |
| 14 | Community where I teach similar to where I grew up | 14 | -2 | 0 | -2 | 4 |
| 36 | Administrator values me as a teacher | 36 | 3 | -4 | -2 | 0 |
| 17 | Comfortable because of a supportive administrator | 17 | 4 | -4 | -1 | 0 |

# APPENDIX M: RANK STATEMENT TOTALS WITHIN EACH FACTOR

```
Rank Statement Totals with Each Factor
```

| No. | Statement | No. | 1 | | 2 | | 3 | | 4 | |
|-----|-----------|-----|---|---|---|---|---|---|---|---|
| 1 | Make a difference because of adequate materials | 1 | -0.05 | 18 | 0.04 | 18 | 0.94 | 9 | 1.40 | 5 |
| 2 | Make a difference because the school facility is adequ | 2 | -0.39 | 24 | 0.42 | 12 | 1.40 | 5 | 1.40 | 5 |
| 3 | Provide equitable education because of materials | 3 | -0.16 | 20 | 0.36 | 14 | -0.94 | 31 | 1.87 | 2 |
| 4 | Provide equitable education because of adequate school | 4 | -0.45 | 25 | 0.47 | 11 | 0.47 | 14 | 0.47 | 14 |
| 5 | Help students grow due to supportive student learning | 5 | 0.82 | 10 | -0.74 | 28 | 0.00 | 22 | -0.47 | 27 |
| 6 | Help students grow due to supportive parents | 6 | -0.64 | 27 | -0.76 | 29 | 1.40 | 5 | -0.47 | 27 |
| 7 | Make a difference because of positive induction and men | 7 | -0.71 | 28 | -0.59 | 25 | 0.00 | 22 | 0.94 | 9 |
| 8 | Provide equitable education because of school climate | 8 | 0.72 | 12 | 0.32 | 15 | 0.00 | 22 | 1.40 | 5 |
| 9 | Serve students better because of pay structure and ben | 9 | -1.26 | 31 | -0.87 | 30 | -1.40 | 34 | 0.47 | 14 |
| 10 | Provide equitable education because of standardized te | 10 | -1.63 | 34 | -1.31 | 33 | -1.87 | 36 | 0.00 | 22 |
| 11 | Nowhere else to go after many years of service | 11 | -1.29 | 32 | 0.00 | 20 | -1.87 | 36 | 0.47 | 14 |
| 12 | Serve students better because of adequate preservice t | 12 | -0.62 | 26 | -0.18 | 21 | 0.00 | 22 | -0.94 | 31 |
| 13 | Job security | 13 | 0.32 | 15 | 1.14 | 6 | 0.00 | 22 | 0.94 | 9 |
| 14 | Community where I teach similar to where I grew up | 14 | -1.16 | 30 | 0.00 | 20 | -0.94 | 31 | 1.87 | 2 |
| 15 | Enjoy being in school | 15 | 1.07 | 7 | 0.65 | 10 | 0.47 | 14 | -1.87 | 36 |
| 16 | Don't have to spend too much time at the school | 16 | -1.40 | 33 | -1.01 | 32 | 0.00 | 22 | 0.00 | 22 |
| 17 | Comfortable because of a supportive administrator | 17 | 1.58 | 1 | -2.05 | 35 | -0.47 | 27 | 0.00 | 22 |
| 18 | Happy because of supportive colleagues | 18 | 1.50 | 2 | -0.23 | 22 | 0.94 | 9 | -0.47 | 27 |
| 19 | Better able to take care of family | 19 | -0.24 | 21 | 1.43 | 3 | 1.87 | 2 | -0.94 | 31 |
| 20 | School has a supportive learning environment for teach | 20 | 0.86 | 9 | -1.63 | 34 | 0.94 | 9 | -0.47 | 27 |
| 21 | Able to take off work for family or personal issues | 21 | 0.14 | 16 | 1.30 | 4 | 0.94 | 9 | 0.47 | 14 |
| 22 | Able to be at home with family more | 22 | 0.09 | 17 | 1.92 | 1 | 1.87 | 2 | 0.00 | 22 |
| 23 | Does not require too much time compared to other jobs | 23 | -1.68 | 35 | -0.60 | 26 | 1.40 | 5 | -0.47 | 27 |
| 24 | Time to complete most of teaching tasks during contrac | 24 | -1.75 | 36 | -0.52 | 24 | -0.47 | 27 | 0.00 | 22 |
| 25 | Able to be creative designing lessons with materials a | 25 | 1.27 | 5 | 1.08 | 7 | -0.47 | 27 | -1.40 | 34 |
| 26 | Able to give back to community even though in rough ar | 26 | 0.36 | 14 | 0.85 | 9 | -1.40 | 34 | 0.00 | 22 |
| 27 | Receive satisfaction in fulfilling professional commit | 27 | 0.72 | 11 | -0.92 | 31 | 0.47 | 14 | -1.87 | 36 |
| 28 | Freedom and flexibility in the classroom | 28 | 1.46 | 4 | 0.36 | 13 | -0.47 | 27 | -0.94 | 31 |
| 29 | Produce desired effect even with student discipline is | 29 | -0.10 | 19 | 0.95 | 8 | -0.47 | 27 | -0.94 | 31 |
| 30 | Able to teach students even though they are disadvanta | 30 | 0.94 | 8 | 1.18 | 5 | -0.94 | 31 | -1.40 | 34 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.25 | 6 | 1.56 | 2 | 0.47 | 14 | -1.40 | 34 |
| 32 | Receive respect from others | 32 | 0.49 | 13 | 0.30 | 16 | 0.00 | 22 | 0.47 | 14 |
| 33 | Able to select professional development that works for | 33 | -0.31 | 22 | 0.25 | 17 | -1.40 | 34 | 0.94 | 9 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.33 | 23 | -0.43 | 23 | 0.47 | 14 | 0.94 | 9 |
| 35 | The district treats me as a professional | 35 | -0.88 | 29 | -0.69 | 27 | 0.00 | 22 | 0.00 | 22 |
| 36 | Administrator values me as a teacher | 36 | 1.46 | 3 | -2.06 | 36 | -0.94 | 31 | 0.00 | 22 |

# APPENDIX N: DESCENDING ARRAY OF DIFFERENCES BETWEEN FACTORS

```
Descending Array of Differences Between Factors 1 and 2
```

| No. | Statement | No. | Type 1 | Type 2 | Difference |
|-----|-----------|-----|--------|--------|------------|
| 17 | Comfortable because of a supportive administrator | 17 | 1.576 | -2.048 | 3.624 |
| 36 | Administrator values me as a teacher | 36 | 1.464 | -2.059 | 3.523 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.860 | -1.629 | 2.488 |
| 18 | Happy because of supportive colleagues | 18 | 1.504 | -0.233 | 1.737 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.721 | -0.924 | 1.645 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.818 | -0.735 | 1.553 |
| 28 | Freedom and flexibility in the classroom | 28 | 1.458 | 0.361 | 1.097 |
| 15 | Enjoy being in school | 15 | 1.072 | 0.654 | 0.418 |
| 8 | Provide equitable education because of school climate | 8 | 0.718 | 0.321 | 0.398 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.274 | 1.075 | 0.199 |
| 32 | Receive respect from others | 32 | 0.486 | 0.295 | 0.191 |
| 6 | Help students grow due to supportive parents | 6 | -0.642 | -0.761 | 0.119 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.335 | -0.427 | 0.092 |
| 1 | Make a difference because of adequate materials | 1 | -0.051 | 0.038 | -0.090 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.709 | -0.589 | -0.120 |
| 35 | The district treats me as a professional | 35 | -0.878 | -0.693 | -0.185 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 0.945 | 1.179 | -0.234 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.249 | 1.563 | -0.314 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.629 | -1.312 | -0.318 |
| 16 | Don't have to spend too much time at the school | 16 | -1.395 | -1.013 | -0.382 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.264 | -0.866 | -0.398 |
| 12 | Serve students better because of adequate preservice trainin | 12 | -0.623 | -0.176 | -0.447 |
| 26 | Able to give back to community even though in rough area | 26 | 0.357 | 0.850 | -0.493 |
| 3 | Provide equitable education because of materials | 3 | -0.164 | 0.356 | -0.520 |
| 33 | Able to select professional development that works for me | 33 | -0.312 | 0.248 | -0.561 |
| 2 | Make a difference because the school facility is adequate | 2 | -0.388 | 0.424 | -0.812 |
| 13 | Job security | 13 | 0.325 | 1.143 | -0.818 |
| 4 | Provide equitable education because of adequate school facil | 4 | -0.455 | 0.467 | -0.922 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.105 | 0.955 | -1.059 |
| 23 | Does not require too much time compared to other jobs | 23 | -1.676 | -0.602 | -1.074 |
| 14 | Community where I teach similar to where I grew up | 14 | -1.160 | 0.000 | -1.160 |
| 21 | Able to take off work for family or personal issues | 21 | 0.145 | 1.305 | -1.160 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -1.749 | -0.522 | -1.227 |
| 11 | Nowhere else to go after many years of service | 11 | -1.292 | 0.000 | -1.292 |
| 19 | Better able to take care of family | 19 | -0.239 | 1.432 | -1.671 |
| 22 | Able to be at home with family more | 22 | 0.094 | 1.923 | -1.829 |

Descending Array of Differences Between Factors 1 and 3

| No. | Statement | No. | Type 1 | Type 3 | Difference |
|---|---|---|---|---|---|
| 36 | Administrator values me as a teacher | 36 | 1.464 | -0.935 | 2.399 |
| 17 | Comfortable because of a supportive administrator | 17 | 1.576 | -0.468 | 2.044 |
| 28 | Freedom and flexibility in the classroom | 28 | 1.458 | -0.468 | 1.925 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 0.945 | -0.935 | 1.880 |
| 26 | Able to give back to community even though in rough area | 26 | 0.357 | -1.403 | 1.760 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.274 | -0.468 | 1.742 |
| 33 | Able to select professional development that works for me | 33 | -0.312 | -1.403 | 1.091 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.818 | 0.000 | 0.818 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.249 | 0.468 | 0.781 |
| 3 | Provide equitable education because of materials | 3 | -0.164 | -0.935 | 0.771 |
| 8 | Provide equitable education because of school climate | 8 | 0.718 | 0.000 | 0.718 |
| 15 | Enjoy being in school | 15 | 1.072 | 0.468 | 0.604 |
| 11 | Nowhere else to go after many years of service | 11 | -1.292 | -1.871 | 0.579 |
| 18 | Happy because of supportive colleagues | 18 | 1.504 | 0.935 | 0.569 |
| 32 | Receive respect from others | 32 | 0.486 | 0.000 | 0.486 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.105 | -0.468 | 0.363 |
| 13 | Job security | 13 | 0.325 | 0.000 | 0.325 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.721 | 0.468 | 0.254 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.629 | -1.871 | 0.241 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.264 | -1.403 | 0.139 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.860 | 0.935 | -0.076 |
| 14 | Community where I teach similar to where I grew up | 14 | -1.160 | -0.935 | -0.224 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.623 | 0.000 | -0.623 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.709 | 0.000 | -0.709 |
| 21 | Able to take off work for family or personal issues | 21 | 0.145 | 0.935 | -0.791 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.335 | 0.468 | -0.803 |
| 35 | The district treats me as a professional | 35 | -0.878 | 0.000 | -0.878 |
| 4 | Provide equitable education because of adequate school facil | 4 | -0.455 | 0.468 | -0.922 |
| 1 | Make a difference because of adequate materials | 1 | -0.051 | 0.935 | -0.987 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -1.749 | -0.468 | -1.281 |
| 16 | Don't have to spend too much time at the school | 16 | -1.395 | 0.000 | -1.395 |
| 22 | Able to be at home with family more | 22 | 0.094 | 1.871 | -1.777 |
| 2 | Make a difference because the school facility is adequate | 2 | -0.388 | 1.403 | -1.791 |
| 6 | Help students grow due to supportive parents | 6 | -0.642 | 1.403 | -2.045 |
| 19 | Better able to take care of family | 19 | -0.239 | 1.871 | -2.109 |
| 23 | Does not require too much time compared to other jobs | 23 | -1.676 | 1.403 | -3.079 |

Descending Array of Differences Between Factors 1 and 4

| No. | Statement | No. | Type 1 | Type 4 | Difference |
|---|---|---|---|---|---|
| 15 | Enjoy being in school | 15 | 1.072 | -1.871 | 2.942 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.274 | -1.403 | 2.677 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.249 | -1.403 | 2.652 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.721 | -1.871 | 2.592 |
| 28 | Freedom and flexibility in the classroom | 28 | 1.458 | -0.935 | 2.393 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 0.945 | -1.403 | 2.348 |
| 18 | Happy because of supportive colleagues | 18 | 1.504 | -0.468 | 1.972 |
| 17 | Comfortable because of a supportive administrator | 17 | 1.576 | 0.000 | 1.576 |
| 36 | Administrator values me as a teacher | 36 | 1.464 | 0.000 | 1.464 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.860 | -0.468 | 1.328 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.818 | -0.468 | 1.286 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.105 | -0.935 | 0.831 |
| 19 | Better able to take care of family | 19 | -0.239 | -0.935 | 0.697 |
| 26 | Able to give back to community even though in rough area | 26 | 0.357 | 0.000 | 0.357 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.623 | -0.935 | 0.313 |
| 22 | Able to be at home with family more | 22 | 0.094 | 0.000 | 0.094 |
| 32 | Receive respect from others | 32 | 0.486 | 0.468 | 0.018 |
| 6 | Help students grow due to supportive parents | 6 | -0.642 | -0.468 | -0.174 |
| 21 | Able to take off work for family or personal issues | 21 | 0.145 | 0.468 | -0.323 |
| 13 | Job security | 13 | 0.325 | 0.935 | -0.611 |
| 8 | Provide equitable education because of school climate | 8 | 0.718 | 1.403 | -0.685 |
| 35 | The district treats me as a professional | 35 | -0.878 | 0.000 | -0.878 |
| 4 | Provide equitable education because of adequate school facil | 4 | -0.455 | 0.468 | -0.922 |
| 23 | Does not require too much time compared to other jobs | 23 | -1.676 | -0.468 | -1.208 |
| 33 | Able to select professional development that works for me | 33 | -0.312 | 0.935 | -1.248 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.335 | 0.935 | -1.270 |
| 16 | Don't have to spend too much time at the school | 16 | -1.395 | 0.000 | -1.395 |
| 1 | Make a difference because of adequate materials | 1 | -0.051 | 1.403 | -1.454 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.629 | 0.000 | -1.629 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.709 | 0.935 | -1.644 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.264 | 0.468 | -1.732 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -1.749 | 0.000 | -1.749 |
| 11 | Nowhere else to go after many years of service | 11 | -1.292 | 0.468 | -1.760 |
| 2 | Make a difference because the school facility is adequate | 2 | -0.388 | 1.403 | -1.791 |
| 3 | Provide equitable education because of materials | 3 | -0.164 | 1.871 | -2.035 |
| 14 | Community where I teach similar to where I grew up | 14 | -1.160 | 1.871 | -3.031 |

Descending Array of Differences Between Factors 2 and 3

| No. | Statement | No. | Type 2 | Type 3 | Difference |
|-----|-----------|-----|--------|--------|------------|
| 26 | Able to give back to community even though in rough area | 26 | 0.850 | -1.403 | 2.253 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 1.179 | -0.935 | 2.114 |
| 11 | Nowhere else to go after many years of service | 11 | 0.000 | -1.871 | 1.871 |
| 33 | Able to select professional development that works for me | 33 | 0.248 | -1.403 | 1.652 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.075 | -0.468 | 1.543 |
| 29 | Produce desired effect even with student discipline issues | 29 | 0.955 | -0.468 | 1.422 |
| 3 | Provide equitable education because of materials | 3 | 0.356 | -0.935 | 1.291 |
| 13 | Job security | 13 | 1.143 | 0.000 | 1.143 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.563 | 0.468 | 1.095 |
| 14 | Community where I teach similar to where I grew up | 14 | 0.000 | -0.935 | 0.935 |
| 28 | Freedom and flexibility in the classroom | 28 | 0.361 | -0.468 | 0.829 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.312 | -1.871 | 0.559 |
| 9 | Serve students better because of pay structure and benefits | 9 | -0.866 | -1.403 | 0.537 |
| 21 | Able to take off work for family or personal issues | 21 | 1.305 | 0.935 | 0.369 |
| 8 | Provide equitable education because of school climate | 8 | 0.321 | 0.000 | 0.321 |
| 32 | Receive respect from others | 32 | 0.295 | 0.000 | 0.295 |
| 15 | Enjoy being in school | 15 | 0.654 | 0.468 | 0.186 |
| 22 | Able to be at home with family more | 22 | 1.923 | 1.871 | 0.052 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.467 | 0.468 | -0.001 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -0.522 | -0.468 | -0.054 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.176 | 0.000 | -0.176 |
| 19 | Better able to take care of family | 19 | 1.432 | 1.871 | -0.439 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.589 | 0.000 | -0.589 |
| 35 | The district treats me as a professional | 35 | -0.693 | 0.000 | -0.693 |
| 5 | Help students grow due to supportive student learning enviro | 5 | -0.735 | 0.000 | -0.735 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.427 | 0.468 | -0.895 |
| 1 | Make a difference because of adequate materials | 1 | 0.038 | 0.935 | -0.897 |
| 2 | Make a difference because the school facility is adequate | 2 | 0.424 | 1.403 | -0.979 |
| 16 | Don't have to spend too much time at the school | 16 | -1.013 | 0.000 | -1.013 |
| 36 | Administrator values me as a teacher | 36 | -2.059 | -0.935 | -1.124 |
| 18 | Happy because of supportive colleagues | 18 | -0.233 | 0.935 | -1.168 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | -0.924 | 0.468 | -1.391 |
| 17 | Comfortable because of a supportive administrator | 17 | -2.048 | -0.468 | -1.580 |
| 23 | Does not require too much time compared to other jobs | 23 | -0.602 | 1.403 | -2.005 |
| 6 | Help students grow due to supportive parents | 6 | -0.761 | 1.403 | -2.164 |
| 20 | School has a supportive learning environment for teachers | 20 | -1.629 | 0.935 | -2.564 |

Descending Array of Differences Between Factors 2 and 4

| No. | Statement | No. | Type 2 | Type 4 | Difference |
|---|---|---|---|---|---|
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.563 | -1.403 | 2.966 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 1.179 | -1.403 | 2.582 |
| 15 | Enjoy being in school | 15 | 0.654 | -1.871 | 2.525 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.075 | -1.403 | 2.478 |
| 19 | Better able to take care of family | 19 | 1.432 | -0.935 | 2.368 |
| 22 | Able to be at home with family more | 22 | 1.923 | 0.000 | 1.923 |
| 29 | Produce desired effect even with student discipline issues | 29 | 0.955 | -0.935 | 1.890 |
| 28 | Freedom and flexibility in the classroom | 28 | 0.361 | -0.935 | 1.296 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | -0.924 | -1.871 | 0.947 |
| 26 | Able to give back to community even though in rough area | 26 | 0.850 | 0.000 | 0.850 |
| 21 | Able to take off work for family or personal issues | 21 | 1.305 | 0.468 | 0.837 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.176 | -0.935 | 0.759 |
| 18 | Happy because of supportive colleagues | 18 | -0.233 | -0.468 | 0.235 |
| 13 | Job security | 13 | 1.143 | 0.935 | 0.207 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.467 | 0.468 | -0.001 |
| 23 | Does not require too much time compared to other jobs | 23 | -0.602 | -0.468 | -0.135 |
| 32 | Receive respect from others | 32 | 0.295 | 0.468 | -0.172 |
| 5 | Help students grow due to supportive student learning enviro | 5 | -0.735 | -0.468 | -0.267 |
| 6 | Help students grow due to supportive parents | 6 | -0.761 | -0.468 | -0.294 |
| 11 | Nowhere else to go after many years of service | 11 | 0.000 | 0.468 | -0.468 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -0.522 | 0.000 | -0.522 |
| 33 | Able to select professional development that works for me | 33 | 0.248 | 0.935 | -0.687 |
| 35 | The district treats me as a professional | 35 | -0.693 | 0.000 | -0.693 |
| 2 | Make a difference because the school facility is adequate | 2 | 0.424 | 1.403 | -0.979 |
| 16 | Don't have to spend too much time at the school | 16 | -1.013 | 0.000 | -1.013 |
| 8 | Provide equitable education because of school climate | 8 | 0.321 | 1.403 | -1.082 |
| 20 | School has a supportive learning environment for teachers | 20 | -1.629 | -0.468 | -1.161 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.312 | 0.000 | -1.312 |
| 9 | Serve students better because of pay structure and benefits | 9 | -0.866 | 0.468 | -1.334 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.427 | 0.935 | -1.363 |
| 1 | Make a difference because of adequate materials | 1 | 0.038 | 1.403 | -1.365 |
| 3 | Provide equitable education because of materials | 3 | 0.356 | 1.871 | -1.515 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.589 | 0.935 | -1.524 |
| 14 | Community where I teach similar to where I grew up | 14 | 0.000 | 1.871 | -1.871 |
| 17 | Comfortable because of a supportive administrator | 17 | -2.048 | 0.000 | -2.048 |
| 36 | Administrator values me as a teacher | 36 | -2.059 | 0.000 | -2.059 |

Descending Array of Differences Between Factors 3 and 4

| No. | Statement | No. | Type 3 | Type 4 | Difference |
|-----|-----------|-----|--------|--------|------------|
| 19 | Better able to take care of family | 19 | 1.871 | -0.935 | 2.806 |
| 15 | Enjoy being in school | 15 | 0.468 | -1.871 | 2.339 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.468 | -1.871 | 2.339 |
| 22 | Able to be at home with family more | 22 | 1.871 | 0.000 | 1.871 |
| 6 | Help students grow due to supportive parents | 6 | 1.403 | -0.468 | 1.871 |
| 23 | Does not require too much time compared to other jobs | 23 | 1.403 | -0.468 | 1.871 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 0.468 | -1.403 | 1.871 |
| 18 | Happy because of supportive colleagues | 18 | 0.935 | -0.468 | 1.403 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.935 | -0.468 | 1.403 |
| 12 | Serve students better because of adequate preservice training | 12 | 0.000 | -0.935 | 0.935 |
| 25 | Able to be creative designing lessons with materials availab | 25 | -0.468 | -1.403 | 0.935 |
| 21 | Able to take off work for family or personal issues | 21 | 0.935 | 0.468 | 0.468 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.000 | -0.468 | 0.468 |
| 30 | Able to teach students even though they are disadvantaged | 30 | -0.935 | -1.403 | 0.468 |
| 28 | Freedom and flexibility in the classroom | 28 | -0.468 | -0.935 | 0.468 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.468 | -0.935 | 0.468 |
| 2 | Make a difference because the school facility is adequate | 2 | 1.403 | 1.403 | 0.000 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.468 | 0.468 | 0.000 |
| 16 | Dont have to spend too much time at the school | 16 | 0.000 | 0.000 | 0.000 |
| 35 | The district treats me as a professional | 35 | 0.000 | 0.000 | 0.000 |
| 1 | Make a difference because of adequate materials | 1 | 0.935 | 1.403 | -0.468 |
| 34 | Opportunities for career advancement if I want them | 34 | 0.468 | 0.935 | -0.468 |
| 32 | Receive respect from others | 32 | 0.000 | 0.468 | -0.468 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -0.468 | 0.000 | -0.468 |
| 17 | Comfortable because of a supportive administrator | 17 | -0.468 | 0.000 | -0.468 |
| 7 | Make a difference because of positive induction and mentoring | 7 | 0.000 | 0.935 | -0.935 |
| 13 | Job security | 13 | 0.000 | 0.935 | -0.935 |
| 36 | Administrator values me as a teacher | 36 | -0.935 | 0.000 | -0.935 |
| 8 | Provide equitable education because of school climate | 8 | 0.000 | 1.403 | -1.403 |
| 26 | Able to give back to community even though in rough area | 26 | -1.403 | 0.000 | -1.403 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.403 | 0.468 | -1.871 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.871 | 0.000 | -1.871 |
| 33 | Able to select professional development that works for me | 33 | -1.403 | 0.935 | -2.339 |
| 11 | Nowhere else to go after many years of service | 11 | -1.871 | 0.468 | -2.339 |
| 14 | Community where I teach similar to where I grew up | 14 | -0.935 | 1.871 | -2.806 |
| 3 | Provide equitable education because of materials | 3 | -0.935 | 1.871 | -2.806 |

# APPENDIX O: FACTOR Q-SORT VALUES FOR EACH STATEMENT

Normalized Factor Scores -- For Factor 1

| No. | Statement | No. | Z-SCORES |
|---|---|---|---|
| 17 | Comfortable because of a supportive administrator | 17 | 1.576 |
| 18 | Happy because of supportive colleagues | 18 | 1.504 |
| 36 | Administrator values me as a teacher | 36 | 1.464 |
| 28 | Freedom and flexibility in the classroom | 28 | 1.458 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.274 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.249 |
| 15 | Enjoy being in school | 15 | 1.072 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 0.945 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.860 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.818 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.721 |
| 8 | Provide equitable education because of school climate | 8 | 0.718 |
| 32 | Receive respect from others | 32 | 0.486 |
| 26 | Able to give back to community even though in rough area | 26 | 0.357 |
| 13 | Job security | 13 | 0.325 |
| 21 | Able to take off work for family or personal issues | 21 | 0.145 |
| 22 | Able to be at home with family more | 22 | 0.094 |
| 1 | Make a difference because of adequate materials | 1 | -0.051 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.105 |
| 3 | Provide equitable education because of materials | 3 | -0.164 |
| 19 | Better able to take care of family | 19 | -0.239 |
| 33 | Able to select professional development that works for me | 33 | -0.312 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.335 |
| 2 | Make a difference because the school facility is adequate | 2 | -0.388 |
| 4 | Provide equitable education because of adequate school facil | 4 | -0.455 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.623 |
| 6 | Help students grow due to supportive parents | 6 | -0.642 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.709 |
| 35 | The district treats me as a professional | 35 | -0.878 |
| 14 | Community where I teach similar to where I grew up | 14 | -1.160 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.264 |
| 11 | Nowhere else to go after many years of service | 11 | -1.292 |
| 16 | Don't have to spend too much time at the school | 16 | -1.395 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.629 |
| 23 | Does not require too much time compared to other jobs | 23 | -1.676 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -1.749 |

Normalized Factor Scores -- For Factor 2

| No. | Statement | No. | Z-SCORES |
|-----|-----------|-----|----------|
| 22 | Able to be at home with family more | 22 | 1.923 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 1.563 |
| 19 | Better able to take care of family | 19 | 1.432 |
| 21 | Able to take off work for family or personal issues | 21 | 1.305 |
| 30 | Able to teach students even though they are disadvantaged | 30 | 1.179 |
| 13 | Job security | 13 | 1.143 |
| 25 | Able to be creative designing lessons with materials availab | 25 | 1.075 |
| 29 | Produce desired effect even with student discipline issues | 29 | 0.955 |
| 26 | Able to give back to community even though in rough area | 26 | 0.850 |
| 15 | Enjoy being in school | 15 | 0.654 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.467 |
| 2 | Make a difference because the school facility is adequate | 2 | 0.424 |
| 28 | Freedom and flexibility in the classroom | 28 | 0.361 |
| 3 | Provide equitable education because of materials | 3 | 0.356 |
| 8 | Provide equitable education because of school climate | 8 | 0.321 |
| 32 | Receive respect from others | 32 | 0.295 |
| 33 | Able to select professional development that works for me | 33 | 0.248 |
| 1 | Make a difference because of adequate materials | 1 | 0.038 |
| 14 | Community where I teach similar to where I grew up | 14 | 0.000 |
| 11 | Nowhere else to go after many years of service | 11 | 0.000 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.176 |
| 18 | Happy because of supportive colleagues | 18 | -0.233 |
| 34 | Opportunities for career advancement if I want them | 34 | -0.427 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -0.522 |
| 7 | Make a difference because of positive induction and mentoring | 7 | -0.589 |
| 23 | Does not require too much time compared to other jobs | 23 | -0.602 |
| 35 | The district treats me as a professional | 35 | -0.693 |
| 5 | Help students grow due to supportive student learning enviro | 5 | -0.735 |
| 6 | Help students grow due to supportive parents | 6 | -0.761 |
| 9 | Serve students better because of pay structure and benefits | 9 | -0.866 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | -0.924 |
| 16 | Dont have to spend too much time at the school | 16 | -1.013 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.312 |
| 20 | School has a supportive learning environment for teachers | 20 | -1.629 |
| 17 | Comfortable because of a supportive administrator | 17 | -2.048 |
| 36 | Administrator values me as a teacher | 36 | -2.059 |

Normalized Factor Scores -- For Factor 3

| No. | Statement | No. | Z-SCORES |
|-----|-----------|-----|----------|
| 19 | Better able to take care of family | 19 | 1.871 |
| 22 | Able to be at home with family more | 22 | 1.871 |
| 6 | Help students grow due to supportive parents | 6 | 1.403 |
| 2 | Make a difference because the school facility is adequate | 2 | 1.403 |
| 23 | Does not require too much time compared to other jobs | 23 | 1.403 |
| 18 | Happy because of supportive colleagues | 18 | 0.935 |
| 1 | Make a difference because of adequate materials | 1 | 0.935 |
| 20 | School has a supportive learning environment for teachers | 20 | 0.935 |
| 21 | Able to take off work for family or personal issues | 21 | 0.935 |
| 15 | Enjoy being in school | 15 | 0.468 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.468 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | 0.468 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | 0.468 |
| 34 | Opportunities for career advancement if I want them | 34 | 0.468 |
| 16 | Don't have to spend too much time at the school | 16 | 0.000 |
| 7 | Make a difference because of positive induction and mentoring | 7 | 0.000 |
| 8 | Provide equitable education because of school climate | 8 | 0.000 |
| 5 | Help students grow due to supportive student learning enviro | 5 | 0.000 |
| 12 | Serve students better because of adequate preservice training | 12 | 0.000 |
| 13 | Job security | 13 | 0.000 |
| 32 | Receive respect from others | 32 | 0.000 |
| 35 | The district treats me as a professional | 35 | 0.000 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | -0.468 |
| 25 | Able to be creative designing lessons with materials availab | 25 | -0.468 |
| 28 | Freedom and flexibility in the classroom | 28 | -0.468 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.468 |
| 17 | Comfortable because of a supportive administrator | 17 | -0.468 |
| 3 | Provide equitable education because of materials | 3 | -0.935 |
| 30 | Able to teach students even though they are disadvantaged | 30 | -0.935 |
| 14 | Community where I teach similar to where I grew up | 14 | -0.935 |
| 36 | Administrator values me as a teacher | 36 | -0.935 |
| 9 | Serve students better because of pay structure and benefits | 9 | -1.403 |
| 33 | Able to select professional development that works for me | 33 | -1.403 |
| 26 | Able to give back to community even though in rough area | 26 | -1.403 |
| 11 | Nowhere else to go after many years of service | 11 | -1.871 |
| 10 | Provide equitable education because of standardized testing | 10 | -1.871 |

Normalized Factor Scores -- For Factor 4

| No. | Statement | No. | Z-SCORES |
|---|---|---|---|
| 3 | Provide equitable education because of materials | 3 | 1.871 |
| 14 | Community where I teach similar to where I grew up | 14 | 1.871 |
| 1 | Make a difference because of adequate materials | 1 | 1.403 |
| 8 | Provide equitable education because of school climate | 8 | 1.403 |
| 2 | Make a difference because the school facility is adequate | 2 | 1.403 |
| 7 | Make a difference because of positive induction and mentoring | 7 | 0.935 |
| 13 | Job security | 13 | 0.935 |
| 33 | Able to select professional development that works for me | 33 | 0.935 |
| 34 | Opportunities for career advancement if I want them | 34 | 0.935 |
| 11 | Nowhere else to go after many years of service | 11 | 0.468 |
| 21 | Able to take off work for family or personal issues | 21 | 0.468 |
| 32 | Receive respect from others | 32 | 0.468 |
| 4 | Provide equitable education because of adequate school facil | 4 | 0.468 |
| 9 | Serve students better because of pay structure and benefits | 9 | 0.468 |
| 16 | Don't have to spend too much time at the school | 16 | 0.000 |
| 17 | Comfortable because of a supportive administrator | 17 | 0.000 |
| 10 | Provide equitable education because of standardized testing | 10 | 0.000 |
| 22 | Able to be at home with family more | 22 | 0.000 |
| 24 | Time to complete most of teaching tasks during contract time | 24 | 0.000 |
| 26 | Able to give back to community even though in rough area | 26 | 0.000 |
| 35 | The district treats me as a professional | 35 | 0.000 |
| 36 | Administrator values me as a teacher | 36 | 0.000 |
| 23 | Does not require too much time compared to other jobs | 23 | -0.468 |
| 20 | School has a supportive learning environment for teachers | 20 | -0.468 |
| 6 | Help students grow due to supportive parents | 6 | -0.468 |
| 5 | Help students grow due to supportive student learning enviro | 5 | -0.468 |
| 18 | Happy because of supportive colleagues | 18 | -0.468 |
| 28 | Freedom and flexibility in the classroom | 28 | -0.935 |
| 29 | Produce desired effect even with student discipline issues | 29 | -0.935 |
| 12 | Serve students better because of adequate preservice training | 12 | -0.935 |
| 19 | Better able to take care of family | 19 | -0.935 |
| 30 | Able to teach students even though they are disadvantaged | 30 | -1.403 |
| 25 | Able to be creative designing lessons with materials availab | 25 | -1.403 |
| 31 | Enjoy the intellectual challenge of teaching | 31 | -1.403 |
| 15 | Enjoy being in school | 15 | -1.871 |
| 27 | Receive satisfaction in fulfilling professional commitment | 27 | -1.871 |

APPENDIX P: INDIVIDUAL FREE-WRITE COMMENTS FROM PARTICIPANTS

WHO LOADED ON FACTOR 1

3       I really think that having worked for 16 years as a scientist makes me appreciate the stability and creative freedom of teaching. I doubt if many people flourish with so little guidance.

7       I have come to realize teaching is my calling. I have taught in THE worst conditions and THE best – neither has made me love teaching any less. "Teacher" is a <u>PART</u> of me. I could never truly leave it!

8.      For my first 3 yrs of teaching I had the world's worst administrator and was very close to leaving the profession.  Then I moved to a school with a great administrator – found a friend who mentored me – and now I love teaching and love my school.  It's all about how we are treated!!!

10      The Educational System has no power in this state – [district] very weak, board of regent no leadership, [superintendent] and [Rogers?] try but have no power.  Until this state begins to fund education by taxing its citizens and not the tourist, will the system change so much and corporation, money in this state (gaming, mining, corporations) we should be a leader in Education not always last.  No power No leadership = poor Education System!!

13      The school's climate has made the biggest difference for me.  I had an option to leave five years ago and chose to stay – simply because of my current school.

18      Teacher prep time is often inadequate, especially when used up for meetings and duties  Discrepancies between job responsibilities and extra pay for extra curricular duties between secondary and elementary teachers is unfair.

20      I feel schools need more local control to adequately meet the needs of their students.  In elementary schools I think the scope of the curriculum is too broad. We are losing focus on <u>important</u> basic skills and forget to meet kids where they are at in their development.  I think in elementary school the day needs to be longer and children should have an AM and PM recess.  I think [the district] is too big to meet the needs of children in all areas.  I think their should be <u>more support</u> for inclusive practices for children in special education. Physical support, philosophical support and training for all teachers.  Thanks!

21      My experience and background in teaching has been mostly with Special Education.  I have taught severe emotionally challenged, early childhood autism, learning disabilities.

23     I enjoy being in a school and having the opportunity to make a positive difference in the lives of my students. I remain in teaching because of the students. I love seeing them grow as individuals. It is so rewarding to catch that moment when the light goes on and you know they got it . . . and now they can see the purpose of the lesson!!

24     I enjoyed this. At first, some of the cards looked the same, but then I noticed the differences (e.g. "make a diff." vs. "equitable"; having a "supportive admin." Vs. and admin. Who "values me", etc.)

25     I enjoy the challenges. Everyday is a new day. You never know when a teachable moment occurs or you see the smile of a student who understands the concept. I have a caring, fair administrator who allows me to try new ideas to teach the CEF. Teaching has been great to me I enjoy past students who stop to visit.

28     9-month contract (summers off) is a huge factor for me – definitely a reason I switched careers

31     Our district is so large; it feels impersonal and inaccessible. I have in the past felt oppressed by unprofessional administrators and unhearing/caring district.

34     No matter what the job, everyone likes to be appreciated. We are all in this together! The increase in emotionally troubled students is increasing dramatically. What are we doing to offer support??

35     I like a well mixed school, students from many backgrounds.

39     If you want to keep great teachers, you MUST hire administrators that value and respect us – NOT micro-managing Nazis!!!

40     When referring to an adequate facility, my concern is the districts inability to keep up with technology and how newer and at-risk schools have so much more technology at their disposal.

41     To get the "AHA" moment. To see a child "get it". To help a child believe they can do it.

43     One of the most important reasons that I remain teaching here is that my children live here and that is why I am here!

49     I think the new teacher support/mentor program improved in CCSD after I came in but the mentor program was cut out of the budget by the beginning of the 2008-09 school year. I enjoyed the reflective time in sorting out the statements by personal priority. Thank you very much!

APPENDIX Q: INDIVIDUAL FREE-WRITE COMMENTS FROM PARTICIPANTS

WHO LOADED ON FACTOR 2

17     When asked why I remain as a teacher, it has nothing to do with the school or the administrators.  The majority of administrators are not interested in the students but in playing whatever politics they need to in order to leave the school environment and move into the main office so they can have a tiny bit of power in order to feel good about themselves.  Teachers remain because of the students.  That's why I stay in teaching.  I stay because if I can reach one student a year I have my "job satisfaction".  I like the people I work with.  I like most of the kids.  Administration comes and goes but the teachers remain.  I can get up each morning and the day is never the same.  I look forward to going to work, the breaks and starting the new school year.  How many people can say that about their jobs?  I joke that I can twist young minds and torture kids with impunity and get paid for it, but really they twist mine and I enjoy what I do so I guess that with all the bullshit and budget cuts going on, somehow us teachers will do what we need to in order to educate the kids.

38     It would greatly impact student achievement and teacher retention if there was a way for teachers to evaluate administrators in an anonymous forum.  Teachers are afraid of retaliation and therefore keep quiet when new administrators are placed mid-year, teachers should be able to let someone, who will make a difference, know <u>before</u> the school hits rock bottom and all teachers want to leave the building.

48     I would no longer be with the district if it were not for my children being enrolled in school here and that my husband has only two years left before he can retire with 30 years in PERS.  The new teachers have the right idea work the required years for the sign-on bonus and then leave.  I plan on leaving the year my husband retires.  Hopefully to a more teacher friendly district.

APPENDIX R: INDIVIDUAL FREE-WRITE COMMENTS FROM PARTICIPANTS

WHO LOADED ON FACTOR 3

11    Additional incentives would be beneficial for staying such as the ability to teach
      in different countries for a time.  In Saudi Arabia, they offer free education for
      kids, travel and expenses, free vehicle, free house.

APPENDIX S: INDIVIDUAL FREE-WRITE COMMENTS FROM PARTICIPANTS

WHO LOADED ON FACTOR 4

27      Kids – very important

APPENDIX T: INDIVIDUAL FREE-WRITE COMMENTS FROM PARTICIPANTS

WHO DID NOT LOAD ON A PARTICULAR FACTOR

2    I do not feel the district treats me as a professional (excessive meetings, no time to work in my classroom on staff development days, waste of time staff development, etc.).  Although the pay scale is not adequate, I do like that I know where I stand – that I'm getting the same salary as my coworkers – that I know what to do to get a raise without having to beg my boss for one (as in other professions), etc.

4    My passion for learning and knowledge is what keeps me going whether it is in a classroom or in life.  I don't love the job; I love the calling.

5    I think the questions could be influenced by the area one teaches in (East, SE, NW, NE, SW) as well as if the school is making AYP.  My school is in the East region and we're a N3 school so my opinions might have been different if I taught at a high achieving school in a different area.

6    There is also an issue which no one likes to talk about – and that is intimidation/harassment by administrators toward teachers.  This is a huge, on-going problem that regional supt.'s and district officials ignore.  Teachers do not file grievances or fight back because of further harassment I witness it every day.  Administrators have also contributed to the problem of creating such a nepotistic atmosphere that it alienates good teachers and encourages bad behavior, unprofessionalism and unethical behavior among admin/staff.  Incompetent classroom teachers are given jobs and held to different standards because of nepotism.

9    "Passing the Dream" Torch  Personal Meaning is the key to staying in the classroom.  It is about reaching kids, making a connection, and the challenge to reach those who do not want to be reached.  It is about teaching the "self power" involved in considering choice making.  It is about seeing an eyebrow rise and then seeing the gleam in an eye that had not uncovered a dream.  Having a Dream/vision is the energy for leaders.  We want leaders in our community who solve problems and not make problems.

29   The superintendent is approachable and listens to suggestions made by staff members

30   The main reason I stay in teaching is because teaching is a choice not a job.  Also I have more fun that not.  Which is a good way to spend the day.

33   It is so important to feel valued and our opinions matter.

37      Teaching is a vocation of service, whereby the instructor should be challenging him or herself to be a better person and teacher continuously.  Children need and deserve adult role models who embrace lifelong learning yet with sufficient humility to recognize they are on a life's journey as well.  (Teaching is a second career and I've always enjoyed letting people know, "Those who can do, teach."

46      I enjoy the rhythm of the school years, a definite beginning and a definite end. Also the feeling of accomplishment at the end of the year.

CURRICULUM VITAE

# Theresa Hollingsworth Hafen Corry

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**Education**

TESOL Credentials, Emporia University, 2006
Master of Science in Educational Leadership, Nova University, 1993
Elementary Education, National University, 1991
Bachelor of Arts in Design, Brigham Young University, 1989

**Professional Profile**

Engaging and motivational educator utilizing a variety of structures and learning styles; Strong oral and written abilities for clear, convergent, and divergent instructional outcomes; Excellent organizational and analytical skills for comprehensive coverage; Dedicated to providing an environment conducive to high levels of learning and enrichment; Innovative, goal-oriented, change agent

**Experience**

Aug 2007-present   **Second Grade Instructor**
*Clark County School District, Las Vegas, Nevada*

Aug 1998-Aug 2007   **Fifth and Sixth Grade Instructor**
*Shawnee Mission School District, Johnson County, Kansas*
Proficiently prepared and implemented objectives and projects with attention to detail. Instructed using curriculum essentials with a variety of teaching and learning styles to create enthusiasm for long term knowledge attainment.

Jan 1992-Aug 1998   **Second through Fifth Grade Instructor**
*Clark County School District, Las Vegas, Nevada*
Assisted in opening first math/science magnet school. Created and implemented cross-curriculum integration for second through fifth grade with emphasis on math, science, and technology. At request of parents and principal, took one group of students from second through fifth grade focusing on mastery of concepts with speed.

Aug 1985-Aug 1991   **Certified Ophthalmic Technician with Surgical Assistant Specialty**
*Weldon E. Havins, M.D., Ltd, Las Vegas, Nevada*
Trained incoming, unskilled ophthalmic personnel in half the time with impeccable results. Analyzed, prepared, presented, and implemented documents, reports, and procedure manuals.

**Additional Education**

Continuing Education for Educators 1991-present
CPR 1987-present
JCAHPO Clinics 1987-1989, 1991-1992

**Accomplishments**

Selected as Cohort Leader for community of doctoral students, 2007
Corry, T. H. (2007). Gold and silver made pure: Experiences in the
    telestial world trenches for celestial refinement and
    conversion. Overland Park, KS: Leathers Publishing.
People to People selected Teacher Leader for Ambassadors, 2006, 2007
Who's Who Among America's Teachers, 2004 and 2005
NASA Selected Teacher Leader 2002-present
e-school Selected Teacher Leader for third and fifth grade, 2001-2007
Teacher of the Year, Briarwood staff choice, Shawnee Mission, 2000
Science Teacher Leader, Clark County School District 1992-1995
New Teacher of the Year, Clark County School District 1993
Selected as sole back office trainer for adult incoming staff, 1986-1991