2010

Administrator and teacher perceptions of the qualities of effective teachers

Robert Eugene Williams
William & Mary - School of Education

NOTE TO USERS

This reproduction is the best copy available.

ADMINISTRATOR AND TEACHER PERCEPTIONS OF THE QUALITIES OF EFFECTIVE TEACHERS

A Dissertation

Presented to

The Faculty of the School Education

The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy

---

by
Robert Eugene Williams
2010

ADMINISTRATOR AND TEACHER PERCEPTIONS OF THE QUALITIES OF EFFECTIVE TEACHERS

by

Robert Eugene Williams

Approved October 2010 by

James H. Stronge, Ph.D.
Chairperson of Doctoral Committee

Christopher R. Gareis, Ed.D.

Kelly J. Whalon, Ph.D.

Table of Contents

ACKNOWLEDGEMENTS

The successful completion of this project could not have been possible without the expertise, dedication, and support of the faculty in the School of Education at The College of William and Mary. When I began my doctoral studies, I was unsure what to expect. William and Mary had a renowned reputation for academic rigor, and my perception of doctoral programs was one of competition. What I found instead at William and Mary was a community of scholars and educators committed to the success of students. In retrospect, I suppose that should not have come as a surprise about a School of Education. After all, is that not to be expected of effective teachers everywhere at any level? My experiences at William and Mary have been marked by the caring support and collegiality of professors, students, and staff. It is truly a supportive environment without which this project would certainly have had a different outcome.

Specifically, I would like to acknowledge the support of a handful of the many faculty members at William and Mary with whom I have worked throughout my graduate studies. Dr. Michael DiPaola served as my academic advisor. His guidance and advice helped steer me through the program with few logistical hurdles. Dr. Dot Finnegan guided me through an independent study of nineteenth century educational history. She helped me understand that there is value in not finding the evidence we seek to support our claims. Dr. Kelly Whalon introduced me to qualitative methodology and made me a better consumer of research. I always enjoyed and benefited from the casual, but substantive conversations we had concerning the methodology of this project.

Dr. Chris Gareis challenged my thinking on important educational issues and changed my understanding and appreciation for the role of assessment in student learning. I was teaching high school when I was enrolled in his courses and I became a better teacher because I was his student. Dr. Gareis exemplifies effective teaching.

Dr. James Stronge guided me through the dissertation phase of the doctoral program from start to finish. Along the way he offered sage advice that guided this study from a broad range of initial ideas to a completed project. His support and encouragement throughout the process have been invaluable. The successful completion of this project is in no small way attributable to Dr. Stronge's knowledge, enthusiasm, and caring guidance.

To my mother, Gloria Williams, a middle school teacher whose classroom I frequented as a child, thank you for sharing your love of history and love of learning. They both continue to be contagious. To my father, Gene Williams, thank you for your guidance and example. You taught me more than I was ever aware and I am thankful more than I was ever able to express.

Most importantly, to my wife, Susie, thank you for your love and support throughout this endeavor. From the first time that we talked about embarking on this adventure through its near completion, you selflessly made sacrifice after sacrifice and provided encouragement. You helped me move forward when I found myself overwhelmed with the responsibilities of full-time work and full-time graduate school. Without your support more than any others, this could not have been possible.

Finally, to all of the friends, classmates, colleagues, and relatives who were with me during this endeavor—there are far too many to mention by name—know that your support and encouragement are forever appreciated.

List of Tables

List of Charts

ADMINISTRATOR AND TEACHER PERCEPTIONS OF THE QUALITIES OF EFFECTIVE TEACHERS

ABSTRACT

The purpose of this study was to determine which qualities of effective teachers K-12 public school administrators and teachers in the United States perceive as having the greatest impact on student achievement. Stronge's (2007) meta-review of the qualities of effective teachers served as the framework for the study. An online survey based on that framework was deployed to a random stratified sample of administrators and teachers across the United States. Participants ranked five general teacher qualities and 29 indicators of quality in the order in which they believed them to impact student achievement. Participants were also provided an opportunity to list and describe additional teacher qualities they believed impacted student achievement that were not present in the survey. Descriptive statistics and ANOVA were used to determine the level of agreement between administrator and teacher rankings. Rankings were further analyzed to determine the impact that the following demographic factors had on perceptions: (a) region of the country, (b) urbanicity, (c) level of school, (d) years of experience, and (e) gender. Results indicated a strong level of agreement between administrator and teacher perceptions. Further results showed that demographic factors played a minimal role influencing participants' perceptions.

ROBERT EUGENE WILLIAMS

PROGRAM IN EDUCATIONAL POLICY, PLANNING, AND LEADERSHIP

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

ADMINISTRATOR AND TEACHER PERCEPTIONS OF THE QUALITIES OF EFFECTIVE TEACHERS

Chapter 1 - Introduction

A significant aim of public education is to improve student learning. Several factors influence learning, some germane to the school environment and others to students themselves. Of the variables associated with schools, none is more powerful than the teacher (Darling-Hammond, 2000; Hattie, 2003; Nye, Konstantopoulos, & Hedges, 2004; Olson, 2008; Stronge, Ward, Tucker, & Hindman, 2008; Wenglinsky, 2004). Wright, Horn, and Sanders (1997) found that effective teachers were effective regardless of their students' academic level, class size, or how students were grouped in classes. Teachers bring a combination of personal abilities, content and professional knowledge, and pedagogical skills to students' learning experiences. Effective teachers skillfully employ those qualities to significantly enhance student learning.

The impact that teachers have on student achievement is both potent and lasting. Hanushek (1992) estimated that being assigned to an effective versus an ineffective teacher can alter annual student achievement gains on standardized tests between one and one and a half standard deviations, or more than one grade level. Thus, the impact of having a series of effective or ineffective teachers can produce great variability in student achievement in a relatively short time (Hanushek, 1992; Wright, Horn, & Sanders, 1997). Several studies have demonstrated that effectiveness varies widely among teachers (Hanushek, 1992; Sanders, 2000; Wright, Horn, & Sanders, 1997) and that effective teachers are inequitably distributed across locations (Bacolod, 2007). Given that teachers play a significant role in student learning, the apparent disparity in teacher quality both within and between schools means that some students are disadvantaged simply by their assignment to a particular teacher. Sanders suggested that improving the academic

achievement of all students "will be obtained only by reducing the likelihood that students will be assigned to relatively ineffective teachers" (p. 335). Thus, improving education is largely a function of improving the effectiveness of teachers (Wright, Horn, & Sanders).

Effectiveness is commonly associated with the impact teachers have on student academic achievement. Munoz and Chang (2008) defined an effective teacher as one who "causes student improvement on core content educational outcomes" (p. 156). Stronge (2007) suggested that the influence a single teacher has on student learning can be difficult to discern, making effectiveness an "elusive" construct. Fenstermacher and Richardson (cited in Berliner, 2005) argued that effective teaching is a combination of both good teaching and successful teaching. The former being characterized by normative practices expected from a teacher and the latter by the degree to which students learn as a result of the teacher's efforts. Fenstermacher and Richardson contended, however, that one does not always lead to the other. Effective teaching has also been conceptualized as the confluence of the art and science of teaching (see Marzano, 2007; Ornstein & Lasley, 2000). Marzano argued that educational research (the science of teaching) provides guidance in identifying the many variables associated with effectiveness, but cannot produce a formula for effective teaching that can be applied to all students in all settings. The art of teaching involves classroom teachers knowing which research-based components of effective teaching to involve with particular students at particular times. Thus, effectiveness is a peculiar construct. Although its components may be identified, teachers must have the ability to determine when and in what combination to employ those components if they are to be effective.

Because student learning is the central aim of schooling, it is necessary to identify which teacher behaviors and attributes contribute to significant student gains. Hattie (1999) argued that most of the behaviors that teachers employ with the intention of improving student achievement do indeed have positive effects. The key, he continued, is to identify those behaviors that have the greatest effects. In other words, to be satisfied that a particular variable—a teacher's behavior or attribute—positively influences student achievement is to ignore the possibility that another variable in its place may produce a greater effect. Identifying the most powerful teacher behaviors and attributes is worthy of investigation because it aids in the improvement of student learning.

Statement of the Problem

Despite what the literature reveals about teacher effectiveness, teachers and administrators may form different perceptions based on their own experiences. Personal experiences, both as a student and as a professional, impact the beliefs that educators have about good teaching (Murphy, Delli, & Edwards, 2004). The earlier in life that these beliefs are formed, the more powerful they become (Gupta & Saravanan, 1995). Based on perceptions formed early on, educators are likely to idealize the qualities that a good teacher should possess, even if those qualities are unrealistic (Kane & Temple, 1997). Therefore, teacher and administrator perceptions of the qualities of effective teachers may not align with the research-based evidence. A study conducted in three Midwestern states demonstrated that teachers believed that experience was more important in becoming an effective teacher than education and training (Snider & Roehl, 2007). Ellett and Teddlie (2003) suggested that despite the fact that it is difficult to find universal agreement on the qualities of good teachers, there are "core elements of teaching and learning

environments that are logically and empirically linked to student outcomes" (p.121). If the aim of schooling is to improve student learning, and teacher effectiveness is essential toward that end, then it is important that teachers and administrators have a common understanding of which qualities comprise an effective teacher.

School leaders are charged with ensuring that significant and meaningful learning takes place in schools. Student achievement is the yardstick by which learning is measured. Therefore, hiring, developing, and retaining effective teachers is one of the most important roles that school leaders perform. Yet, determining the effectiveness of a teacher is complicated because the concept of effectiveness itself is elusive (Stronge, 2007). Qualities and qualifications considered necessary for effective teaching have changed over time (Ellett & Teddlie, 2003; Fraser, 2007) and are often inconsistent across cultures and regions (see Akiba, LeTendre, & Scribner, 2007). Consequently, attempting to pinpoint a universally accepted list of qualities that constitute an effective teacher is to take aim at a moving target. Effectiveness is a construct that is largely dependent upon the contextual perceptions of those involved in the process. Stronge stated that the complexities of determining effectiveness notwithstanding, effective teachers are those who have a significant impact on the lives and learning of students.

Several studies have explored the characteristics, qualities, and behaviors that effective teachers possess and demonstrate (see, for example, Beishuizen, Hof, Putten, Bouwmeester, & Asscher, 2001; Kyriakides & Campbell, 2003; Murphy, et al., 2004; Polk, 2006; Stronge, Ward, Tucker, & Hindman 2008). Because effective teachers have a powerful and positive effect on student learning, it is important to understand what it is that makes a teacher effective—that is, knowledge of how to positively impact the

learning and the lives of students is reliant upon an understanding of the qualities and actions of those who are able to do it. However, the attributes of a particular teacher's effectiveness can be difficult to discern because they do not act in isolation from other variables that also impact students' lives and learning. Understanding teacher effectiveness is confounded further by the various perceptions that practitioners have about the qualities that constitute effectiveness and the relative importance they place on each of those qualities.

Using a value-added model of evaluation, Geithman (2009) found that administrators' perceptions of which teachers were effective did not align with those whose students had the greatest achievement gains. Geithman's study demonstrates that administrators have perceptions of effectiveness that are not necessarily linked to student achievement. In the absence of a consistent model, school personnel are likely to rely on personal knowledge and experience to construct their own criteria for effectiveness. Because school administrators are charged with the recruitment, development, and retention of teachers whom they view as effective, it is important to understand which teacher qualities and behaviors they perceive as the most valuable. It is similarly important to determine if those views are congruent with the perceptions of teachers.

Statement of Purpose

The purpose of this study is to determine which qualities of effective teachers are perceived by school administrators and teachers as having the greatest impact on student achievement. Further, the researcher hopes to discern whether those perceptions are influenced by the following demographic factors region of the country, urbanicity of school, level of school, years of experience, and gender.

Research Questions

The following research questions will guide this study:

1. Which qualities of effective teachers do administrators and teachers perceive as having the greatest impact on student achievement?
2. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement between administrators and teachers?
3. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?
4. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among teachers (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?
5. Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?

Significance of the Study

Increasing student learning is the primary function of schools, and the link between student learning and teacher quality is well established. Therefore, it is imperative that school personnel continually aim to improve teacher quality. To be

effective, improvement should be the joint effort of both administrators and teachers. Therefore, it is important that teachers and administrators hold similar views of the qualities that promote effective teaching. Without such congruence efforts to improve teacher quality may be hindered. Further, if those views are not aligned with research-based qualities, then attempts aimed at improving teacher effectiveness, though well-intended, may miss the mark. Districts expend a large amount of resources each year to promote student achievement. This study sought to identify which specific qualities of effective teachers that educators perceive as having the greatest impact on student achievement.

Limitations and Delimitations

Limitations describe the characteristics of design and methodology that impact, or limit, the generalizability of findings in a study. Delimitations describe the conscious inclusionary or exclusionary decisions that limit the scope of the investigation (http://education.astate.edu/dcline/Guide/Limitations.html). The following limitations applied to this study.

1. The survey required participants to rank order the qualities of effective teachers. Rank ordering "represents an ordering of values of a variable with no assumption of an equal interval between the values" (Gall, Gall, & Borg, 2007, p. 132).
2. The wording of the descriptors of effective teacher qualities and indicators of quality on the survey may have influenced participants' responses.
3. The low number of usable responses from the online survey limits the generalizability of the findings of the study.

The following delimitations applied to the study.

1. The qualities and indicators of quality used to construct the survey were taken exclusively from Stronge's (2007) framework.
2. Participation was limited to public school K-12 teachers and administrators. Private and charter school educators were excluded form the study.

Assumptions

The following major assumptions underlie this study:

1. Teachers and administrators participating in the study will provide information that accurately describes their perceptions.
2. Teachers and administrators participating in the study have the knowledge necessary to provide meaningful information.
3. Stronge's framework includes qualities and indicators of quality with which participants are familiar.

Chapter 2: Literature Review

An abundance of research supports the notion that teachers have a significant impact on student learning (Darling-Hammond, 2000; Hattie, 2003; Olson, 2008; Stronge, Ward, Tucker, & Hindman, 2008; Wenglinsky, 2004). Accordingly, a teacher's behavior and attitude toward his or her students can positively or negatively influence student achievement. Those behaviors are influenced by the beliefs that teachers hold about students, about teaching and learning, and about schooling in general. Those beliefs, in turn, shape the perceptions that teachers carry with them into the classroom and ultimately impact the way that they perform their role as teachers. Examining teacher beliefs and perceptions is critical to understanding and potentially improving teacher effectiveness. This is especially important in the lack of a consensus about empirically based teaching practices (Snider & Roehl, 2007).

Impact of Perceptions on Teacher Practice

Perceptions are powerful predictors of behavior. Fenwick English (2008) argued that perceptions held as truths are based on facts that are culturally and temporally constructed. What one holds to be true is often built on contextual evidence. Therefore, facts that form the basis of one's perceptions are fluid in nature. English stated that "the world is not a static entity perceived the same way by everyone" (p. 53), meaning that perceptions themselves are open to refutation. Often the facts upon which perceptions are built come from one's own experience. English characterized the shaping of perception as the process of observation and verification. One observes a particular phenomenon, forms a belief about what he or she has observed, and then verifies that belief by

comparing it to what he or she already accepts as truth about similar events. Once perceptions are formed they guide performance.

That belief informs perception, which in turn guides performance, can have both positive and negative impacts. Snider and Roehl (2007) differentiated between belief systems and knowledge systems suggesting that the former does not require empirical validation. If perceptions are not based on unbiased and verifiable evidence, then the ensuing professional practices that follow are suspect. Snider and Roehl found that teachers often base their classroom practice on practical knowledge which they defined as "the beliefs and habits that teachers acquire from experience rather than from empirically based principles and practices acquired through education and training" (p. 873).

The connection between perception and practice is exemplified by a number of studies. Perhaps the most famous are reported in Rosenthal and Jacobson's *Pygmalion in the Classroom* (1968). Teachers in many of these studies formed their perceptions of student ability on the results of standardized intelligence testing. It was determined that manipulating the results of the tests influenced the perceptions and practices employed by teachers in the classroom. Rosenthal and Jacobson referred to this phenomenon as the self-fulfilling prophecy. A more recent study also supports the notion that perception is linked to practice. Law and Kaufhold (2009) found that teacher and administrator perceptions of staff and student ability were positively associated with the performance level of the school. Teachers and administrators in high performing schools believed in their own ability to promote critical thinking in their students as well as the ability of their students to successfully grasp critical thinking skills. On the other hand, teachers and administrators in low performing schools did not believe that they could promote

critical thinking skills in their students. This suggests that educators form beliefs based on the performance level of the school in which they work and that their practices reflect those beliefs.

Additional studies support the proposition that teacher beliefs affect practice. Roehrig, et al. (2009) examined the alignment of beginning teacher beliefs and practices and concluded that the teachers who held optimistic views of students engaged more positively and incorporated more exemplary instructional practices than those who held pessimistic views of students. Further, Hardre and Sullivan (2009) demonstrated that teacher perceptions about student motivation predict their own classroom practices. Interestingly, these findings revealed that teachers generalize their perceptions about motivation for students as a whole and not for individual students. As a result, teachers in the study did not believe that their efforts to motivate students were effective. Finally, Tsai (2007) found that teachers' epistemological beliefs guided classroom practices. Studying science classrooms, Tsai concluded that teachers with positivist views about teaching and learning focused on lecture, teacher-led activities, and test scores, whereas constructivist teachers focused on the application of concepts, student-led inquiry activities, and interactive discussions. Each of these studies corroborates the idea that the beliefs that teachers bring with them to the classroom and the perceptions they form from their experiences play an important role in how they engage in the act of teaching.

Conceptual Framework for Teacher Effectiveness

Various researchers have constructed conceptual frameworks that organize and categorize teacher behaviors and attributes that are positively related to student achievement. These frameworks, though different in detail, support research-based

practices and characteristics of effective teachers. Danielson (1996), noting the complexities of teaching, argued that frameworks for professional practice serve as a roadmap for educators and publicly communicate the high standards to which educators hold themselves accountable. Danielson's framework combined 22 qualities of effective teachers under four broad domains: (a) *Planning and Preparation* (demonstrating knowledge of content, demonstrating knowledge of students, selecting instructional goals, demonstrating knowledge of resources, designing coherent instruction, and assessing student learning), (b) *Classroom Environment* (creating an environment of respect and rapport, establishing a culture for learning, managing classroom procedures, managing student behavior, and organizing physical space), (c) *Instruction* (communicating clearly and accurately, using questioning and discussion techniques, engaging students in learning, providing feedback to students, and demonstrating flexibility and responsiveness), and (d) *Professional Responsibilities* (reflecting on teaching, maintaining accurate records, communicating with families, contributing to the school and district, growing and developing professionally, and showing professionalism).

Davis and Thomas (1989) provided a summary of effective teacher behaviors divided into three sets. The first set consists of behaviors that increase academic engagement such as instructional pacing, classroom management skills, teacher expectations, and organizing and presenting objectives. The second set of behaviors relates to organizing learning experiences to increase the clarity of instruction. Included in this set are checking for understanding, instructional relevance, and monitoring student

progress. The last set contains a broad array of behaviors ranging from providing feedback to caring and respecting students as persons.

Ornstein and Lasley (2000) authored a textbook for pre-service teachers in which they divided effective teaching into two components—the art of teaching and the science of teaching. The framework they developed includes a synthesis of extent research on effective teaching strategies. This framework focuses on the science of teaching and details research-based teaching skills such as developing instructional objectives, planning for instruction, grouping students for instruction, assessing, and evaluating student work. They argued that it is more difficult to measure the art of teaching because it often involves behaviors and attitudes that are not easily observable, or that may not manifest in student achievement for some time. Nonetheless, the art of teaching comprises an important component of effective teaching. Thus, the authors emphasized that effective teachers are masters of both the art and science of teaching.

Stronge (2007) conducted a meta-review of effective teacher qualities and built a framework based on 27 research-based qualities organized within six domains: (a) *Prerequisites for Effective Teaching* (verbal ability, knowledge of teaching and learning, certification status, content knowledge, and teaching experience), (b) *The Teacher as a Person* (caring, fairness and respect, interactions with students, enthusiasm, motivation, dedication to teaching, and reflective practice), (c) *Classroom Management and Organization* (classroom management, organization, and discipline of students), (d) *Planning for Instruction* (importance of instruction, time allocation, teachers' expectations, and instructional plans), (e) *Implementing Instruction* (instructional strategies, content and expectations, complexity, questioning, and student engagement),

and (f) *Monitoring Student Progress* (homework, monitoring student progress, and responding to student needs and abilities).

Finally, Lui and Meng (2009) conducted a qualitative study on teacher effectiveness in China. Teachers, students, and parents participated in the study by completing open-ended survey questions. Lui and Meng organized their framework around four congruent themes that emerged from participant responses: (a) *Teacher Ethics*—characterized by the way teachers interact with students, (b) *Professional Skills*—characterized by particular teaching methods (c) *Professional Development*—characterized by continual teacher learning, and (d) *Teacher Effects*—characterized by student test scores. Lui and Meng argued that the first three categories show commonality with American models of effective teachers. The last category is unique to China, they suggested, because of the rigorous Chinese examination process which heavily emphasizes test scores.

None of the preceding frameworks is identical in organization and structure to the others. This is likely because researchers use different names for similar behaviors and attributes and have different conceptual views for organizing them (Ornstein & Lasley, 2000; Stronge, 2007). Despite the inconsistencies in organization and structure among the frameworks, there is considerable content overlap. For example, all five frameworks suggest that effective teachers establish classroom environments that foster respect for students. Similarly, all emphasize reflection as a behavior in which effective teachers engage. The overlapping of research-based content strengthens the claim that the teacher behaviors and attributes found within the frameworks are in fact qualities of effective teachers. Stronge's (2007) framework will undergird this study because it provides the

most comprehensive structure and organization for these qualities. Table 1 summarizes the qualities found in each framework and demonstrates that Stronge's is the most comprehensive of the five.

Table 1

Comparison of Teacher Effectiveness Frameworks

Stronge	Danielson	Davis & Thomas	Ornstein & Lasley	Lui & Meng
Prerequisites for Effective Teaching				
• Verbal Ability	•	•	•	•
• Knowledge of Teaching and Learning				
• Certification Status				
• Content Knowledge	•		•	•
• Teaching Experience				
Teacher as a Person				
• Caring		•		•
• Fairness and Respect	•	•	•	•
• Interactions with Students	•	•		•
• Enthusiasm		•	•	•
• Motivation				
• Dedication to Teaching	•			•
• Reflective Practice	•	•	•	•
Classroom Management & Organization				
• Classroom Management	•	•	•	•
• Organization	•	•	•	
• Discipline of Students	•		•	
Planning for Instruction				
• Importance of Instruction		•		
• Time Allocation		•		
• Teachers' Expectations	•	•		
• Instructional Plans	•		•	
Implementing Instruction				
• Instructional Strategies			•	•
• Content and Expectations				•
• Complexity			•	

• Questioning	•	•		
• Student Engagement	•	•		
Monitoring Student Progress				
• Homework				•
• Monitoring Student Progress	•	•	•	•
• Responding to Student Needs and Abilities	•		•	•

A review of literature confirms that the qualities of effective teachers in Stronge's (2007) framework are in fact related to student achievement. The literature review of effective teacher qualities is structured around Stronge's framework and essentially updates the research on five of the six domains of quality upon which that framework was built. The domain "Prerequisites of Effective Teaching" was intentionally omitted from the review because its qualities and indicators of quality are difficult for a teacher to alter to improve his or her practice. The remaining five domains of qualities—*Teacher as a Person, Classroom Management and Organization, Planning for Instruction, Implementing Instruction, and Monitoring Student Achievement*—each contain qualities and indicators of quality that are more easily alterable. The following review is framed around those five domains of qualities.

The Teacher as a Person

Although a teacher's personal qualities are often viewed as "fuzzy" variables (Ornstein & Lasley, 2000), there is considerable evidence that teachers who are fair, demonstrate care for students, and are enthusiastic strongly impact student learning. A misconception about personal qualities of effective teachers was identified by Marzano and Marzano (2003) who cautioned that effective teachers are not characterized by agreeable personalities or by the degree to which students like them. Rather, effective teachers exhibit behaviors that positively impact student learning. Often, the way teachers

interact with students and the way they are perceived does impact learning. Walker (2008) asked preservice teachers to identify the qualities of teachers who had the greatest impact on their lives and were the most successful in teaching content. He collected data over a 15 year period and summarized findings into 12 qualities of effective teachers. Nine of the 12 qualities reflected personal qualities, indicating that these "fuzzy" teacher qualities were powerful enough to inspire students to want to become teachers themselves. A review of literature on each of the personal qualities in Stronge's (2007) framework provides evidence that they are also linked to student learning.

Caring

Teachers regularly convey a variety of verbal and nonverbal messages to students that communicate their own levels of competence, trustworthiness, and caring (Teven & Hanson, 2004). Students relate teacher caring behaviors to teacher competence (Teven, 2007) and put forth greater effort toward their schoolwork when they have teachers who communicate and display such behaviors (Lumpkin, 2007; Wentzel, 1997). These behaviors include encouragement, academic support, interest in students as individuals, listening, and building relationships (Cassidy & Bates, 2005; Ferreira, 2000; Hayes, Ryan, & Zseller, 1994; Lumpkin, 2007; Noddings, 2006). Caring is also demonstrated through teacher immediacy. Teacher immediacy behaviors—mannerisms, expressions, gestures, and so forth— lessen the perceived distance between student and teacher during communication (Teven & Hanson, 2004) leading students to feel a closer connection to the teacher. Students decode these nonverbal cues and form judgments about how much they are cared for based on those cues. Several studies (Allen, Witt, & Wheeless, 2006; Cheesebro, 2003; Teven, 2001; Teven & Hanson, 2004) demonstrate that teacher

immediacy has a significant impact on student learning. Accordingly, effective teachers employ effective verbal and nonverbal techniques to communicate that they care for their students.

Caring is demonstrated through behaviors by one party that are acknowledged and accepted by another (Noddings, 2005). Students perceive caring behaviors as those initiated by the teacher and directed toward the student. These behaviors tend to be based on relationships and are rarely centered on content or curriculum (Ferreira, 2000). The meaning of caring relies on the perspective and context that each participant brings to the exchange. For example, a teacher may exhibit behaviors that he or she believes demonstrate care, but unless the student interprets the action as caring, the message of care has not been conveyed (Ferreira, 2000). Therefore, it is important that both the caregiver and the cared-for recognize certain behaviors as caring behaviors. Culture, ethnicity, and socio-economic status can affect what behaviors are viewed as caring behaviors. Hayes, Ryan, and Zseller (1994) found differences between minority and non-minority students' ratings of certain teacher behaviors. For example, African-American students rated teachers who promoted competition in the classroom as less caring than those who fostered interdependence. These findings indicate that caring is to some degree a cultural construct, and suggest that teachers must understand the cultural context of their actions if they want to communicate to their students that they care for them.

Students report feeling better about school and having a more positive attitude when they have teachers they believe care about them (Cassidy & Bates, 2005). Conversely, student affect for teachers diminishes when teachers are forgetful, fail to learn student names, are unprepared for class, and are intimidating. These teacher

misbehaviors cause students to infer that teachers do not care about them (Banfield, Richmond, & McCroskey, 2006). Thus, the degree to which a teacher displays caring behaviors has a large impact on student motivation and affective learning (Comadena, Hunt, & Simonds, 2007).

Fairness and Respect

Students report that effective teachers care about them, show respect for their differences, and treat them with fairness (Cassidy & Bates, 2005; Ferreira, 2000; Patrick & Smart, 1998). Teachers also report that caring about and respecting students is among the most important of their responsibilities (Korkmaz, 2007). Given the link between a student's affective state and his or her achievement (Allen, Witt, & Wheeless, 2006), teachers need to know which of their own behaviors contribute to positive and negative student affect. Suldo et al. (2009) investigated teacher practices that positively and negatively influenced students' perceived social well-being. Fairness was among the 12 positive themes that emerged from student reports, though with lower frequency counts than most of the other emergent themes. Interestingly, when describing negative teacher behaviors, not being fair emerged as a theme with noticeably higher frequency counts. This finding suggests that a lack of perceived teacher fairness acts as a hygiene factor (Herzberg, Mausner, & Snyderman, 1993) for students because fairness appears to be expected by students. When fairness is absent, an unhealthy psychological classroom environment emerges hindering student achievement. Thus, effective teachers exhibit behaviors that not only demonstrate fairness, but more importantly, they show students a deliberate intent to prevent or correct unfairness that may occur in the classroom.

Like most of us, students desire to be accepted and appreciated for their individual talents and qualities, while at the same time being treated equally. Respectful teachers help to preserve and reinforce their students' senses of dignity. Teachers can demonstrate respect for students when they view them as more than members of a class or group and see in them instead their unique individual qualities. Respect for students is communicated by valuing student opinions, being polite, not stereotyping, and not embarrassing students (Schulte, Slate, & Onwuegbuzie, 2008). In addition, students do not report that teachers respect them simply because they do not disrespect them. Respect, in other words, is not the status quo. It is instead the result of deliberate effort. This is illustrated by a group of at-risk teenagers in an alternative school who offered the following advice to beginning teachers: "Listen to [students], be a good person and a friend, take a personal interest, treat students with respect, help them succeed, and show [that you] care" (Cassidy & Bates, 2005, p. 94). One student suggested that teachers needed to understand that all kids are different. Another stated that students inferred that teachers who do not go the extra mile to help them learn have given up on them. He suggested that teachers must go beyond the boundaries of what is expected (Cassidy & Bates, 2005). All of these teacher actions were perceived by students as above and beyond what teachers normally do. Therefore, teachers who mean to communicate to their students an ethic of personal respect must do so overtly and deliberately.

Respect and fairness are similar constructs, though important differences may distinguish one from the other. Respect is evidenced by behaviors that demonstrate recognition and acceptance of uniqueness. This can apply to race, ethnicity, gender, religion, and so forth. It is also applicable to distinguishing individual qualities from

group qualities, and the avoidance of stereotyping. Additionally, teachers show students respect when they treat them with kindness and politeness. Fairness, on the other hand, is communicated to students when teachers do not differentiate. Students expect to be treated equally by teachers, especially in terms of discipline and expectations. The concept of fairness also goes beyond a teacher's personal behavior toward students; it may also be considered in the context of curriculum and content. Students perceive teachers as unfair when they exhibit poor pedagogy and engage in classroom behaviors that are seen as incompetent. Students are more likely to believe that cheating is acceptable when they are exposed to teachers they perceive as unfair in this context (Murdock, Miller, & Kohlhardt, 2004).

Effective teachers consciously engage students in fair and respectful ways. They are aware that doing otherwise diminishes student affect and negatively impacts student performance. Accordingly, they are consistent and equitable with discipline, non-judgmental toward student differences, and impartial in making classroom decisions.

Interactions with Students

Effective teachers make students feel special and important. They demonstrate respect for students as individuals and show interest in their personal lives. Positive interactions with teachers cause students to feel a greater sense of connectedness with the teacher and consequently with the social and academic processes of school. Such connectedness is characterized by higher levels of engagement and motivation (Furer & Skinner, 2003) and results in greater academic and social learning. Teacher interactions with students have been found to have positive effects in elementary (Hamre & Pianta, 2005) and middle school (Barney, 2005; Midgley, Feldlaufer, & Eccles, 1989). Anecdotal

evidence supports similar effects at the high school level (Beishuizen, et al. 2001; Pressley, Raphael, Gallagher, & DiBella, 2004).

The emotional support that students receive from teachers plays an important role in the development of academic and social skills. Teachers provide emotional support by interacting and forming positive relationships with students. Formed in the early elementary grades, positive relationships between teachers and students increase student achievement and minimize student misbehaviors. Conversely, negative teacher-student relationships formed in the early grades hinder academic achievement and are predictive of future student misconduct as far ahead as middle school (Hamre & Pianta, 2001; Silver, Measelle, Armstrong, & Essex, 2005). Effective teachers break the cycle of poor teacher-student relations by providing emotional support for students whom they know to have experienced such relationships in the past. The result of this intervention, when it occurs early enough, is the reduction of reported conflict between students and teachers (Hamre & Pianta, 2005). Positive teacher-student interactions are especially important for students considered to be at-risk (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002) indicating that positive interactions can mitigate situational factors that often lead to lower achievement. Because emotional support through positive interactions with students is an important part of student development, effective teachers foster positive relationships with their students.

Teacher behaviors have a powerful influence on student learning. Allen, Witt, and Wheeless (2006) found that certain teacher behaviors were significantly related to affective learning which was in turn related to cognitive learning. In other words, teacher actions affect academic performance because cognitive learning is dependent, at least in

part, on the emotional state of students at school. The way in which teachers interact with students is a behavior that not only affects the students involved in, but also those who observe the interaction. Students take in cues about which of their classmates teachers like and dislike and make judgments about those students' likeability and competence (Hughes, Cavell, & Wilson, 2001). This represents a powerful effect that teachers have over the social development of students in their charge.

Enthusiasm and Motivation

Teachers routinely assign blame to students for lacking the motivation to succeed in school. Attitudes such as this relieve the teacher from the responsibility to motivate students. Academic motivation, however, does not occur in the same manner for all students (Karsenti & Thibert, 1995). Effective teachers share responsibility for their students' successes and failures. They recognize that student motivation is often a matter of interest in a topic, and that they have a variety of tools at their disposal to elicit interest in their subject matter. Teacher enthusiasm is such a tool.

Effective teachers focus their efforts on improving student outcomes. Displaying enthusiasm and energy in the classroom increases student interest and motivation to learn (Patrick, Hisley, Kempler, & College, 2000). Therefore, teachers who intend to excite students about learning must themselves demonstrate excitement. Good and Brophy (1987) proposed that students' attention and achievement increase when teachers are enthusiastic. A teacher's enthusiasm can be shown in a variety of ways including expertise in subject knowledge, participation in content related activities outside of school, knowledge of students' personal interests, and energetic and dynamic presentations (Long & Hoy, 2005). Given the number of ways that teachers can

demonstrate enthusiasm, it is worthy to note that a teacher's enthusiasm for teaching has been shown to have a stronger effect on instructional quality than his or her enthusiasm for content (see Kunter, et al. 2008). Accordingly, content expertise, though an important attribute, is not enough on its own to merit effective teaching.

Enthusiasm "reflects the degree of enjoyment, excitement and pleasure that teachers typically experience in their professional activities" (Kunter et al., 2008, p. 470). Logically, teachers who enjoy teaching exhibit different classroom behaviors than those who do not enjoy teaching. Students recognize when teachers are motivated and enjoy their work. A number of recent qualitative studies support the notion that students (Alazzi, 2007) and teachers (Hudson, 2007; Johnson-Leslie, 2007; Walls, Nardi, von Minden, & Hoffman, 2007) perceive enthusiasm to be an indicator of effective teaching. Students report higher levels of classroom engagement and intrinsic motivation when they perceive that their teachers are enthusiastic (Kunter et al., 2008; Long & Hoy, 2005; Patrick, et al. 2000). To effectively demonstrate enthusiasm and promote motivation in the classroom, teachers must view them as multidimensional constructs. Interest and enthusiasm for content must be complemented by a genuine interest and enthusiasm for students (Long & Hoy, 2005). Practiced separately, these two dimensions of enthusiasm may suggest to students that their teachers are interested in either content or students, but not both. Thus, effective teachers take a multidimensional view of enthusiasm to maximize their impact on student motivation and student learning.

There are, of course, a number of ways in which teachers can motivate students to work hard and challenge their abilities. Dolezal, Welsh, Pressely, and Vincent (2003) reported that teachers in highly engaged classrooms frequently displayed supportive

motivational practices. These practices included dynamic presentations, challenging and relevant activities, frequent feedback, and positive attention for each student. Dolezal et al. also found that teachers in low engaging classrooms frequently exhibited practices that undermined student motivation and that an inverse relationship existed between supportive motivational practices and undermining practices. Such undermining practices included poor classroom management characterized by frequent threats of punishment, lack of organization, poor planning, and simple, unchallenging tasks. Effective teachers recognize that they have powerful motivational tools at their disposal, and that these tools are an important component of student achievement. Therefore, effective teachers minimize behaviors and practices that undermine student motivation.

Dedication to Teaching

There are several ways that teachers can demonstrate their commitment and dedication to the teaching profession. Stronge (2007) stated that effective teachers are dually committed to their own and to their students' learning. They "learn and grow as they expect their students to learn and grow . . . and serve as powerful examples of lifelong learning" (p. 29). Working collaboratively with colleagues represents a powerful way in which effective teachers help other staff members learn and grow professionally. Peer coaching, for example, provides paired teachers the opportunity to observe and review one another's teaching. When combined with professional development, this type of peer learning promotes a willingness to change classroom practice and increases teacher efficacy (Bruce & Ross, 2008). Without structure, however, peer learning may not affect student achievement (Murray, Ma, & Mazur, 2008) and may actually result in the reinforcement of poor practice.

A number of school reform models emphasize the role of teacher leaders. Teacher leaders often supervise and assist in the professional development of their peers. This allows highly effective teachers greater opportunity to influence the professional knowledge and practice of others (Rutherford, 2009). Gareis and Grant (2008) defined teacher leadership as "the constructive influence of one teacher on the professional practice of one or more other teachers" (p. 185). This broad definition allows many opportunities for teachers to act as teacher leaders whether or not they are assigned formal roles as such. For example, teachers often learn from their own experiences both as students and teachers. Teachers can exhibit leadership simply by demonstrating professional expertise to others. Further, teachers often work in formal collaborative teams and informal groups. These groups provide additional opportunities for effective teachers to share and acquire knowledge and skills from others. Whether exhibiting teacher leadership through a formally assigned role or through informal relationships and collaboration, teacher leaders can effectively promote change at the classroom level because teachers are often more willing to value and participate in teacher-led reforms (von Frank, 2009).

Reflective Practice

Effective teachers are also effective learners. They learn by continuously studying their classroom experiences in an effort to improve practice. By examining, or reexamining, the content and context of their own behaviors in the classroom they are able to refine or even alter what they do and how they do it. They engage in reflective activities that involve identifying, analyzing, and resolving problems associated with the complexities of teaching (Spalding & Wilson, 2002). The aim of reflection is the

improvement of instruction (Jay, 2003) which is inextricably connected to student outcomes. Thus, effective teachers are committed to improving their own learning because it leads to the improvement of student learning. Reflection is a critical component of that improvement.

Reflective practice serves as an instrument for continual improvement and discovery (Jay, 2003). It is a process rather than an event. Dewey (1933) defined reflection as the "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends (p. 9)." Reflection constitutes a disciplined way of thinking that entails calling into question one's existing beliefs and routines in light of new evidence and altering teaching behaviors accordingly (Valli, 1997). Similarly, Otteson (2007) described reflection as "a discursive process elicited from the flow of events and expanded in communicative action" (p. 42). The reflective teacher makes conscious inquiries into his or her pedagogical practices and solicits feedback to build a reasoned case for renewing or altering those practices. The critical component in the process is communicative evidence which is provided through feedback. Feedback from others, and from the experiences of others, allows the practitioner to broaden his or her perspective and gain insight to what may have previously been missed. Accordingly, Rodgers (2002) argued that reflection that is practiced in collaboration with others expands meaning making opportunities and prevents teachers from readily dismissing important insights.

There are numerous degrees to which teachers may engage in reflective thinking ranging from narrow, focused inquiry to broad philosophical questioning. At each level, teachers use reflection to make decisions that guide future practice. Valli (1997) proposed

a typology of five levels of reflection in which teachers engage. At the most basic level, technical reflection allows teachers to compare their practice to existing guidelines. Teachers view and make judgments about their behaviors in light of existing rules and norms. Teachers employing technical reflection rely on external expertise to inform their practice. Second, reflection on- and in-action provides teachers with the opportunity to look back on a recent lesson or engage in reflection during a lesson. The source of knowledge for this type of reflection is the individual teacher's unique teaching situation. Teachers reflect on the situational context of their experiences and use their own values and knowledge to inform practice. Third, deliberative reflection involves looking at a problem through multiple lenses and using a variety of knowledge sources to make judgments. Teachers engaged in deliberative reflection consider their own values and knowledge, the viewpoints of colleagues, extant research, rules, and so forth, and then make the best decision they can based on these competing sources of knowledge. Teachers may also connect their personal and professional lives by engaging in personalistic reflection. Teachers using this type of reflection consciously think about who they are as people, and how teaching impacts their personal growth. They have a high capacity for empathy and their reflection concerns the social and emotional development of students. Last, critical reflection requires teachers to examine the structures and goals of schooling in light of ethics and social justice. The aim of critical reflection is to improve quality of life. Critically reflective teachers consider conditions of schooling that contribute to social injustice and then work to change or eliminate those conditions. This typology offers teachers the opportunity to match their needs with a certain level of reflective activity. Effective teachers are able to recognize which level is

most suitable for a particular situation and successfully engage in reflective practice at that level.

Teacher education programs often emphasize reflective practice as an important quality of preservice teachers (Del Carlo, Hinkhouse, & Isbell, 2010). Similarly, the National Council for the Accreditation of Teacher Education (NCATE) includes reflection as a professional disposition for teacher candidates (http://www.ncate.org/public/unitStandardsRubrics.asp?ch=4#3). Del Carlo, Hinkhouse, and Isbell (2010) compared Valli's framework to the reflection that occurs during independent qualitative research and recommended teacher education programs use the typology in conjunction with independent research to develop reflective practitioners among their preservice teachers.

Several constraints can hinder the development and quality of reflection. First, higher levels of reflection require teachers to possess certain epistemological views about learning that allow them to question their own beliefs and practices (Ostorga, 2006; Rodgers, 2002). For example, empathy and open-mindedness are necessary for deliberative, personalistic, and critical reflection, but are not qualities that are inherent in all teachers. Therefore, many teachers may lack the capacity for reflection. Others may practice reflection only at lower levels and find the process unproductive (Davis, 2006). Other constraints include the lack of structured time for teachers to engage in reflection, the lack of opportunity to engage others in the process, and the personal risks associated with the careful scrutiny of one's beliefs and practices that reflection requires (Jay, 2003). Additionally, teaching is often perceived as the transmission of content from teacher to student. In this context, teachers are not viewed as learners, but as performers (Otteson,

2007) or "unthinking conformists" (Valli, 1997). If teachers are not valued as learners, then reflection as an act of professional learning will not be valued. Table 2 summarizes the literature on the personal qualities of effective teachers.

Table 2

Key References for The Teacher as a Person

	Caring	Fairness & Respect	Interactions with Students	Enthusiasm & Motivation	Dedication to Teaching	Reflective Practice
Walker (2008)	•					
Teven & Hanson (2004)	•					
Teven (2007)	•					
Cassidy & Bates (2005)	•	•				
Lumpkin (2007)	•					
Wentzel (1997)	•					
Ferreira (2000)	•	•				
Hayes, Ryan, & Zseller (1994)	•					
Noddings (2005)	•					
Noddings (2006)	•					
Allen, Witt, & Wheeless (2006)	•	•				
Cheesebro (2003)	•					
Teven (2001)	•					
Banfield, Richmond, McCroskey (2006)	•					
Comadena, Hunt, & Simonds (2007)	•					
Patrick & Smart (1998)		•				
Korkmaz		•				
Suldo et al. (2009)		•				
Schulte, Slate, & Onwuegbuzie (2008)		•				
Murdock, Miller, & Kohlhardt (2004)		•				
Furer & Skinner (2003)			•			
Hamre & Pianta (2005)			•			
Barney (2005)			•			
Midgley, Feldlaufer, & Eccles (1989)			•			
Beishuizen et al. (2001)			•			
Pressely, Raphael, Gallagher, & DiBella (2004)			•			
Hamre & Pianta (2001)			•			
Silver, Measelle, Armstrong, & Essex (2005)			•			

	Caring	Fairness & Respect	Interactions with Students	Enthusiasm & Motivation	Dedication to Teaching	Reflective Practice
Burchinal, Peisner-Feinberg, Pianta, & Howes (2002)			•			
Hughes, Cavelle, & Wilson (2001)			•			
Karsenti & Thibert (1995)				•		
Patrick, Hisley, Kempler, & College (2000)				•		
Good & Brophy (1987)	•	•	•	•	•	•
Long & Hoy (2005)				•		
Kunter et al. (2008)				•		
Alazzi (2007)				•		
Hudson (2007)				•		
Johnson-Leslie (2007)				•		
Walls, Nardi, von Minden, & Hoffman (2007)				•		
Dolezal, Welsh, Pressely, & Vincent (2003)				•		
Bruce & Ross (2008)					•	
Murray, Ma, & Mazur (2008)					•	
Rutherford (2009)					•	
Gareis & Grant (2008)					•	
Spalding & Wilson (2002)						•
Jay (2003)						•
Valli (1997)						•
Otteson (2007)						•
Rodgers (2002)						•
Ostorga (2006)						•
Davis (2006)						•

Classroom Management and Organization

Teacher effectiveness is inextricably connected to student outcomes. To have a significant impact on student learning, teachers must be able to efficiently and effectively manage and organize their classrooms in a manner that is both psychologically and physically conducive to learning. They must be able to foresee potential obstacles to successful teaching and learning and plan ahead to circumvent or remove those obstacles.

Effective teachers physically orient their classrooms to fit particular instructional styles. They organize rules and expectations for student behavior to minimize non-academic disruptions, and teach and re-teach those expectations as they would course content. When misbehaviors occur, they know when and how to respond to minimize disruptions and reduce reoccurrences.

Student Discipline

Teachers consistently rank lack of student discipline as a primary concern (Goodlad, 2004; Lewis, Romi, Qui, & Katz, 2005). Lack of discipline in the classroom impedes learning and leads to high levels of teacher stress. Ingersoll (2001) found that stress created by discipline problems was an important factor for teachers who chose to leave the profession. Additionally, principals perceive deficient classroom management skills to be a significant indicator of teacher ineffectiveness (Torff & Sessions, 2005).Therefore, establishing and maintaining an effective classroom environment that limits disruptions is a critical component of both the learning process and teacher retention.

Establishing and maintaining effective student discipline is a prerequisite to successful instruction. Creating such an environment, though, can be challenging because teachers who rely on overly authoritarian or overly relaxed styles may contribute to student misbehaviors (Muijs & Reynolds, 2001). Marzano and Marzano (2003) described an effective classroom manager as one who balanced their own dominance over and cooperation with students. Effective teachers use a variety of both proactive and reactive strategies to minimize misbehaviors and maximize engagement. Proactive strategies provide students with clear expectations, while reactive strategies involve effectively

responding to misbehaviors when they occur. Most teachers have behavioral expectations for their students which are stated in classroom rules and procedures; their purpose being to maintain a positive learning environment and prevent disruptions. To be effective, these rules and procedures must be clearly stated and deliberately taught to students early in the year (Cameron, Connor, & Morrison, 2005; Cameron, Connor, Morrison, & Jewkes, 2008; Muijs & Reynolds, 2001) and consistently enforced and reinforced.

Despite their best efforts to prevent disruptions caused by misbehavior, teachers do have to respond to students who do not follow rules and procedures. Effective teachers recognize when discrepancies between expectations and student behavior are large enough to require intervention (Good & Brophy, 1987; Muijs & Reynolds, 2001). In other words, not all student misbehaviors warrant the teacher's attention and subsequent loss of instructional time. Nonetheless, students expect teachers to maintain control of the classroom (Good & Brophy, 1987), and responding to misbehaviors in an appropriate manner helps teachers maintain control and helps keep students on task. For new teachers this can be especially difficult because it "requires them to acquire skills unlike any their previous schooling or experience has encompassed" (Torff & Sessions, 2005, p. 535).

Teachers respond to misbehaviors in a variety of ways. Lewis et al. (2005) synthesized potential teacher responses to misbehavior into six categories: (a) Punishing, (b) rewarding, (c) involvement in decision-making, (d) hinting, (e) discussion, and (f) aggression. An international study conducted by Lewis et al. found that students who self-reported misbehaving the most also perceived their teachers as being the most aggressive. This suggests that teacher aggression may be related to student misbehaviors. If this is the case, then the method teachers employ to handle classroom discipline may

relate to the prevention of future misbehaviors. Little and Little-Akin (2008) reported that teachers believe effective responses to isolated misbehaviors include moving the student closer to the teacher, verbally reprimanding the student, and giving the student a disapproving stare. For chronic misbehaviors, teachers reported that revoking privileges, sending students to the principal's office, and assigning detention were the most effective responses. Teachers may also decide to either ignore minor misbehaviors or redirect disruptive students by rewarding other students who model appropriate behaviors (Davis & Thomas, 1989).

Organization

Effective teachers implement a variety of techniques to organize and manage their classrooms. These techniques are manifested in class rules, informal procedures, and the physical arrangement of classrooms. The type of instruction that a teacher plans to use dictates the manner in which the classroom should be organized (Muijs & Reynolds, 2001). However, there is no one set of techniques or arrangements that guarantees good management because each classroom has its own somewhat unique combination of variables that affect its environment. Accordingly, teachers must develop an awareness of those variables and combine both proactive and reactive procedures to establish and maintain a positive and productive classroom environment (Little & Akin-Little, 2008). Attaining that environment may be enhanced by teachers who give up some control over the classroom. Empowering students to exercise choice in the classroom reduces misbehaviors and positively impacts achievement (Rock, 2005; Shogren, Faggella-Luby, Bae, & Wehmeyer, 2004).

Teachers who emphasize structure in the classroom are more effective than those who do not (Cameron et al., 2008; Stronge, et al. 2008; Zahorik, Halbach, Ehrle, & Molnar, 2003). Structure involves physically orienting the classroom for instruction, preparing and organizing materials, and framing lessons in a coherent and logical manner. Doherty and Hilberg (2007) found that elementary classrooms organized for simultaneous and diversified instruction led to greater achievement gains. These classrooms were organized in a manner the allowed both teacher- and student-directed learning. This finding is complemented by Cameron et al. (2008) who noted that teachers spending more time establishing instructional routines at the beginning of the school year did not need to exert as much effort on similar tasks later in the year. The investment in initial organizational strategies yielded significant gains in reading scores throughout the year. Achievement gains were lower among students whose teachers did not demonstrate similar organization skills. Table 3 summarizes the literature on classroom management and organization of effective teachers.

Table 3

Key References for Classroom Management and Organization

	Student Discipline	Organization
Goodlad (2004)	•	
Lewis, Romi, Qui, & Katz (2005)	•	
Ingersoll (2001)	•	
Torff & Sessions (2005)	•	
Muijs & Reynolds (2001)	•	•
Marzano & Marzano (2003)	•	
Cameron, Connor, & Morrison (2005)	•	
Cameron, Connor, Morrison, & Jewkes (2008)	•	•
Good & Brophy (1987)	•	•

	Student Discipline	Organization
Little & Little-Akin (2008)	•	•
Davis & Thomas (1989)	•	
Rock (2005)	•	•
Shogren, Faggella, Bae, & Wehmeyer (2004)	•	•
Zahorik, Halbach, Ehrle, & Molnar (2003)		•
Stronge, Ward, Tucker, & Hindman (2008)	•	•
Doherty & Hilberg (2007)		•

Planning for Instruction

Planning for instruction involves organizing content and learning activities in a manner that students will master learning goals. To accomplish this, teachers must have a thorough understanding of the content students are to learn and design instructional activities that make content accessible to students (Danielson, 1996). This invariably means that teachers must have a thorough knowledge of their students. Objectives provide a preliminary guide for planning. Marzano (2007) described objectives as learning goals, which he defined as "a statement of what students will know or be able to do" (p. 17). Establishing and following lesson objectives mitigates instructional aimlessness (Ornstein & Lasley, 2000).

Planning for instruction also involves assessment. Decisions about what to teach may be driven by objectives, but must also be linked to student learning. In this way, planning is more circular than linear because a lack of student learning necessitates revisiting and revising plans on a regular basis. Therefore, a teacher's ability to accurately measure student learning is an integral component of planning (Gareis & Grant, 2008).

Making Instruction a Priority

Because teachers have a fixed amount of time each day with students, it is important that they plan activities that make the best use of available time. Although non-academic issues become the focus of every classroom at some point, teachers must be able to limit those occasions to make instruction a priority. A recent study of 15 classrooms in one high school found that students spent nearly half of class time listening to the teacher. After listening, "waiting" was the second most common use of class time. Students observed in the study spent 65 percent of class time either listening to the teacher or waiting for something to happen (Fisher, 2009). One of the best ways to maintain a focus on instruction is for teachers to have a written plan. Written lesson plans provide teachers with an opportunity to connect learning goals to activities, allocate time to complete those activities, and remove any foreseeable obstacles to instruction. Well organized and thoughtfully constructed lesson plans help teachers become more effective leaders in the classroom and enable them to make more efficient use of class time (Panasuk, Stone, & Todd, 2002). Effective use of class time helps teachers maintain focus on specific learning goals. Lesson plans provide a blueprint for instruction that allows teachers to allocate time for academic instruction.

Although instructional time is a valuable school resource, there is little to suggest that allocated time to learn translates into actual student learning. Baker, Fabrego, Galindo, and Mishook (2007) compared student achievement scores form various countries and found that allocated instructional time did not play a significant role in explaining the variance in scores either between or within countries. A separate international study cited by Huyveart (1998, pp. 15-16) demonstrated that neither annual

hours of instruction nor length of school year could consistently explain variations in mathematics achievement. It is likely that student achievement is more a factor of instructional quality within the constraints of time limits than total time allocated for instruction. In fact, Taylor, Pearson, Clark, and Walpole (2000) investigated factors related to reading achievement in early grades and found that effective teachers were able to keep students on-task more than moderately effective and ineffective teachers. This notion was supported by Good and Brophy (1987) who acknowledged that achievement was less reliant on allocated time than on engaged time.

Pacing

Teachers must consider a variety of factors when planning instruction. The feasibility of a particular lesson largely depends on student ability and variation, content goals and mandated objectives, time and material resources. Many of these factors present the teacher with constraints that are beyond his or her immediate control. For example, there is a prescribed, fixed amount of time each day in which formal instruction may occur. Typically, hours of the day are chunked into units that are dedicated to the study of a certain subject or discipline as determined by a legislative body or school administrator. Within those chunks of time, however, teachers have traditionally enjoyed a great deal of flexibility and autonomy. That is, what they did with class time was largely up to them. Over the past decade that flexibility has begun to wane, a by-product of high-stakes testing. Teachers report a narrowing of the curriculum that focuses on tested items and breadth of content while sacrificing depth of content (Au, 2007).

Many districts require teachers to follow strict pacing guides which prescribe how much time is spent on certain lessons or concepts. Pacing guides are intended to be

instruments that teachers use to measure the amount of instructional time devoted to certain topics in light of the total content that must be taught. Properly used, pacing guides are tools to steer daily instructional decisions within the context of the entire curriculum. Used improperly, however, pacing guides inform instructional pace regardless of student ability. Student variation makes standardized pacing—where every teacher is on the same page on the same day—inherently ineffective (English, 2000). David (2008) argued that the most effective pacing guides provide curriculum guidance for teachers instead of prescriptive pacing requirements. Pacing allows teachers to see the curriculum in its entirety and avoid the trap of overemphasizing one area of content at the expense of others. Thus, pacing is an important component of instructional planning, but must be considered in conjunction with other planning concerns such as student variability.

Teacher Expectations

The beliefs that teachers have about their students' abilities can profoundly affect both teacher and student performance. In their seminal work, *Pygmalion in the Classroom*, Rosenthal and Jacobson (1968) argued that teacher expectations came from a variety of sources and had a marked influence of student outcomes. More recently, Auwarter and Aruguete (2008) used hypothetical scenarios to determine that teachers held higher expectations for wealthy students than poor students. Similarly, Warren (2002) found that teachers in poor urban schools had low expectations for student achievement. Those low expectations correlated with low efficacy for teaching. Teachers in the study believed that they had little influence over the long-term success of their students. Low teacher expectations not only negatively impact student self-esteem and

behavior (Cotton, 2001; Dee, 2007), but also achievement (Good & Brophy, 1987). The effect of low teacher expectations has been characterized as "self-fulfilling prophecy" because the condition of low achievement is related to low expectations of achievement (Rosenthal & Jacobson).

Teachers communicate expectations to students in a variety of everyday interactions. For example, teachers respond differently to student questions, provide differing wait-time for student answers, and even grade differently based on their own perceptions of student ability (Good & Brophy, 1987). Teacher expectations are powerful enough to not only affect teacher behaviors, but also student expectations and performance. Students have higher expectations for their own achievement, as well as higher actual achievement, when their teachers communicate high expectations. When teacher expectations are congruent with parental expectations, the power is intensified (Benner & Mistry, 2007).

Teacher beliefs about student ability are often based on perceptions, not actual student achievement. Rubie-Davies, Hattie, and Hamilton (2006) studied ethnically diverse students in New Zealand and found that teacher expectations about student academic ability did not correspond to actual achievement. They suggested that such persistently held beliefs about students were the result of cultural bias. Students often recognize teacher bias and conform to teacher expectations. This phenomenon can be particularly troublesome when teachers stereotype students based on personal characteristics such as race, gender, or socio-economic status. McKnown and Weinstein (2002) confirmed that students who are the targets of negative stereotyping are likely to

verify teachers' under-estimates of their ability, and that this trend increases with the age of the student.

There is an achievement gap between minority and non-minority students. This gap is most profound among high achieving students (Viadero, 2008). As students progress through the grade levels, the gap widens between the top performing white students and the top performing minority students. It appears that schooling has the effect of benefiting one group of students more than another. One explanation can be found in a recent study that shows that teachers expected more of white students and Asian American students than they did of African American and Hispanic students (McKnown & Weinstein, 2008). The same study revealed that teachers put forth greater effort when they believed that they were teaching high ability students. Rubie-Davies, Hattie, and Hamilton (2006) found that student ethnicity had a profound effect on teacher expectations. Table 4 summarizes the literature on planning.

Table 4

Key References for Planning for Instruction

	Making Instruction a Priority	Pacing	Teacher Expectations
Panasuk, Stone, & Todd (2002)	•		
Baker, Fabrego, Galindo, & Mishook (2007)	•		
Fisher (2009)	•		
Huyveart (1998)	•		
Taylor, Pearson, Clark, & Walpole (2000)	•		
Good & Brophy (1987)	•		•
Au (2007)		•	
English (2000)		•	
David (2008)		•	

	Making Instruction a Priority	Pacing	Teacher Expectations
Rosenthal & Jacobson (1968)			•
Auwarter & Arugete (2008)			•
Cotton (2001)			•
Dee (2007)			•
Benner & Mistry (2007)			•
Rubie-Davies, Hattie, & Hamilton (2006)			•
McKnown & Weinstein (2002)			•
Viadero (2008)			•

Implementing Instruction

Students arrive at school with a variety of backgrounds, interests, and abilities making a one-size-fits-all approach to instruction ineffective if not unethical. School and district mission statements often include a sentiment that all students can learn with schools being the vehicle by which learning can be achieved. If the goal of instruction is to provide an opportunity for all students to learn, then the instructional practices that teachers employ in the classroom matter (Carlson, Lee, & Schroll, 2004). In fact, Wenglinsky (2004), analyzing the results of NAEP testing, argued that the cumulative impact of teacher classroom practices has a greater effect on student achievement than any other variable. Wenglinsky also determined that teachers who received professional development in individualizing instruction and teaching special populations were more effective than those whose did not have such training, indicating that effective teachers target instruction to student needs. It is important for teachers to know their students' strengths, weaknesses, and modes of learning. The more teachers know about the way

their students receive and process information, the better they will be able to deliver instruction in a meaningful way. Therefore, employing a variety of instructional methods is an important component of effective teaching. Not only does it enable teachers to better meet the needs of students, but also enhances student motivation and decreases discipline problems (Dolezal, Welsh, Pressley, & Vincent, 2003). Not surprisingly, effective teachers employ an extensive variety of instructional strategies to meet the needs of all of their students (Stronge, Ward, Tucker, & Hindman, 2008).

Learning Styles

A major tenet of Western culture is individualism. It is not surprising then that efforts pervade to steer education toward the needs of individual students (Scott, 2010). Students enter the classroom with a variety of talents, skills, and abilities. In an effort to maximize student learning teachers often attempt to match instructional strategies to individual preferences for learning. These preferences are thought to be linked to students' innate characteristics and are often referred to as learning styles. The notion that student learning could be increased by linking instruction to learning styles gained prominence with the popularity of Gardner's (1983) theory of multiple intelligences. Gardner originally posited that human intelligence could be found within the context of seven domains: Linguistic, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and musical. This was a contradiction to the long held belief that intelligence was confined to verbal and mathematics abilities (Helding, 2009). As multiple intelligence theory gained momentum, educators increasingly began to diversify instruction in an effort to accommodate their students' strengths and increase their achievement.

Although both multiple intelligence theory and the focus on learning styles are not without critics (see Waterhouse, 2006 and Scott, 2010), there is a long list of research that aims to support the idea that students achieve at higher levels when instruction is geared toward their learning preferences. Examining twenty years of studies on learning styles, Lovelace (2005) conducted a meta-analysis and found that instruction that accommodated for learning styles produced significant effect sizes in student achievement. These findings were supported by Farkas (2003) who conducted an experimental study and determined that a multi-sensory approach to teaching the Holocaust, an emotionally charged topic, led to higher achievement, positive attitudes toward the topic, and increased empathy among middle school students. Similarly, Kaya, Dogan, Gokcek, Kilik, & Kilik (2007) employed an experimental design among middle school science students and concluded that instruction based on multiple intelligences yield significantly higher student achievement and attitudes in the experimental group.

These studies demonstrate that effective teachers should design instruction that motivates each student, connects to their real-world experience, and communicates content in such a way that they are able to comprehend based on their individual prior learning and ability. Students learn in a variety of ways. Therefore, teachers should deliver their lessons in a variety of ways. Effective teachers know their students' learning styles and provide instructional strategies to maximize student learning. Instruction based on learning styles produces significant increases in student achievement (Farkas, 2003; Lovelace, 2005; Kaya, Dogan, Gokcek, Kilik, & Kilik, 2007) and attitudes to learning (Farkas; Kaya, Dogan, Gokcek, Kilik, & Kilik). Dunn et al. (2009) extended this finding

to at-risk students, reporting that mean achievement increased nearly one standard deviation when teachers accommodated for learning styles.

Grouping

Teachers must be able to match instructional strategies to student needs. This manifests in a number of important decisions prior to implementing instruction. Among those decisions is how to group students most effectively. Whole-group instruction offers an efficient way to convey instruction to a large group of students at one time. Ornstein and Lasley (2000) commented that teachers using whole-group instruction "gear their teaching to the 'mythical' average student on the assumption that this level of presentation will meet the needs of the greatest number of students" (p. 301). The shortcoming of this approach is that its overuse may neglect the needs of many actual students in the classroom, resulting in boredom and frustration. Taylor, Pearson, Clark, and Walpole (2000) confirmed that the least effective teachers spent significantly more time in whole-class instruction than their more effective peers.

Small group instruction allows students to be more actively engaged and teachers to more accurately monitor learning (Ornstein & Lasley, 2000). A meta-analysis of related literature revealed that students who learned in small groups achieved at higher levels than those in whole-group instruction (Lou et al., 1996). The small group approach requires teachers to decide how to arrange groups for maximum learning. Often, however, teachers create groups for the purpose of classroom management. Although grouping students based on their ability has a long tradition, it has come under fire in recent decades. Oakes (cited in O'Neil, 1992), for example, described the inequity of resources and opportunities available to students between high and low ability groups.

This is confounded by the tendency for students to remain in the same ability grouping over time, a condition that Good and Brophy (1987) suggested demonstrates that the practice is ineffective. Evidence about the benefits of ability grouping appears to be mixed. A recent Massachusetts study (cited in Quillin, 2009) found that schools that tracked students by ability yielded more advanced scores on end of year state tests. Other studies, however, indicate that ability grouping may benefit some, but not all students. These studies show that low-ability students' achievement increases with exposure to heterogeneous grouping, average-ability students' achievement increases from homogeneous grouping, and high-ability students achieve at high levels regardless of grouping (Lou et al.; Saleh, Lazonder, & Jong, 2005).

Student Engagement

Akey (2006) summarized student engagement as a level of interest and participation that a student shows toward school. High levels of engagement are indicative of both student and teacher factors. For example, Akey found that high levels of prior academic competence led to high levels of student engagement, but also that high levels of teacher support for students led to high levels of engagement. Because student engagement has been linked to achievement (Akey; Guthrie, et al., 2004; Park, 2005), it is important for teachers to foster a learning environment that promotes student engagement.

Classroom activities provide an opportunity for teachers to affect the level of their students' engagement. Qualifying engagement as time on task, Connor, Jakobsons, Crowe, and Meadows (2010) found that classrooms in which teachers provided differentiated instruction yielded higher engagement. Among other strategies that

teachers use to increase engagement are group activities, projects, and hands-on activities ("Using Positive Student Engagement," 2007). These strategies tend to be more interactive than traditional teacher-centered instructional methods. Further, lessons that promote student to student interaction result in higher levels of engagement (Akey, 2006). Teacher behaviors also impact student engagement. Marzano (2007) cited teacher enthusiasm as a catalyst for engagement because students must be interested before they are engaged. Thus, teachers who intend to increase student achievement should incorporate activities and practices in their classrooms that enhance student engagement.

Making instruction relevant to real-world problems is among the most powerful instructional practices a teacher can use to increase student learning (Wenglinsky, 2004; Shroeder, Scott, Tolson, Huang, & Lee, 2007). Relevant instruction connects learning to student prior experience and learning. This connection allows students to bridge potential divides between complex or abstract concepts and real-life applications. One way to bridge that divide is to build opportunities into lessons for students to talk about themselves (Marzano, 2007). This serves the dual purpose of allowing students to relate content to their own lives and for teachers to learn something about their students. An example from higher education demonstrates that increased prior knowledge leads to increased student achievement. Hailikari (2008) studied first year chemistry students and determined that strong conceptual background knowledge led to higher achievement. Hailikari also determined that large levels of factual knowledge were not significantly related to achievement. Rather, students with high levels of conceptual knowledge—the ability to understand the interrelationship of large quantities of facts—were those with the highest achievement. Therefore, making instruction relevant to students' lives and prior

knowledge is a powerful teaching tool. Effective teachers use this strategy to build conceptual understanding of complex content.

Questioning

Questioning is an instructional strategy perhaps as old as teaching itself. Teachers use questions to ascertain student comprehension and prompt future learning. A meta-analysis of science classroom instructional strategies conducted by Shroeder, Scott, Tolson, Huang, and Lee (2007) revealed that questioning strategies were among the most effective in promoting student achievement. Questions promote thinking, and thinking is a component of learning. Teachers can promote student thinking at a variety of cognitive levels by employing appropriate questioning techniques. The key is to match questioning strategies to cognitive instructional objectives. The type of question that a teacher asks determines the type of response students provide and the depth of thinking required to form the response. For instance, yes or no questions require students to recall information without further thought or analysis. Recall questions are not entirely undesirable. However, limiting student responses to recall of information limits the opportunity for them to think about content at higher levels and can result in lower achievement. A recent study by Bitter, O'Day, Gubbins, and Socias (2009) revealed a positive association between higher level questioning and elementary students' reading achievement. This finding compliments an older study (Wenglinsky, 2000) which found that student achievement increases when teachers promote higher-order thinking skills. Similarly, Stronge, Ward, Tucker, and Hindman (2008) found that teachers considered ineffective asked questions as lower cognitive levels than their more effective peers. Despite this

relationship, teachers tend to ask lower level questions more frequently than higher level questions (Brualdi, 1998).

Student questions also promote thinking. Effective teachers train their students to formulate higher level questions to stimulate their own thinking and learning. Teachers who deliberately instruct their students how to go about forming such questions give students a marked academic advantage over other students (Cuccio-Schippira & Steiner, 2000). However, researchers confirm that teachers dominate classroom discussions and ask nearly all of the questions (Criag & Cairo, 2005; Rowe, cited in Walsh & Sattes, 2005).

Rowe (cited in Walsh & Sattes, 2005) identified periods of teacher silence in the classroom as opportunities for prolonged thinking and for students to ask questions. She labeled these periods of silence as wait time. Wait Time 1 refers to the silence following the asking of a question. Pausing at this point before calling on a student to answer allows all students to begin formulating possible answers. Wait Time 2 refers to the silence following a student's response. By resisting the urge to immediately provide feedback to student responses, teachers allow students to elaborate and possibly self-correct. Each period of silence offers students the opportunity to prolong their thinking about content. Teachers providing adequate wait times increase the number of students responding to questions, increase the length of student responses, and increase student initiated questions (Good & Brophy, 1987; Walsh & Sattes, 2005).

The manner in which teachers ask questions, the types of questions asked, and the way they respond to student answers can strongly influence student learning. Effective teachers match questioning strategies to instructional objectives, teach students to form

their own higher level questions, and provide time for students to think about and elaborate their responses. Table 5 summarizes the literature on implementing instruction.

Table 5

Key References for Implementing Instruction

	Learning Styles	Grouping	Student Engagement	Questioning
Farkas (2003)	•			
Lovelace (2005)	•			
Kaya, Dogan, Gokcek, Kilik, & Kilik (2007)	•			
Dunn et al. (2009)	•			
Ornstein & Lasley		•		
Taylor, Pearson, Clark, & Walpole (2000)		•		•
Lou et al. (1996)		•		
O'Neil (1992)		•		
Good & Brophy (1987)		•	•	•
Quillin (2009)		•		
Saleh, Lozander, & Jong (2005)		•		
Akey (2006)			•	
Guthrie, et al. (2004)			•	
Park (2005)			•	
Connor, Jakobsons, Crowe, & Meadows (2010)			•	
Marzano (2007)	•	•	•	•
Wenglinsky (2004)			•	
Shroeder, Scott, Tolson, Huang, & Lee (2007)		•	•	•
Hailikari (2008)			•	
Bitter, O'Day, Gubbins, & Socias (2009)				•
Stronge, Ward, Tucker, & Hindman (2008)			•	•
Brualdi (1998)				•
Cuccio-Shippira & Steiner (2000)				•
Craig & Cairo (2005)				•
Walsh & Sattes (2005)				•

Monitoring Student Progress

A major responsibility of classroom teachers is monitoring and evaluating student progress. Teachers must consider the intended outcomes of instruction and develop or select assessments to determine the degree to which student knowledge, skills, and dispositions reflect those outcomes (Gareis & Grant, 2008). Monitoring student progress involves using a sufficient quantity and variety of assessments to measure student progress, then making and communicating judgments about that progress. Thus, assessment and evaluation constitute two separate components of effectively monitoring student progress (Gallavan, 2009).

Assessment involves measuring student knowledge and performance against the intended outcomes of instruction. Gronlund (2006) described assessment as "a broad category that includes all of the various methods for determining the extent to which students are achieving the intended learning outcomes of instruction" (p. 3). Jacobs (2010) argued that it is "what a student produces to show knowledge and insight into content, skills, and proficiencies" (p. 21). In essence, assessments are the methods by which teachers gather information about student progress (Gareis & Grant, 2008). Therefore, it is critical that teachers have a firm grasp of what they intend for students to be able to demonstrate before instruction begins. Assessment may be formal, such as traditional tests and quizzes, or it may be informal, such as teacher observation or class discussion. Assessment may also be formative or summative. Formative assessment takes place throughout instruction and aids teachers in making instructional decisions. Summative assessment follows instruction and forms the basis for making judgments

about student learning. The aim of all assessment is to improve student learning (Gareis & Grant, 2008).

Whereas, assessment involves measuring student knowledge and performance against the intended outcomes of instruction, evaluation involves making judgments about that progress. Teachers use assessments to measure the degree to which student learning reflects intended learning outcomes. Data collected from assessments help teachers form judgments about student learning. Grades (letters, numbers, check marks, or other symbols) are assigned to student work and are intended to convey meaning about the degree to which students are achieving intended goals.

Types of Assessments

Effective teachers use a variety of assessments to gather information on student achievement and then make evaluations, or judgments, about student learning based on that information. Further, making evaluations about student learning should occur regularly throughout a lesson or unit, not simply serve as an end-cap to instruction. When assessment and evaluation only take place after instruction is completed there may not be sufficient time to correct errors in student understanding. On the other hand, ongoing assessment of student progress informs students and teachers about discrepancies in student understanding and allows teachers to refocus and improve instruction (Tomlinson, 2008).

Effective teachers plan their assessments prior to planning instruction. Describing the "Backward Design" process, Wiggins and McTighe (1998) argued that teachers first identify desired outcomes, then determine acceptable evidence of student learning, and finally plan instructional experiences. The sequential development in this model provokes

teachers to think about assessment evidence as they think about instruction. The alignment of desired outcomes, content standards, and assessment procedures helps increase the construct and content validity of assessments. Effective teachers ensure this validity to provide students with instructional experiences that are aligned to the intended learning outcomes which they are expected to master.

There are many ways that teachers can assess student learning. Too often, however, teachers rely on a limited variety of traditional methods such as tests and quizzes. Tomlinson (2008) suggested that teachers must find a proper fit between students and the method being used to assess their learning. Assessment, she posited, is a form of communication. Teachers must allow students to communicate their learning in a manner best suited to their needs. Accordingly, traditional paper and pencil tests limit the ability of all students to effectively communicate.

Stiggins and Chappuis (2008) argued that "the litmus test of an effective assessment for learning is that it informs students about their own learning" (p. 43). Traditional pencil and paper tests offer little corrective feedback to students (Hattie, 2003), and therefore, may not pass this litmus test. Guskey (2007) found that teachers and administrators believed student portfolios were the most important type of assessment tool used to measure student learning, while district, state, and national assessments ranked the lowest. Homework ranked in the middle of Guskey's assessment results perhaps because its correlation to student achievement increases with grade level (Cooper, 1989).

Homework

The use of homework as a teaching and assessment tool has a long history in American education. For the past 100 years, proponents have argued that homework is an important component of academic rigor, often linking student achievement to national security (i.e. the launch of Sputnik in 1957 and the publication of A Nation at Risk in 1983). Critics, on the other hand, have complained that too much homework is detrimental to children's health and prevents them from engaging in other activities outside of school that also provide valuable learning experiences (Vatterott, 2009). Regardless of public opinion about its importance, teachers continue to assign homework because it "extends learning opportunities beyond the confines of the school day" (Marzano, Pickering, & Pollock, 2005, p. 61).

Support for homework has been bolstered by studies showing that time spent on homework is related to academic success at school. Cooper (1989) conducted a meta-analysis and found that time spent on homework was positively associated with achievement in middle and high school. However, no significant relationship was found between homework and achievement for elementary students. Citing Cooper's work, Marzano, Pickering, and Pollock (2005) explained that effect sizes for homework quadrupled from fourth grade to tenth grade, indicating that homework is a more effective learning and assessment tool for older students. Marzano (2007) argued that time spent on homework was less important than the amount of successfully completed homework. In other words, large quantities of time spent on poorly designed assignments were less valuable than shorter amounts of time spent on well structured homework.

Critics contend that the majority of these studies either suffer from design flaws or misinterpretation. They argue that there lacks any substantial causal relationship between homework and achievement. Thus, it may simply be that students with greater ability and motivation have high achievement because of factors not associated with homework completion (Kohn, 2006). A study on student effort corroborated this notion. Trautwein and Ludke (2007) found that students put greater effort into homework when it was assigned in classes they enjoyed or in which they previously had experienced academic success. They also found that students who were goal oriented and willing to delay gratification were more likely to complete homework. Further, the effect of homework on achievement appeared to decrease when more variables were controlled. Analyzing achievement scores of more than 28,000 high school seniors, Cool and Keith (1991) found that that the effects of homework on achievement decreased when they included other variables in their analysis. However, Cooper, Robinson, and Patall (2006) analyzed 69 studies from 1987-2003 and concluded that despite design flaws, studies confirming the relationship between time spent on homework and academic achievement were robust and numerous enough to infer a causal relationship.

Examining the factors that affected homework completion among elementary students, Cooper, Jackson, Nye, and Lindsay (2001) determined that parental attitudes played a central role. Interestingly, parent involvement in completing homework had a negative relationship to achievement, possibly because parents were more likely to help struggling students. Thus, parents who communicated a belief that homework was important were likely to have children who completed homework. Once again, at the elementary level, grades were not found to be connected to homework completion.

However, because homework is consistently shown to be related to achievement in higher grades, it is important to develop study skills in younger students. Parents play a key role in the development of positive attitudes towards homework in younger children. As students get older, however, teachers play an increasingly important role in fostering those attitudes. Teachers instill positive attitudes toward homework when they design relevant assignments and provide timely feedback (Trautwein & Ludke, 2007).

Cooper, Robinson, and Patall (2006) conducted an updated meta-analysis which produced similar results to Cooper's (1989) original work. In the more recent analysis, 50 of the 69 studies revealed positive relationships between homework and achievement. Again, no relationship was found for elementary students. Cooper and his co-authors surmised that this finding was related to younger students' underdeveloped study skills and the supposition that the purpose of homework assignments were markedly different for elementary students than for older students.

To suggest that student characteristics and attitudes are the principal determinants in the effectiveness of homework would be misleading. Building on the notion that teachers influence student attitudes toward homework (Trautwein & Ludke, 2007), Vatterott (2009) argued that quality teaching matters most. How teachers use homework is a critical factor in how students perceive homework. Teachers need to connect homework assignments to classroom learning and clearly communicate the purpose of the assignment. Effective teachers make homework an integral and expected component of learning, a sentiment echoed by Painter (2003). They equip both students and parents with the tools needed for the successful completion of assignments. For example, if the purpose of an assignment is practicing a skill, then students should be familiar enough

with the skill to be able to use it independently and successfully (Marzano, 2007). For parents, teachers can provide helpful tips on facilitating an appropriate time and space for completing homework. For homework to be effective in helping students learn, teachers must communicate the scope and purpose of assignments. Students should be able to relate the process and content of the homework assignment to classroom learning. Teachers should use homework to check for understanding and provide non-punitive feedback. Providing feedback on all assigned homework communicates to students that teachers believe the assignments are important. Thus, homework is a strategy that effective teachers use to increase student achievement. Like any strategy, however, it must be employed skillfully to achieve desired results. Homework assignments should be connected to classroom practice and student ability if they are to help students achieve at higher levels.

Feedback

Feedback is a critical part of the learning process. Hattie (2003) conducted a meta-analysis involving more than 100 variables that influence student achievement and found that teacher feedback proved to be the most significant among them. Feedback provides students with an opportunity to gain awareness of the gaps between current performance or understanding and intended learning outcomes. Effective teachers give specific feedback that is connected to learning goals and provides guidance on how students should proceed to close the gap (Hattie & Timperley, 2007). Feedback should occur as close to learning as possible so that students can receive the advantages of either positive reinforcement or immediate correction. Learning activities with long delays in feedback can be frustrating and unproductive for students (Good & Brophy, 1987). Aside

from timeliness, Gareis and Grant (2008) provided four additional qualities of effective feedback. First, feedback must be truthful. It should not convey a sense of accomplishment when learning objectives were not met. Second, it must be aligned to intended learning outcomes. For this to occur, teachers must have a strong sense of what knowledge, skills, and dispositions comprise those learning outcomes. Also, feedback should be specifically related to achievement criteria. Simply providing a grade to a research paper, for example, does little to communicate achievement. Additionally, feedback should be constructive. It should arm students with insight about improving their learning and with the motivation to do so.

Teachers and students both believe that teacher feedback is important (Zacharias, 2007). However, teachers and students hold differing beliefs about the underlying purpose of feedback. One study demonstrated that teacher feedback made students aware of their mistakes, highlighted ways to make corrections, and informed them of teacher expectations. Students reported that they valued corrective feedback from teachers when it was specific and could aid them in revising their work to meet the teacher's expectations. Underlying this belief, however, was the awareness that teachers controlled grades (Zacharias, 2007). Thus, students in the study viewed feedback as a way of revising the quality and content of their work to receive higher marks. Conversely, teachers believe that grades often interfere with feedback. Lee (2007) found that teachers believed the potential benefit of providing corrective feedback on students' written work was diluted when students focused on the grade they received rather than on the specific feedback associated with it. This suggests that teachers put greater stock in the written feedback they provide to students than in the grades they assign. This is corroborated by a

study in which teachers and administrators ranked grades among the weakest indicators of student learning (Guskey, 2007). Despite this disconnect, Lee also found that teachers continued to provide the same kind of feedback on written assignments despite the fact that they did not believe it was effective.

To be effective, feedback must be related to improving a particular task or performance (Hattie & Timperley, 2007). Feedback that is general in scope has little impact on narrowing the gap between current performance and intended outcomes. Gareis and Grant (2008) argued, "If we wish to convey *instructive* meaning about our judgments, we must say something about the expectations or criteria that were met and those that were unmet" (p. 164). Interestingly, teachers often provide feedback on associated, but not central learning goals. For example, writing teachers provide more, and more specific, feedback on writing mechanics than on the development of ideas and the writing process even when the latter is the intended learning goal (Lee, 2007; Matsumara, 2002; Zacharias, 2007). Matsumara followed that student gains in writing mechanics improved as a result. This demonstrates that feedback is a powerful learning tool. It is important that teacher feedback is aligned to intended learning outcomes.

The purpose of feedback is to improve student learning (Gareis & Grant, 2008). Providing written comments on assignments is one way that teachers can assist students in improving their learning and achievement. Assigning grades is another form of feedback that communicates meaning to students about their current level of performance. The purpose of assigning grades, like other forms of feedback, is to improve student learning (Gareis & Grant, 2008; O'Connor, 2007). Therefore, the meaning that grades convey should be uniformly recognizable to all involved parties

(teachers, students, parents, administrators, and so forth) whether they are numbers, letters, check marks, or other symbols. These symbols communicate a certain judgment about student progress toward a particular intended learning outcome. However, teacher grading practices often reflect student compliance rather than student learning (Winger, 2009). Grades are often weighted so that they overemphasize the quantity of assignments completed rather than the quality of those assignments. When this occurs, grades fail to serve as a means to improve student learning because the message sent is that teachers value compliance more than learning.

Because important decisions about student placement, retention, and even college acceptance are made largely on the basis of grades, teachers must ensure that grades reflect actual learning as accurately as possible. Accordingly, teachers must ensure that assessments are aligned to intended learning outcomes. A variety of assessments should be used to measure each intended learning outcome. When grades are comprised of an adequate quantity and variety of assessments, the reliability of the message that the grade is intended to communicate increases. Grades should then be based on student achievement toward the learning outcome. Grades that incorporate other criteria, such as participation or behavior, do not accurately communicate student achievement toward learning outcomes (O'Connor, 2007). Though such criteria may be valued, feedback about them should be clearly distinguishable from feedback given about progress toward academic goals. Table 6 summarizes the literature on monitoring student progress.

Table 6

Key References for Monitoring Student Progress

	Monitoring Student Progress	Types of Assessments	Homework	Feedback
Gareis & Grant (2008)	•	•		•
Gallavan (2009)	•			
Jacobs (2010)	•			
Tomlinson (2008)		•		
Wiggins & McTighe (1998)		•		
Stiggins & Chappuis (2008)		•		
Hattie (2003)		•		•
Guskey (2007)	•	•		
Cooper (1989)			•	
Vatterott (2009)			•	
Marzano, Pickering, & Pollock (2005)			•	•
Marzano (2007)	•	•	•	
Kohn (2006)			•	
Trautwein & Ludke (2007)			•	
Cool & Keith (1991)			•	
Cooper, Robinson, & Patall (2006)			•	
Cooper, Jackson, Nye, & Lindsey (2001)			•	
Painter (2003)			•	
Hattie & Timperley (2007)				•
Good & Brophy	•	•	•	•
Zacharias (2007)				•
Lee (2007)				•
Matsumara (2002)				•
O'Connor (2007)	•			•
Winger (2009)	•	•		•

Summary

Student learning is the primary intended outcome of schooling. Teachers play a significant role in determining the degree to which students learn while they are in school. Effective teachers possess attitudes and exhibit behaviors that influence student motivation, performance, and achievement (Stronge, et al., 2008). This influence manifests in teachers' personal and professional behavior toward students, classroom management strategies, instructional planning, instructional activities, and monitoring student progress.

The literature, however, does not reveal a universal consensus among educators as to which teacher qualities or characteristics promote the greatest gains in student learning. Some researchers focus on connecting characteristics such as years of experience, education attainment (Munoz & Chang, 2008), or certification status (Darling-Hammond, 2000) to student achievement. Others emphasize qualities of teacher personality, motivation, and classroom practice (Good & Brophy, 1987; Stronge, Ward, Tucker, & Hindman, 2008). The result is that educators are often left to rely upon their own perceptions to inform instructional practice. These perceptions grow out of belief systems that require only personal and not empirical validation (Snider & Roehl, 2007). The idea that teachers and administrators may base many important decisions that affect student learning on their own limited experiences can have enormous consequences for student learning.

The purpose of the current study was to determine which teacher qualities administrators and teachers perceive as having the greatest impact on student achievement, and if perceptions are unduly prejudiced by the following demographic

factors: (a) region, (b) urbanicity, (c) level of school, (d) years of experience, and (e) gender. The literature demonstrates that educators' perceptions play a role in the way that they carry out their professional duties (see, Hardre & Sullivan, 2009; Roehrig, et al., 2009; Tsai, 2007). If perceptions are largely based on individual experiences, then it would be expected that educators from various settings would form different beliefs about teaching and learning, about students, and about how they should perform their roles as educators. This study adds to the existing literature by determining whether or not educators' perceptions align with one another across demographic factors or if they are significantly affected by those factors.

Chapter 3: Methodology

Effective teachers possess many abilities that aid them in promoting student learning. Stronge's (2007) framework provides a synthesis of research-based qualities that effective teachers employ to affect student learning. The purpose of this study was to determine which of those qualities teachers and administrators perceived as having the greatest impact on student achievement, and to determine whether those perceptions varied between administrators and teachers, and across demographic factors. To achieve this purpose, a quantitative study was employed using a web-based survey as the data collection instrument. The survey was designed around Stronge's framework for effective teacher qualities. Participants ranked the qualities and indicators of quality identified by Stronge according to their knowledge and experience.

Research Questions

1. Which qualities of effective teachers do administrators and teachers perceive as having the greatest impact on student achievement?
2. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement between administrators and teachers?
3. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?
4. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among teachers (a) in different regions of

the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?

5. Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?

Sample

The target population for this study was K-12 teachers and building administrators in public schools in the United States. Systematic stratified random sampling was used to identify a national accessible equal-size sample of 1,000 teachers and 1,000 administrators to participate in the study. Systematic random sampling is an efficient means of selecting participants from a large accessible population. Stratified random sampling ensured that subgroups that are important to the study—in this case, teachers and administrators divided by elementary, middle, and high school levels—were represented in the sample (Gall, Gall, & Borg, 2007).

The survey sample was accessed using the services of Market Data Retrieval (MDR), a company that specializes in education marketing. MDR maintains lists of email addresses for more than 100,000 school principals (including assistant principals) and over one million K-12 teachers in the United States (http://www.schooldata.com/pdfs/MDR_Ed_catalog.pdf). MDR created a customized list composed of 1,039 randomly selected public school teachers in the United States. The list was stratified so that elementary, middle, and high school teachers each represented approximately one-third of the sample. A second list included 1,050 randomly selected

public school administrators in the United States. This list was also stratified so that elementary, middle, and high school administrators were similarly represented.

To create a list of teachers and a list of administrators MDR systematically selected participants from the total number of email addresses available in their databases. MDR maintains 1,117,956 email addresses for elementary teachers; 417,099 for middle school teachers; and 648,373 for high school teachers. A list of 1,039 total teachers equally represented by all three levels was created by dividing the number in each group by 333. For example, every 3,357th elementary teacher on the list was selected to receive an email inviting them to participate in the study. In addition, every 1,252nd middle school teacher and every 1,947th high school teacher received and email inviting them to participate (R. Butz, personal communication, May 19, 2010).

MDR's databases contain the email addresses of 43,976 elementary principals and assistant principals; 19,205 middle school principals and assistant principals; and 26,947 middle school principals and assistant principals. Again, a list of 1,050 administrators equally represented by all three levels of schools was created by dividing the total number of each group by 333. Therefore, every 132nd elementary administrator on the list, every 57th middle school administrator, and every 81st high school administrator was selected to receive an email inviting them to participate in the study (R. Butz, personal communication, May 19, 2010).

Instrumentation

A survey was developed for this study based on Stronge's (2007) framework for qualities of effective teachers. The survey instrument contained six force choice items and one open-ended item. The survey was divided into four sections. The first section

required participants to rank the indicators of the five general qualities of effective teachers examined in the study: (a) *Planning for Instruction*, (b) *Classroom Management and Organization*, (c) *Implementing Instruction*, (d) *Monitoring Student Progress*, and (e) *The Teacher as a Person*. The second section required the ranking of the five general qualities themselves. In the third section, participants were provided an opportunity to identify any additional qualities that they believed impact student achievement that were not presented in the survey. In the fourth section, participants answered six demographic questions related to the research questions. Demographic questions pertained to the participant's (a) current position, (b) years experience in education, (c) gender, (d) urbanicity of the school in which they work, (e) state in the which their school is located, and (f) the type of school in which they work.

Guskey (2007) identified three advantages to using the rank order feature. First, it forces participants to compare the qualities and indicators against one another. That means that participants must evaluate the validity of each item against similar items. Second, rank ordering increases the variation of responses because participants must make choices as to which items are more important than other, similar items. Guskey argued that a third reason for using the rank order feature is that, for reasons stated above, it has been found to be more valid and reliable than using ratings. The third part of the survey contained one open-ended item that asks participants to write in and describe any additional qualities or indicators of quality that they believe are not represented in the survey.

The survey instrument was field tested on two occasions. The first test required participants to rate each of the qualities and indicators of quality on a seven point likert-

type rating scale. Twenty administrators from two states took part in this field test. Results from the first test indicated that participants viewed all of the qualities and indicators as similarly important. Mean scores ranged from 6.03 for the lowest rated quality to 6.19 for the highest rated quality (Williams, 2008) representing little variation in scores and indicating that participants viewed all of the qualities as important. The second field test required participants to rank order the qualities and indicators of quality against each other. Results from the second test yielded greater variability in scores, and thus were more easily analyzable. However, caution must used when interpreting rank order studies because rank order data are ordinal and not to scale. For example, the perceived separation between a first and second ranked response may or may not be equal to the perceived separation between a second and third ranked response. Therefore, all of the ranked items may be perceived by participants as important (as evidenced by the first field test) even though one will necessarily be ranked lower than all of the others.

Additionally, participants in the field tests critiqued the language and format of the surveys. Most commonly, participants commented that some of the items were difficult to rank against other items because they were perceived as either similar or related constructs. This was reported most often in the *Teaches as a Person* section of the survey. *Teacher as a Person* was also viewed as the most difficult category to rank and was moved to the end of the survey. Other comments from the field tests indicated that participants found the descriptors connected to each indicator of quality helpful in determining the meaning of the indicator. These descriptors were either taken verbatim from Stronge's framework or were a synthesis of related literature. The final version of the survey is presented in Appendix A.

Table 7

Table of Specifications for Survey Items

Qualities of Effective Teachers (Stronge, 2007)	Descriptors of Qualities on Survey Instrument
Prerequisites for Effective Teaching • Verbal Ability..... • Knowledge of Teaching and Learning .... • Certification Status ..... • Content Knowledge ..... • Teaching Experience.....	*These qualities and indicators of quality are not addressed in the current study*
Teacher as a Person	
• Caring	"Demonstrates concern for the physical and emotional well-being of students."
• Fairness	"Treats students with fairness."
• Respect	"Treats all students with respect."
• Interactions with Students	"Interacts and fosters positive relationships with students."
• Enthusiasm & Motivation.....	(a) "Displays an excitement for teaching and learning." (b) "Displays an excitement for subject area content."
• Dedication to Teaching	"Demonstrates an on-going commitment to the profession."
• Reflective Practice.....	"Uses reflection to improve his or her own teaching practice."
Classroom Management & Organization	
• Classroom Management	(a) "Maintains order and routines." (b) "Maintains a physically and emotionally safe environment for students."
• Organization	"Prepares materials ahead of time and has them ready to use."
• Discipline of Students	"Reinforces expectations for positive behavior and responds to misbehaviors promptly."
Planning for Instruction	
• Importance of Instruction.....	"Limits interruptions and focuses classroom time on teaching and learning."
• Time Allocation	"Maintains an appropriate pacing of instruction."

• Teachers' Expectations	"Establishes and communicates high expectations for student achievement."
• Instructional Plans	(a) "Links instruction to objectives." (b) "Links instruction to students' real-life situations." (c) "Considers student learning styles and plans instruction accordingly."
Implementing Instruction	
• Instructional Strategies.....	"Employs a variety of techniques and instructional strategies to accomplish learning goals."
• Content & Expectations.....	"Provides clear examples and offers guided practice."
• Complexity	"Focuses instruction on higher-order skills rather than memorization of information."
• Questioning.....	"Uses a variety of questioning techniques."
• Student Engagement.....	"Designs lessons to actively engage students in the learning process."
Monitoring Student Progress	
• Homework	"Uses homework to augment student learning."
• Monitoring Student Progress	(a) "Gives clear, specific, and timely feedback." (b) "Selects appropriate assessment tools and strategies to evaluate student progress." (c) "Re-teaches when students do not achieve mastery."
• Responding to Student Needs and Abilities	"Uses student achievement data to make instructional decisions."

Procedures

Potential participants received an email from the researcher informing them of their selection to participate in the study. The email contained a link to an online survey in which participants rank ordered the qualities of effective teachers as they perceived them to affect student achievement. A follow up email was sent within one week of the

initial contact as a reminder for those who had not yet completed the survey. A second follow up email was sent approximately two weeks after the initial email. In all, participants received three emails informing them of the study and providing a link for their participation. Studying the methods and response rates of online surveys, Mitra, Jain-Shukla, Robins, Champion, and Durant (2008) found that as much as 91% of data from online surveys is collected within the first 13 days after initial contact is made with participants. This survey contained a feature to allow participants to save their responses and return at a later date to complete the unfinished items. The survey remained open for approximately one month from the time of initial contact with participants.

Data Analysis

Results from the survey were analyzed using descriptive statistics, Spearman rank-order coefficient, analysis of variance (ANOVA), and content analysis. Means were calculated and ranked for each quality and indicator of quality in the survey. Mean rankings were then subjected to an ANOVA test for each demographic variable in the study to determine significance within groups. For example, to determine if the level of school in which teachers worked significantly impacted perceptions, ANOVA was run for mean rankings provided by teachers using level of school (elementary, middle, and high school) as the independent variable. ANOVAs compared between-group variance with within-group variance (Gall, Gall, & Borg, 2007). A resulting significant F statistic meant that between-group variance was significantly greater than variance by chance (Kiess & Green, 2010). If a significant F statistic was obtained in any of the ANOVA tests, then post-hoc analysis was run using Tukey's HSD test. Whereas, ANOVA results indicate that there may be significant differences between any groups or variables,

Tukey's test is a follow up procedure that specifies where the significant differences are found. If ANOVA procedures indicated no significant F ratios, then no post-hoc analysis was necessary. The Spearman rank-order coefficient was used to determine the directionality and strength of the relationship between administrator and teacher rankings.

Finally, the last research question concerned additional qualities that participants believed were not addressed in the survey. An open-ended question on the survey provided participants the opportunity to remark on any additional teacher qualities that they believed impact student achievement. Content analysis was used to discover emergent patterns and themes from participant responses. Content analysis involves reducing and organizing data in an effort to make sense out of a large volume of data (Patton, 2002).The researcher initially coded responses to correspond with the existing framework of the survey. It was possible that participants would identify qualities that were already present in the survey, but would identify them with an alternate name. Qualities that did not fit into the categorical framework of the survey and were reported by multiple participants were considered additional qualities. These additional qualities are presented in Appendix E and Appendix F.

Table 8

Data Analysis

Research Questions	**Data Sources**	**Data Analysis Procedures**
1. Which qualities of effective teachers do administrators and teachers perceive to have the greatest impact on student achievement?	Teacher and Administrator Perception Survey	Descriptive statistics
2. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student	Teacher and Administrator Perception Survey	Spearman Rank-Order Coefficient, ANOVA

achievement between administrators and teachers?		
3. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?	Teacher and Administrator Perception Survey	Descriptive statistics, ANOVA
5. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among teachers (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; with different years of experience; and (e) of different gender?	Teacher and Administrator Perception Survey	Descriptive statistics, ANOVA
8. Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?	Teacher and Administrator Perception Survey	Content Analysis

Ethical Considerations

Each participant's privacy and psychological safety was protected throughout the study. Participants received an introductory email describing the study and the ethical safeguards that were provided. Participants were free to withdraw from the study at any time. The researcher received approval for the study from the Human Subjects Review Committee at The College of William and Mary.

Chapter 4 – Analysis of Results

This study sought to ascertain the perceptions that K-12 administrators and teachers have about qualities of effective teachers. Specifically, the researcher sought to determine which research-based qualities of effective teachers that administrators and teachers perceived as having the greatest impact on student achievement and if certain demographic characteristics affected those perceptions. Data were collected using a survey created by the researcher (see Appendix A) based on Stronge's (2007) framework for the qualities of effective teachers. A national stratified random sample of 170 U.S. educators ranked five qualities of effective teachers in the order they believed that those qualities to impact student achievement. Participants also ranked teacher behaviors and attitudes that serve as indicators of those qualities in similar fashion. The survey was organized into four parts. In the first part, participants ranked the indicators of quality in each of five domains: (a) *Planning for Instruction*, (b) *Classroom Management and Organization*, (c) *Implementing Instruction*, (d) *Monitoring Student Progress*, and (e) *The Teacher as a Person*. Participants then ranked the domains themselves. In the third part of the survey, participants were provided an opportunity to add any additional qualities or indicators of quality that they believed were not represented in the survey. Finally, demographic information was solicited in the final six items of the survey. That information included: (a) job title; (b) gender; (c) level of school in which the participant worked (elementary, middle, or high); (d) number of years experience in education; (e) whether the participant's current school was located in a rural, suburban, or urban setting; and (f) the state in which the participant worked.

Research question one was addressed using descriptive statistics. Mean rankings were calculated using Statistical Package for Social Science (SPSS) software. Mean ranks were then themselves rank ordered to determine which qualities and indicators of quality administrators and teachers perceived as having the greatest impact on student achievement. To answer research question two, the Spearman rank-order correlation coefficient was calculated using the formula provided in Kiess and Green (2010). This statistic demonstrated the degree to which administrator and teacher rankings of specific qualities correlated. ANOVA was also used to determine the statistical differences in means between administrator and teacher ranks. Research questions three and four were answered running a one-way ANOVA on SPSS for each quality. For each ANOVA, one of the demographic factors served as the independent variable. Finally, research question five was addressed by coding and categorizing open-response data provided by participants. Themes were examined to determine if additional qualities were presented by participants.

Research Questions

1. Which qualities of effective teachers do administrators and teachers perceive as having the greatest impact on student achievement?
2. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement between administrators and teachers?
3. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in

elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?

4. Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among teachers (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?
5. Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?

The Study

Return Rate

Data for the study were collected in May and June 2010. Three emails were sent to a stratified equal-size random sample of K-12 teachers and administrators. The researcher created an online survey and imbedded a link to the survey in an email message to prospective participants. MDR, an educational marketing company, was hired to create an email list of K-12 teachers and administrators evenly stratified by elementary, middle, and high school levels and to deploy those emails. The list contained 1,039 teacher emails (346 elementary, 347 middle, and 346 high) and 1,050 administrator emails (351 elementary, 346 middle, and 353 high) for a total of 2,089 potential participants. Table 10 shows the response rate of subgroups.

Three emails were sent to participants informing them of the study and requesting their participation. Each email contained an introductory message (see Appendix B), a

consent agreement (see Appendix C), and a link to the online survey. The initial email was sent on May 20, 2010. MDR records indicate that 304 people opened this email (14.62%), 113 continued to open the link to the survey (5.44%), and 69 completed the survey (3.30%). A second email was sent as a reminder on May 26, 2010 and was delivered to the same sample. From this deployment, 251 people opened the email (12.02%), 97 continued to open the link to the survey (4.64%), and 53 completed the survey (2.54%). A final reminder message was sent on June 2, 2010 and resulted in 222 people opening the email (10.63%), 92 continuing to open the link to the survey (4.40%), and 55 completing the survey (2.63%). In sum, 177 out of 2,087 K-12 teachers and administrators completed the survey for a total response rate of 8.48%.

Consistent with research on online surveys (see Mitra, Jain-Shukla, Robins, Champion, and Durant, 2008), the rate of participation dropped as the amount of time after email notification about the study increased. In this study, three email notifications were sent. Within three hours of the first email, 43 surveys were completed (24.29% of total responses). Within twenty-four hours of the first message deployment, an additional 17 surveys had been completed for a total of 60 (33.90% of total responses). Only nine additional surveys were completed within this initial 24 hour period and the deployment of the second notification five days later. Response rates for the second and third deployment were similar to the first with most responses arriving within a few hours of the message deployment. As the amount of time increased after each deployment, the number of responses drastically dropped. Table 9 shows the response rates per email deployment.

Table 9

Response Rates per Email Notification

Elapsed Time after Email Deployment	Email sent May 20 Number of Completed Surveys	Email sent May 26 Number of Completed Surveys	Email sent June 2 Number of Completed Surveys
3 hours	43	22	29
24 hours	17	13	13
4 days	8	13	5
6 days	1	5	4
16 Days	N/A	N/A	4

Table 10

Homogeneity of Responses

Level and Job of Participants	Invited to Participate	Number Participating	Percent Participating
Elementary Administrators	351	26	7.41%
Middle School Administrators	346	42	12.14%
High School Administrators	353	32	9.07%
Elementary Teachers	346	27	7.80%
Middle School Teachers	347	26	7.49%
High School Teachers	346	20	5.78%

Demographic Information

The *Teacher and Administrator Perceptions of the Qualities of Effective Teachers* survey contained six demographic items. Those items requested information on participants' job, gender, years of experience, level of school in which they worked, urbanicity of the school in which they worked, and the state in which they worked.

Job and level of school. One hundred administrators and 77 teachers completed the survey for a response rate of 9.52% and 7.41% respectively. Although 177 surveys were completed, seven had to be removed from analysis because either the participant's job or level of school was indeterminable based on the information he or she provided in the survey. Therefore, the final number of usable surveys in the study was 170. Table 11 shows the number of usable completed surveys by participant's job title and level of school.

Table 11

Level of School

	Total Sample Completing Survey N=170	Percent of Total Group	**Administrators N=100**	Percent of Total Admin. Group	**Teachers N=70**	Percent of Teacher Group
Elementary	**53**	31.17%	**26**	26%	**27**	38.57%
Middle	**65**	38.24%	**42**	42%	**23**	32.86%
High	**52**	30.59%	**32**	32%	**20**	28.57%

Gender. Out of 170 completed surveys, 104 were completed by females and 66 by males. When disaggregated by job, the 100 administrators were evenly divided by gender, 50 females and 50 males. This split is representative of the to the total population of K-12 public school administrators of whom 54% were female and 46% male in 2007-2008 (the most recent year for which data are available) according to the U.S. Department of Education's National Center for Education Statistics (NCES) website. Teachers completing the survey were represented by 54 females (77%) and 16 males (23%). This breakdown is also representative of the target population of U.S. public school teachers. NCES data from 2007-2008 indicated that 75% of U.S. teachers were

female and 25% male (http://nces.ed.gov/programs/coe/2010/section4/indicator27.asp). Table 12 illustrates the breakdown of participants' gender by total sample, administrators, and teachers.

Table 12

Gender

	Total Sample N=170	Percent of Total Group	**Administrators N=100**	Percent of Admin. Group	**Teachers N=70**	Percent of Teacher Group
Female	**104**	61.18%	**50**	50%	**54**	77.14%
Male	**66**	38.82%	**50**	50%	**16**	22.86%

Years of Experience. Participants were asked to select a range of years from a drop-down menu on the survey that most accurately reflected the total number of years of experience they had worked in education. The choices were: (a) 1-5 years, (b) 6-10 years, (c) 11-15 years, (d) 16-20 years, and (e) 20+ years. Nearly half of all participants in the study reported having 20 or more total years of experience in education. Ten participants reported having 5 or fewer years of experience, all of whom were teachers; 18 reported 6-10 years of experience, eight administrators and 10 teachers; 35 reported having 11-15 years of experience, 24 administrators and 11 teachers; 26 reported having 16-20 years of experience, 17 administrators and nine teachers; and 81 reported having 20 or more years of experience, 51 administrators and 30 teachers. Table 13 shows respondents' reported years of experience by job.

Table 13

Years Experience

	Total Sample N=170	Percent of Total Group	**Administrators N=100**	Percent of Admin. Group	**Teachers N=70**	Percent of Teacher Group
1-5 Years	**10**	5.88%	**0**	--	**10**	14.29%
6-10 Years	**18**	10.59%	**8**	8%	**10**	14.29%
11-15 Years	**35**	20.59%	**24**	24%	**11**	15.71%
16-20 Years	**26**	15.29%	**17**	17%	**9**	12.86%
20+ Years	**81**	47.65%	**51**	51%	**30**	42.86%

Urbanicity of School. Participants were asked to characterize the setting of the school in which they worked as rural, suburban, or urban. Table 14 reveals that 58 (34.12%) of the total group of respondents (administrators and teachers) reported the setting of their school as rural, 66 (38.82%) reported the setting as suburban, and 46 (27.06%) reported the setting as urban.

Table 14

Urbanicity of School

	Total Sample N=170	Percent of Total Group	**Administrators N=100**	Percent of Admin. Group	**Teachers N=70**	Percent of Teacher Group
Rural	**58**	34.12%	**33**	33%	**25**	35.72%
Suburban	**66**	38.82%	**40**	40%	**26**	37.14%
Urban	**46**	27.06%	**27**	27%	**19**	27.14%

Region. Region was determined by asking participants in which state they currently worked. States were then grouped into regions based on the four major regions of the United States identified by the U.S. Census Bureau (http://www.census.gov/geo/www/us_regdiv.pdf). The Census Bureau identifies Region 1 as "Northeast" and consists of nine states; Region 2 is identified as "Midwest" and

consists of 12 states; Region 3 is identified as "South" and consists of 16 states; Region 4 is identified as "West" as consists of 13 states. Appendix D contains a complete listing of states divided by region. The results illustrated in Table 15 demonstrate that approximately half of all participants in the study worked in one of the 16 states comprising the South. One quarter of participants worked in the 12 states of the Midwest and the remaining one quarter of participants worked in either the Northeast or West.

Table 15

Region of the United States

	Total Sample N=170	Percent of Total Group	**Administrators N=100**	Percent of Admin. Group	**Teachers N=70**	Percent of Teacher Group
Northeast	**18**	10.59%	**13**	13%	**5**	7.14%
Midwest	**44**	25.88%	**27**	27%	**17**	24.29%
South	**84**	49.41%	**45**	45%	**39**	55.71%
West	**24**	14.12%	**15**	15%	**9**	12.56%

Findings for the Research Questions

Research Questions One

Which qualities of effective teachers do administrators and teachers perceive as having the greatest impact on student achievement?

Stronge's (2007) meta-review of the qualities of effective teachers revealed a broad array of actions and dispositions that characterize what teachers do in the classroom that affect student achievement. These actions and dispositions are organized into five general qualities: (a) *The Teacher as a Person*, (b) *Classroom Management and Organization*, (c) *Planning for Instruction*, (d) *Implementing Instruction*, and (e) *Monitoring Student Progress*. K-12 School administrators and teachers were asked to rank these general qualities from 1-5 in the order in which they impact student

achievement; a rank of 1 represented the most important quality and a rank of 5 represented the least important. Descriptive statistics were calculated for each quality, including mean, median, and standard deviation. Mean rankings displayed in Table 16 reveal that both administrators and teachers perceived *Planning for Instruction* to be the most important teacher quality that impacts student achievement and *Monitoring Student Progress* the least important. Interestingly, participants in the study overwhelmingly ranked The Teacher as a Person as either the most important or the least important quality. Few administrators or teachers ranked it second, third, or fourth. In fact, more administrators gave *The Teacher as a Person* a ranking of 1 than any other individual quality. However, nearly twice as many gave it a rank of 5, bringing the mean rank down to 3.44, making it the fourth most important quality out of five. Table 16 provides descriptive statistics for administrator and teacher rankings of the general qualities of effective teachers. Included in the table are the frequency that each quality was ranked first, second, third, fourth, or fifth; the mean for each quality; and the mean ranking of each quality.

Table 16

Rankings of Qualities of Effective Teachers

	Frequency of Administrator Ordered Responses N=100	Administrator Median Rank	Administrator Mean	Administrator Standard Deviation	Administrator Mean Rank	Frequency of Teacher Ordered Responses N=70	Teacher Median Rank	Teacher Mean	Teacher Standard Deviation	Teacher Mean Rank
Planning for Instruction	#1 = 26 #2 = 28 #3 = 16 #4 = 21 #5 = 9	2.0	2.59	1.32	1	#1 = 35 #2 = 18 #3 = 7 #4 = 5 #5 = 5	1.5	1.96	1.24	1
Implementing Instruction	#1 = 19 #2 = 25 #3 = 32 #4 = 23 #5 = 1	3.0	2.62	1.07	2	#1 = 6 #2 = 15 #3 = 23 #4 = 21 #5 = 5	3.0	3.06	1.08	3
Classroom Management and Organization	#1 = 21 #2 = 27 #3 = 23 #4 = 19 #5 = 10	3.0	2.70	1.28	3	#1 = 10 #2 = 28 #3 = 18 #4 = 7 #5 = 7	2.0	2.61	1.16	2
The Teacher as a Person	#1 = 30 #2 = 8 #3 = 3 #4 = 6 #5 = 53	5.0	3.44	1.82	4	#1 = 17 #2 = 3 #3 = 4 #4 = 11 #5 =35	4.5	3.63	1.68	4
Monitoring Student Progress	#1 = 4 #2 = 12 #3 = 26 #4 = 31 #5 = 27	4.0	3.65	1.23	5	#1 = 2 #2 = 6 #3 = 18 #4 = 26 #5 =18	4.0	3.74	1.03	5

Planning for Instruction. Administrators and teachers both ranked *Planning for Instruction* the most important teacher quality that impacts student achievement. Six indicators of quality comprised this general quality. Each indicator was coded for statistical analysis by the researcher. Table 17 illustrates those indicators.

Table 17

Indicators of Quality: Planning for Instruction

Code	Indicator	Description of Indicator
Plan 1	Time Allocation	Limits interruptions and focuses classroom time on teaching and learning.
Plan 2	High Expectations	Establishes and communicates high expectations for student achievement.
Plan 3	Pacing	Maintains appropriate pacing of instruction.
Plan 4	Learning Styles	Considers student learning styles and plans instruction accordingly.
Plan 5	Relevance	Links instruction to students' real-life situations.
Plan 6	Linking Instruction to Objectives	Links instruction to objectives.

Participants were provided the description of each indicator and asked to rank them in the order they believed that they impact student achievement. Findings are displayed in Table 18.

Table 18

Rankings and Descriptive Statistics for Indicators of Planning for Instruction

Administrators					Teachers			
Mean Rank	Median	Mean	Std. Deviation	Indicator	Mean Rank	Mean	Mean	Std. Deviation
1	2.0	2.30	1.38	High Expectations	1	2.0	2.73	1.76
2	3.0	2.86	1.39	Learning Styles	3	3.0	3.00	1.59
3	3.0	3.55	1.88	Time Allocation	2	3.0	2.79	1.69
4	3.0	3.57	1.68	Linking to Instruction to Objectives	6	5.0	4.43	1.50
5	4.0	3.93	1.65	Relevance	4	4.0	3.97	1.43
6	5.0	4.68	1.15	Pacing	5	4.0	4.09	1.50

The results in Table 18 indicate that both administrators and teachers perceived "Establishing and communicating high expectations" as the most important component of *Planning for Instruction* with means of 2.30 and 2.73 respectively. Administrator rankings revealed the following rank order for indicators of Planning for Instruction: (1) High expectations, (2) learning styles, (3) time allocation, (4) linking instruction to objectives, (5) relevance, and (6) pacing. Mean rankings for teachers indicate the following rank order for the indicators of *Planning for Instruction*: (1) High expectations, (2) time allocation, (3) learning styles, (4) relevance, (5) pacing, and (6) linking instruction to objectives. These findings indicate that

Implementing Instruction. Administrators ranked *Implementing Instruction* as the second, and teachers the third, most important teacher quality that impacts student achievement. Six indicators characterize this quality and they were also ranked against one another. Table 19 describes those indicators.

Table 19

Indicators of Quality: Implementing Instruction

Code	Indicator	Description of Indicator
Instr1	Variety	Employs a variety of techniques and instructional strategies to accomplish learning goals.
Instr2	Engagement	Designs lessons to actively engage students in the learning process.
Instr3	Questioning	Uses a variety of questioning techniques.
Instr4	Guided Practice	Provides clear examples and offers guided practice.
Instr5	Grouping	Uses effective grouping strategies in the classroom.
Instr6	Higher-Order Skills	Focuses instruction on higher-order skills rather than memorization of information.

Participants ranked these indicators against one another in the order they perceive them to impact student achievement. Findings are displayed in Table 20.

Table 20

Rankings and Descriptive Statistics for Indicators of Implementing Instruction

Administrators					Teachers			
Mean Rank	Median	Mean	Std. Deviation	Indicator	Mean Rank	Median	Mean	Std. Deviation
1	1.0	1.79	1.23	Engagement	1	2.0	2.31	1.39
2	3.0	2.84	1.43	Variety	2	2.0	2.37	1.46
3	3.0	2.98	1.57	Higher-Order Skills	4	4.0	3.63	1.63
4	4.0	4.14	1.36	Questioning	5	4.0	4.17	1.33
5	4.0	4.17	1.29	Guided Practice	3	4.0	3.39	1.24
6	5.0	4.93	1.34	Grouping	6	6.0	5.13	1.36

Table 20 demonstrates that administrators and teachers in the study both perceived that "Designing lessons to actively engage students in the learning process" is the most important component of implementing instruction. Both groups also ranked "employing a variety of techniques and instructional strategies to accomplish learning goals" as the second most important indicator of effectively implementing instruction. Mean rankings reveal that administrators rank ordered the indicators for *Implementing Instruction* as follows: (1) Engagement, (2) variety, (3) high-order skills, (4) questioning, (5) guided practice, and (6) grouping. Teachers in the study rank ordered the indicators as: (1)

Engagement, (2) variety, (3) guided practice, (4) higher-order skills, (5) questioning, and (6) grouping.

Classroom Management and Organization. Mean rankings demonstrate that administrators perceived *Classroom Management and Organization* to be the third most important quality of effective teachers, whereas, teachers perceive it to be second. Table 21 illustrates the indicators of quality for *Classroom Management and Organization* and a description of each quality.

Table 21

Indicators of Quality: Classroom Management and Organization

Code	Indicator	Description of Indicator
CRM1	Order	Maintains order and routines.
CRM2	Preparation	Prepares materials ahead of time and has them ready to use.
CRM3	Safe Environment	Maintains a physically and emotionally safe environment for students.
CRM4	Discipline	Reinforces positive expectations for student behavior and responds to misbehaviors promptly.

Table 22

Rankings and Descriptive Statistics for Indicators of Classroom Management and Organization

Administrators				Indicator	Teachers			
Mean Rank	Median	Mean	Std. Deviation		Mean Rank	Median	Mean	Std. Deviation
1	2.0	2.02	1.15	Safe Environment	1	2.0	2.20	1.10
2	2.0	2.30	1.05	Discipline	3	3.0	2.63	1.12
3	3.0	2.76	1.06	Preparation	2	3.0	2.47	1.16
4	3.0	2.84	1.03	Order	4	3.0	2.70	1.05

The findings displayed in Table 22 suggest that administrators and teachers both believe that "Maintaining a physically and emotionally safe environment for students" is the most important component of classroom management and organization. Administrators viewed "Reinforcing positive expectations for student behavior and responding to misbehaviors promptly" as the second most important component. Teacher viewed this indicator as third, preferring the indicator "Preparing materials ahead of time and having them ready to use" as second. Both administrators and teachers viewed "Maintaining order and routines" as the least important component of classroom management and organization.

The Teacher as a Person. The Teacher as a Person was ranked fourth out of the five general qualities that impact student achievement by both administrators and teachers. This quality is comprised of eight indicators that characterize both personal and professional attributes of teachers. Table 23 describes those indicators.

Table 23

Indicators of Quality: The Teacher as a Person

Code	Indicator	Description of Indicator
PERSON1	Concern	Demonstrates concern for the physical and emotional well-being of students.
PERSON2	Fairness	Treats all students with fairness.
PERSON3	Respect	Treats all students with respect.
PERSON4	Interaction	Interacts and fosters positive relationships with students.
PERSON5	Content Knowledge	Displays and excitement for subject area content.
PERSON6	Teaching	Displays an excitement for teaching and learning.
PERSON7	Commitment	Demonstrates an on-going commitment to the profession.
PERSON8	Reflection	Uses reflection to improve his or her own teaching practice.

Participants ranked these eight indicators against one another in the order that they perceive them to affect student achievement. Findings are displayed in Table 24.

Table 24

Rankings and Descriptive Statistics for The Teacher as a Person

Administrators				Indicator	Teachers			
Mean Rank	Median	Mean	Std. Deviation		Mean Rank	Median	Mean	Std. Deviation
1	3.0	3.26	2.00	Interaction	2	4.0	3.94	1.97
2	3.0	3.43	1.67	Respect	1	3.0	3.54	2.08
3	4.0	3.74	2.25	Concern	3	4.0	3.97	2.09
4	4.0	4.01	2.11	Teaching	4	4.0	4.14	1.94
5	5.0	4.63	1.92	Fairness	5	5.0	4.33	2.01
6	5.0	4.76	2.20	Content Knowledge	6	5.0	4.56	2.25
7	6.0	5.22	2.31	Reflection	7	6.0	5.43	2.43
8	7.0	6.67	1.97	Commitment	8	7.0	6.09	2.48

Findings in Table 24 show that administrators ranked "Interacting and fostering positive relationships with students" as the most important indicator, while teachers ranked "Treating all students with respect" as the most important indicator of the quality *The Teacher as a Person.* These rankings were reversed, with teachers ranking "Interacting and fostering positive relationships with students" and administrators ranking "Treating all students with respect" as the second most important indicators of this quality. Administrators' and teachers' rankings were identical for the remainder of the indicators as follows: (3) "Demonstrates concern for the physical and emotional well-being of students", (4) "Displays an excitement for teaching and learning", (5) "Treats all students with fairness", (6) "Displays an excitement for subject area content", (7) "Uses reflection

to improve his or her own teaching practice", and (8) "Demonstrates an on-going commitment to the profession".

Monitoring Student Progress. Of the five general qualities of effective teachers in this study, administrators and teachers both ranked *Monitoring Student Progress* as having the least impact on student achievement. In fact, 102 participants (60 percent) ranked Monitoring Student Progress as the fourth most important (next to last) or fifth most important (last) quality impacting student achievement. In contrast, only 24 (14 percent) of participants ranked it either the most or second most important quality. Table 25 describes the five indicators that comprise this quality.

Table 25

Indicators of Quality: Monitoring Student Progress

Code	Indicator	Description of Indicator
MON1	Homework	Uses homework to augment student learning.
MON2	Feedback	Gives clear, specific, and timely feedback.
MON3	Re-teaching	Re-teaches when students do not achieve mastery.
MON4	Using Data	Uses student achievement data to make instructional decisions.
MON5	Assessment	Selects appropriate assessment tools and strategies to evaluate student progress.

Participants ranked these indicators against one another as they perceive them to impact student achievement. Findings are displayed in Table 26.

Table 26

Rankings and Descriptive Statistics for Monitoring Student Progress

Administrators				Indicator	Teachers			
Mean Rank	Median	Mean	Std. Deviation		Mean Rank	Median	Mean	Std. Deviation
1	2.0	2.16	1.19	Using Data	3	3.0	2.76	1.13
2	2.0	2.37	1.18	Assessment	1	2.0	2.37	1.38
3	3.0	2.77	.099	Re-teaching	2	3.0	2.71	1.19
4	3.0	2.86	1.24	Feedback	4	3.0	2.81	1.25
5	5.0	4.75	.076	Homework	5	5.0	4.34	1.24

Table 26 shows that administrators believe that "Using student achievement data to make instructional decisions" has the most impact on student achievement of the indicators in this quality. Teachers in the study, on the other hand, believe that "Selecting appropriate assessment tools and strategies to evaluate student progress" has the greatest impact on achievement. Mean rankings reveal that administrators view assessment selection as the second most important quality, followed by "Re-teaching when students don't achieve mastery"; "Providing clear, specific, and timely feedback"; and "Using homework to augment student learning". Following selection of assessments, teachers ranked "Re-teaching when students don't achieve mastery" second; "Using data to make instructional decisions" third; "Providing clear, specific, and timely feedback" fourth; and "Using homework to augment student learning" fifth.

Research Question Two

Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement between administrators and teachers?

Congruence between administrators' and teachers' rankings of the qualities of effective teachers and the indicators of those qualities was calculated in two ways. First, the Spearman rank order coefficient was used to measure the correlation of paired ordinal data. Because mean rankings were obtained for both administrators and teachers on the same qualities and indicators, the Spearman coefficient was a suitable statistic. However, no statistical significance could be determined using the Spearman coefficient because of the low number of ranked pairs in this study. Nonetheless, it does provide strength and directionality for the correlation between administrator and teacher rankings. Spearman correlations range from -1.00 to 1.00. A correlation coefficient of 1.00 reveals an absolute positive correlation and a coefficient of -1.00 demonstrates an absolute negative correlation. Table 27 displays the correlation between administrators' and teachers' rankings for the general qualities of effective teachers and each individual quality.

Table 27

Correlation of Administrator and Teacher Responses for Qualities of Effective Teachers

Quality	Spearman Correlation Coefficient
General Qualities	.90
Planning for Instruction	.77
Classroom Management & Organization	.83
Implementing Instruction	.80
Monitoring Student Progress	.98
The Teacher as a Person	.70

Additionally, ANOVA was calculated for each general quality to determine whether statistical significance was present between administrator and teacher means. Significance was set at the $p < .05$ level. ANOVA results tested statistical differences in actual means obtained from administrators' and teachers' rankings. The ANOVA did not test for differences in rank ordering. Thus statistically significant differences between administrators and teachers in ANOVA were present even when the rankings were identical. This was the case for between group rankings for the general quality *Planning for Instruction*. Administrators and teachers both ranked this as the most important quality of effective teachers, though the teacher mean was significantly lower (representing a higher perceived value) than the administrator mean. Conversely, the administrator mean was significantly lower than the teacher mean for *Implementing Instruction*. In this case, administrator and teacher ranks were not identical. The ANOVA findings are detailed in Table 28.

Table 28

ANOVA Results for General Qualities of Effective Teachers

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	16.492	1	16.492	9.928	.002
	Within Groups	279.061	168	1.661		
	Total	295.553	169			
Qual2 Classroom Mgmnt. & Organization	Between Groups	.303	1	.303	.200	.655
	Within Groups	253.586	168	1.509		
	Total	253.888	169			
Qual3 Implementing Instruction	Between Groups	7.869	1	7.869	6.838	.010
	Within Groups	193.331	168	1.151		
	Total	201.200	169			
Qual4 Monitoring Student Progress	Between Groups	.355	1	.355	.301	.584
	Within Groups	198.121	168	1.179		
	Total	198.476	169			
Qual5 The Teacher as a Person	Between Groups	1.464	1	1.464	.472	.493
	Within Groups	520.983	168	3.101		
	Total	522.447	169			

Research Question Three

Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?

Region. Administrator and teacher responses were separated to create two distinct data sets. Data from each group were then analyzed to determine whether specific demographic criteria accounted for differences within groups. ANOVA tests were run using SPSS with the significance level set at $p < .05$. Table 29 demonstrates that significant differences among administrator rankings of the five general qualities of effective teachers were not evident based on region of the country.

Table 29

Administrator ANOVA by Region

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	1.869	3	.623	.351	.788
	Within Groups	170.321	96	1.774		
	Total	172.190	99			
Qual2 Classroom Management & Organization	Between Groups	8.344	3	2.781	1.749	.162
	Within Groups	152.656	96	1.590		
	Total	161.000	99			
Qual3 Implementing Instruction	Between Groups	1.505	3	.502	.430	.732
	Within Groups	112.055	96	1.167		
	Total	113.560	99			
Qual4 Monitoring Student Achievement	Between Groups	4.173	3	1.391	1.108	.350
	Within Groups	120.577	96	1.256		
	Total	124.750	99			
Qual5 The Teacher as a Person	Between Groups	25.325	3	8.442	2.690	.051
	Within Groups	301.315	96	3.139		
	Total	326.640	99			

Although region of the country did not account for significant differences among administrators for the general qualities, several significant differences were evident when qualities were disaggregated and examined by their indicators. First, significant differences emerged for the indicator of quality "Maintaining order and routines" within the quality *Classroom Management and Organization*, $F(3,96) = 2.978$, $p = .035$. Tukey post-hoc analysis revealed that the difference occurred because administrators in the South ranked this indicator as significantly higher (more important) than administrators in the Midwest.

Additional differences appeared within the quality *Monitoring Student Progress* for the indicator "Gives clear, specific, and timely feedback" $F(3,96) = 4.961$, $p = .003$ and the indicator "Selects appropriate assessment tools and strategies to evaluate student progress" $F(3,96) = 2.807$, $p = .044$. Tukey post-hoc analysis revealed that administrators in the Midwest ranked the "Feedback" indicator significantly higher than administrators in both the South and West and that administrators in the Northeast ranked the "Assessment" indicator significantly higher than administrators in the Midwest.

Differences also appeared within the quality The Teacher as a Person for the indicator "Treats all students with fairness" $F(3,96) = 4.650$, $p = .004$. Tukey post-hoc analysis demonstrated that the difference was the result of administrators in the South ranking this indicator as significantly more important than administrators in the Midwest. Also, significant differences were found for the indicator "Uses reflection to improve his or her own teaching practice" $F(3,96) = 3.766$, $p = .013$. Post-hoc analysis revealed that administrators in the West ranked this indicator significantly more important than administrators in the South.

Urbanicity. Table 30 demonstrates that no significant differences emerged for the five general qualities of effective teachers among administrators based on the urbanicity of the school in which they worked. However, ANOVA tests of the indicators for the individual qualities did reveal statistical significance in two places. First, administrator rankings for the indicator "Establishes and communicates high expectations for student achievement" were significant at the .05 level, $F(2,97) = 3.536$, $p = .033$. Tukey post-hoc analysis revealed that this difference existed because administrators in urban schools ranked this indicator significantly more important than their counterparts in suburban schools. Second, the indicator "Treats all students with fairness" was also significant at the .05 level, $F(2,97) = 5.666$, $p = .005$. Again, post-hoc analysis revealed that this difference was the result of a ranking of higher importance by urban administrators than by suburban administrators.

Table 30

Administrator ANOVA by Urbanicity

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	6.435	2	3.218	1.883	.158
	Within Groups	165.755	97	1.709		
	Total	172.190	99			
Qual2 Classroom Management & Organization	Between Groups	6.634	2	3.317	2.084	.130
	Within Groups	154.366	97	1.591		
	Total	161.000	99			
Qual3 Implementing Instruction	Between Groups	1.257	2	.628	.543	.583
	Within Groups	112.303	97	1.158		
	Total	113.560	99			
Qual4 Monitoring Student Progress	Between Groups	.376	2	.188	.146	.864
	Within Groups	124.374	97	1.282		
	Total	124.750	99			
Qual5 The Teacher as a Person	Between Groups	3.534	2	1.767	.531	.590
	Within Groups	323.106	97	3.331		
	Total	326.640	99			

Level of school. Table 31 demonstrates that whether an administrator worked at an elementary, middle, or high school only had a significant affect on the ranking of one general quality of effective teachers, *The Teacher as a Person* $F(2,97) = 5.627$, $p = .005$.

Table 31

Administrator ANOVA by Level of School

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	4.284	2	2.142	1.238	.295
	Within Groups	167.906	97	1.731		
	Total	172.190	99			
Qual2 Classroom Management & Organization	Between Groups	.535	2	.267	.162	.851
	Within Groups	160.465	97	1.654		
	Total	161.000	99			
Qual3 Implementing Instruction	Between Groups	2.073	2	1.036	.902	.409
	Within Groups	111.487	97	1.149		
	Total	113.560	99			
Qual4 Monitoring Student Progress	Between Groups	3.419	2	1.709	1.367	.260
	Within Groups	121.331	97	1.251		
	Total	124.750	99			
Qual5 The Teacher as a Person	Between Groups	33.956	2	16.978	5.627	.005
	Within Groups	292.684	97	3.017		
	Total	326.640	99			

Tukey post-hoc analysis revealed that both middle and high school administrators ranked The Teacher as a Person as a significantly more important quality than did elementary administrators. Table 32 shows the post-hoc results.

Table 32

Tukey Post-hoc Analysis for The Teacher as a Person by Administrators Level

Multiple Comparisons

Qual5
Tukey HSD

(I) Level	(J) Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Elementary	Middle	1.32784*	.43347	.008	.2961	2.3596
	High	1.32933*	.45863	.013	.2377	2.4210
Middle	Elementary	-1.32784*	.43347	.008	-2.3596	-.2961
	High	.00149	.40760	1.000	-.9687	.9717
High	Elementary	-1.32933*	.45863	.013	-2.4210	-.2377
	Middle	-.00149	.40760	1.000	-.9717	.9687

*. The mean difference is significant at the 0.05 level.

Administrator level of school only accounted for one significant difference among all of the indicators of the qualities of effective teachers examined in the study. That difference was found for the indicator "Uses student achievement data to make instructional decisions" and was significant at the .05 level, $F(2,97) = 4.154$, $p = .019$. Post-hoc analysis revealed that the difference resulted from rankings of higher importance by elementary administrators than by middle school administrators.

Years of experience. To determine the effect of administrators' years of experience, administrators' years of experience served as the constant independent variable while the dependent variable alternated between the five general qualities of effective teachers and the specific indicators of those qualities. Table 33 demonstrates that no significant differences emerged from administrator rankings of the five general qualities that could be attributed to their years of experience. Further analyses revealed that no significant differences surfaced for any specific indicator of quality that could be attributed to years of experience.

Table 33

Administrator ANOVA by Years of Experience

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	2.847	3	.949	.538	.657
	Within Groups	169.343	96	1.764		
	Total	172.190	99			
Qual2 Classroom Management & Organization	Between Groups	6.569	3	2.190	1.361	.259
	Within Groups	154.431	96	1.609		
	Total	161.000	99			
Qual3 Implementing Instruction	Between Groups	1.511	3	.504	.432	.731
	Within Groups	112.049	96	1.167		
	Total	113.560	99			
Qual4 Monitoring Student Achievement	Between Groups	5.623	3	1.874	1.510	.217
	Within Groups	119.127	96	1.241		
	Total	124.750	99			
Qual5 The Teachers as a Person	Between Groups	3.660	3	1.220	.363	.780
	Within Groups	322.980	96	3.364		
	Total	326.640	99			

Gender. To determine the role that gender played on administrators' perceptions, gender served as the constant independent variable while the five general qualities and their indicators alternated as dependent variables. Table 34 reveals that administrator rankings of both *Classroom Management and Organization* and *The Teacher as a Person* were affected by gender.

Table 34

Administrator ANOVA by Gender

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	.010	1	.010	.006	.940
	Within Groups	172.180	98	1.757		
	Total	172.190	99			
Qual2 Classroom Management & Organization	Between Groups	6.760	1	6.760	4.295	.041
	Within Groups	154.240	98	1.574		
	Total	161.000	99			
Qual3 Implementing Instruction	Between Groups	.040	1	.040	.035	.853
	Within Groups	113.520	98	1.158		
	Total	113.560	99			
Qual4 Monitoring Student Achievement	Between Groups	.810	1	.810	.640	.425
	Within Groups	123.940	98	1.265		
	Total	124.750	99			
Qual5 The Teacher as a Person	Between Groups	14.440	1	14.440	4.533	.036
	Within Groups	312.200	98	3.186		
	Total	326.640	99			

When specific indicators of quality replaced the general qualities as dependent variables, four significant differences emerged as a result of administrator years of experience. One of those differences was found for "Links instruction to objectives", $F(1,98) = 8.377$, $p = .005$. Because there were only two levels of the independent variable, no post-hoc analysis was necessary. Nonetheless, it was determined that this difference was the result of female administrators in the study ranking this indicator as significantly more important than male administrators. The other three differences attributable to administrators' gender were all indicators of the general quality, *The Teacher as a Person*. The first was "Displays an excitement for content knowledge", $F(1,98) = 4.135$, $p = .045$. Male administrators ranked this quality significantly higher than female administrators. The second indicator of *The Teacher as a Person* that was significantly different for females and males was "Displays an excitement for teaching

and learning", $F(1,98) = 5.143$, $p = .026$. Again, this difference was attributable to male administrators ranking this indicator more importantly than females. Lastly, the indicator "Uses reflection to improve his or her own teaching practice" also proved significantly different based on gender, $F(1,98) = 5.715$, $p = .019$. Unlike the previous two indicators, this difference was the result of female administrators in the study ranking this indicator as significantly more important than did male administrators.

Research Question Four

Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among teachers (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?

Region. The region of the country in which teachers worked did not account for any meaningful differences in their rankings of the general qualities of effective teachers. Table 35 displays the findings for the ANOVA run using the teacher data set by region.

Table 35

Teacher ANOVA by Region

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	2.011	3	.670	.422	.738
	Within Groups	104.860	66	1.589		
	Total	106.871	69			
Qual2 Classroom Management & Organization	Between Groups	3.048	3	1.016	.749	.527
	Within Groups	89.537	66	1.357		
	Total	92.586	69			
Qual3 Implementing Instruction	Between Groups	2.020	3	.673	.572	.636
	Within Groups	77.751	66	1.178		
	Total	79.771	69			
Qual4 Monitoring Student Progress	Between Groups	6.739	3	2.246	2.225	.093
	Within Groups	66.632	66	1.010		
	Total	73.371	69			
Qual5 The Teacher as a Person	Between Groups	7.260	3	2.420	.854	.470
	Within Groups	187.083	66	2.835		
	Total	194.343	69			

However, when each quality was disaggregated by its indicators, three significant differences emerged. First, the ANOVA revealed a statistically significant difference at the .05 level for the indicator "Establishes and communicates high expectations for student achievement" $F(3,66) = 3.262$, $p = .027$. Tukey post-hoc analysis confirmed that this difference was the result of teachers in the West ranking this indicator as significantly less important than teachers in the Northeast and the South. Second, region accounted for a significant difference in teachers rankings of the indicator "Designs lessons to actively engage students in the learning process" $F(3,66) = 3.339$, $p = .024$. This difference emerged because teachers in the Midwest believed it to be significantly more important that did teachers in the West. The last difference attributable to region was for the indicator "Displays an excitement for teaching and learning" $F(3,66) = 2.849$, $p = .044$. Tukey post-hoc analysis revealed that this difference was the result of teachers in the Midwest ranking this indicator as more important than teachers in the South.

Urbanicity. Whether teachers described their school as rural, suburban, or urban did produce a significant difference in their rankings of one of the five general qualities of effective teachers. Teachers in rural schools ranked The Teacher as a Person as a more important contributor to student achievement than did teachers in urban schools. Table 36 displays the findings for the ANOVA for teacher rankings of the general qualities run by urbanicity. Only one significant difference emerged when the individual qualities and their indicators were submitted to ANOVA tests. The indicator "Maintains a physically and emotionally safe environment for students" was significant at the .05 level, $F(2,67) = 4.102$, $p = .021$. Post-hoc analysis showed that this difference was attributable to teachers in rural schools ranking it significantly higher than teachers in urban schools.

Table 36

Teacher ANOVA by Urbanicity

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	4.058	2	2.029	1.322	2.73
	Within Groups	102.813	67	1.535		
	Total	106.871	69			
Qual2 Classroom Management & Organization	Between Groups	.928	2	.464	.339	.714
	Within Groups	91.658	67	1.368		
	Total	92.586	69			
Qual3 Implementing Instruction	Between Groups	3.93	2	1.986	1.756	.181
	Within Groups	75.798	67	1.131		
	Total	79.771	69			
Qual4 Monitoring Student Progress	Between Groups	.151	2	.075	.069	.933
	Within Groups	73.221	67	1.093		
	Total	73.371	69			
Qual5 The Teacher as a Person	Between Groups	19.660	2	9.830	3.770	.028
	Within Groups	174.683	67	2.607		
	Total	194.343	69			

Level of school. Whether teachers worked in an elementary, middle, or high school did not significantly impact teacher rankings of the five general qualities of effective teachers. Table 37 shows the results of the ANOVA run for the teacher data set using the five general qualities as the dependent variables and the level of school as the independent variables.

Table 37

Teacher ANOVA by Level of School

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	7.297	2	3.648	2.455	.094
	Within Groups	99.575	67	1.486		
	Total	106.871	69			
Qual2 Classroom Management & Organization	Between Groups	.617	2	.308	.225	.799
	Within Groups	91.969	67	1.373		
	Total	92.586	69			
Qual3 Implementing Instruction	Between Groups	3.041	2	1.521	1.328	.272
	Within Groups	76.730	67	1.145		
	Total	79.771	69			
Qual4 Monitoring Student Progress	Between Groups	.571	2	.285	.263	.770
	Within Groups	72.801	67	1.087		
	Total	73.371	69			
Qual5 The Teacher as a Person	Between Groups	9.178	2	4.589	1.660	.198
	Within Groups	185.165	67	2.764		
	Total	194.343	69			

When disaggregated by individual qualities and the indicators of those qualities became the dependent variables, three significant differences surfaced. First, a significant difference existed for the indicator "Maintains appropriate pacing of instruction", $F(2,67) = 3.143$, $p = .050$. Post-hoc analysis showed that this was because high school teachers ranked this indicator as more important than teachers in elementary schools. An additional difference occurred for the indicator "Prepares materials ahead of time and has them ready to use", $F(2,67) = 4.702$, $p = .012$. Post-hoc analysis demonstrated that elementary and high school teachers ranked this indicator as significantly more important than middle school teachers. Lastly, a significant difference appeared for the indicator "Uses student achievement data to make instructional decisions", $F(2,67) = 5.677$, $p = .005$. The difference was explained through post-hoc analysis by elementary teachers ranking this indicator as significantly more important than high school teachers.

Years of experience. The effect of teachers' years of experience was determined by running a series of one-way ANOVAs using teachers' years of experience as the constant independent variable and by alternating the five general qualities and their indicators as the dependent variables. Table 38 shows that teachers' years of experience explained three significant differences in teacher rankings of the five general qualities. The first difference was found for the quality *Classroom Management and Organization*, $F(4,65) = 3.834$, $p = .007$. Interestingly, teacher mean rankings for this quality had bell shaped quality. Teachers with the least experience (one to five years) and most experience (20 or more years) ranked *Classroom Management and Organization* significantly more important than other qualities—as indicated by lower means— than did teachers with 11-15 years of experience. Chart 1 demonstrates the pattern of teacher rankings for this quality based on their years of experience.

Table 38

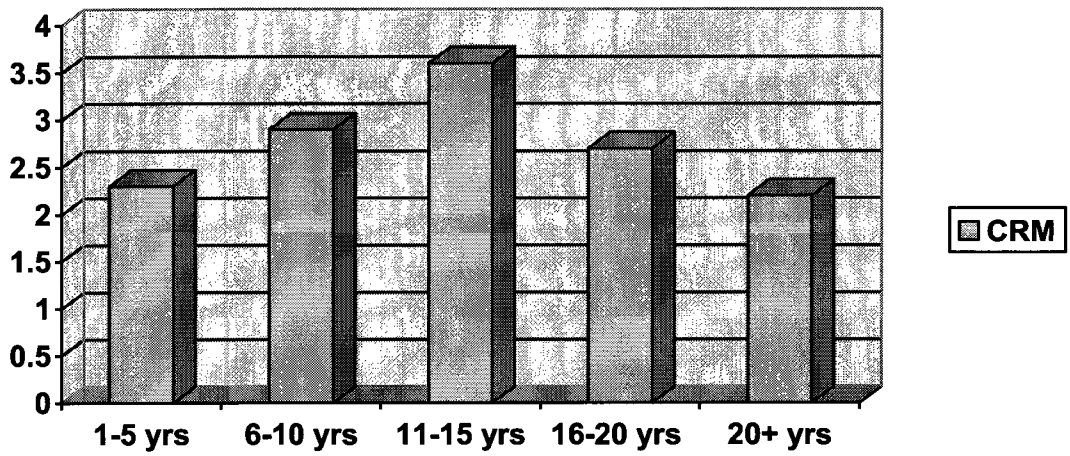
Teacher ANOVA by Years of Experience

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1 Planning for Instruction	Between Groups	3.049	4	.762	.477	.752
	Within Groups	103.822	65	1.597		
	Total	106.871	69			
Qual2 Classroom Management & Organization	Between Groups	17.674	4	4.418	3.834	.007
	Within Groups	74.912	65	1.152		
	Total	92.586	69			
Qual3 Implementing Instruction	Between Groups	13.259	4	3.315	3.239	.017
	Within Groups	66.512	65	1.023		
	Total	79.771	69			
Qual4 Monitoring Student Progress	Between Groups	2.823	4	.706	.650	.629
	Within Groups	70.548	65	1.085		
	Total	73.371	69			
Qual5 The Teacher as a Person	Between Groups	35.305	4	8.826	3.607	.010
	Within Groups	159.037	65	2.447		
	Total	194.343	69			

Chart 1

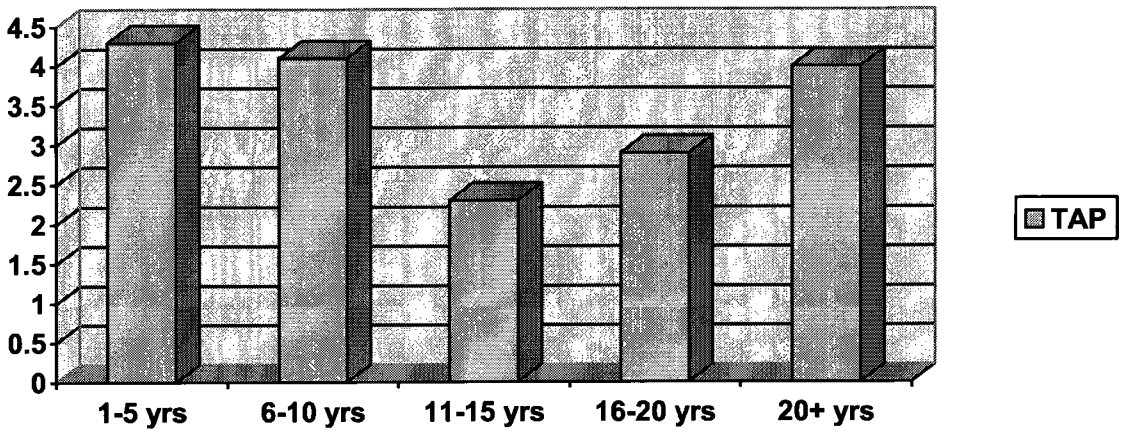
Teacher Mean Rankings for Classroom Management & Organization by Years of Experience



The second general quality impacted by teachers' years of experience was *Implementing Instruction*, $F(4,65) = 3.239$, $p = .017$. Post-hoc analysis revealed that this difference was attributable to teachers with six to 10 years experience ranking this quality as significantly more important than did teachers with 16-20 years experience. The third difference in teachers rankings of the general qualities that could be attributed to years of experience was *The Teacher as a Person*, $F(4,65) = 3.607$, $p = .010$. Unlike the pattern that emerged for *Classroom Management and Organization*, teacher rankings for this quality yielded an inverse bell-shaped curve. That is, teachers with the least and most experience ranked *The Teacher as a Person* significantly less important relative to other qualities—as indicated by higher means—than teachers with 11-15 years of experience. Chart 2 demonstrates this pattern. These differences were statistically significant at the $p < .05$ level.

Chart 2

Teacher Mean Rankings for The Teacher as a Person by Years of Experience



Despite the many differences that emerged for teacher rankings of the general qualities based on years of experience, only one significant difference appeared when analyzing the indicators of those qualities by years of experience. That difference occurred for the indicator "Re-teaches when students do not achieve mastery", $F(4,65) = 2.741$, $p = .036$. This difference existed because teachers in the study with one to five years experience ranked it as significantly more important than teachers with twenty or more years of experience.

Gender. Unlike the teacher rankings for the general qualities based on years of experience, rankings based on gender did not yield any significant differences. Table 39 shows the results of the ANOVA run with teachers' gender as the independent variable and the general qualities as the dependent variables.

Table 39

Teacher ANOVA by Gender

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Qual1	Between Groups	.890	1	.890	.571	.452
	Within Groups	105.981	68	1.559		
	Total	106.871	69			
Qual2	Between Groups	4.167	1	4.167	3.204	.078
	Within Groups	88.419	68	1.300		
	Total	92.586	69			
Qual3	Between Groups	.068	1	.068	.058	.811
	Within Groups	79.704	68	1.172		
	Total	79.771	69			
Qual4	Between Groups	.288	1	.288	.268	.606
	Within Groups	73.083	68	1.075		
	Total	73.371	69			
Qual5	Between Groups	.091	1	.091	.032	.859
	Within Groups	194.252	68	2.857		
	Total	194.343	69			

Significant differences did emerge, however, when indicators of the general qualities were the dependent variables and teachers' gender was the independent variable. The first of these differences was for the indicator "Maintains appropriate pacing of instruction", $F(1,68) = 5.893$, $p = .018$. Tukey post-hoc analysis showed that this difference resulted from male teachers in the study ranking this indicator as significantly more important than did female teachers. The second significant difference among teacher rankings based on gender was for the indicator "Uses student achievement data to make instructional decisions", $F(1,68) = 6.651$, $p = .012$. Female teachers in the study ranked this indicator significantly higher than did male teachers. Lastly, a difference existed for the indicator "Demonstrates an on-going commitment to the profession" $F(1,68) = 4.670$, $p = .034$. Male teachers in the study ranked this indicator significantly higher than female teachers.

Research Question Five

Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?

Administrators. Participants in the study were asked if they believed additional qualities existed that impact student achievement that were not present in the survey. Forty-seven administrators (47%) responded to this open-ended question. Responses were coded by the researcher and compared to the description of qualities of effective teachers and the indicators of those qualities in the survey. Many administrators responding to this question echoed qualities and indicators that were already in the survey. For example, an administrator from a suburban middle school in the South remarked that "The teacher must display a genuine concern for students." This comment was coded "Concern for Students" and compared to items in the survey. The researcher determined that the comment was similar to the item on the survey "Demonstrates concern for the physical and emotional well-being of students" and it was eliminated as an additional quality. Several other comments involved the teachers' knowledge of subject area content as well knowledge of teaching and learning. These comments were also eliminated for their similarity to survey items.

There were, however, coded items from administrators' responses that were not similar to items on the survey. Six additional qualities or indicators of qualities emerged from these responses: Using technology in instruction, collaboration with peers, flexibility, parent communication, continuing education, and humor. The most common of these coded responses were flexibility which appeared seven times, collaboration with

peers, and parent communication, both of which appeared five times. Appendix E contains the coded responses disaggregated by demographic criteria and shows that these two additional items occurred consistently across region, level of school, urbanicity of school, gender, and years of experience.

Teachers. Twenty-five teachers (35.71%) responded to the open-ended question on the survey that asked for additional qualities of effective teachers or indicators of those qualities. Like administrators, many teachers reiterated qualities that were already present in the survey. For example, one middle school teacher from an urban school in the West commented that an additional quality was "Building a positive teacher-student relationship where learning and teaching can be exchanged so both are changed in the relationship." This comment was coded "Student/Teacher Relationships" and was compared to items in the survey. It was determined by the researcher that it was similar to the survey item "Interacts and fosters positive relationships with students" and was eliminated as an additional quality.

Teacher responses did yield seven additional qualities or indicators of quality that were not stated in the survey: Flexibility, parent communication, the teachers' personal values, honesty, continuous improvement, teacher dress, and experience. Like administrators responses, the only recurring responses were flexibility, which appeared twice, and parent communication which appeared six times. Appendix F shows the coded teacher responses for additional qualities disaggregated by demographic criteria.

Although many of the items identified by administrators and teachers as additional qualities and indicators were not explicitly stated in the survey, some of them are either explicitly or implicitly found in Stronge's (2007) framework. For example, a

teacher's personal values, his or her honesty, and continuous improvement are implied within the several indicators of the quality *The Teacher as a Person*. Also, experience was mentioned by participants as an additional quality. Although it was not an explicit quality in the survey, it is clearly stated in Stronge's framework as an indicator of the quality *Prerequisites for Effective Teaching*. This general quality, however, was purposefully left out of the study by the researcher because its characteristics are not easy to alter to improve practice. In sum, the major findings for the open-ended question in the survey revealed that both administrators and teachers both believed that effective teachers must be flexible and successfully engage parents in communicating about student progress.

Chapter 5: Summary and Discussion of Findings

The central purpose of schooling is the advancement of student learning and academic achievement. There is an abundance of evidence that teachers play an integral role in this purpose. Many studies have explored the particular attributes and characteristics of teachers who effectively promote student learning and achievement (see for example, Darling-Hammond, 2000; Hattie, 2003; Nye, Konstantopoulos, & Hedges, 2004; Olson, 2008; Stronge, Ward, Tucker, & Hindman, 2007; Wenglinsky, 2004). A meta-analysis by Stronge (2007) identified several general qualities and indicators of those qualities that impact student achievement. This study sought to clarify which research-based qualities of effective teachers that K-12 public school administrators and teachers perceived as having the greatest impact on student achievement.

Data were collected from a national random sample of 100 administrators and 70 teachers who completed an online survey in May and June of 2010. Specifically, administrators and teachers were asked to rank a set of research-based qualities of effective teachers and the indicators of those qualities in the order in which they perceived them to impact student achievement. Qualities and indicators of quality were drawn from Stronge's (2007) framework for the qualities of effective teachers. Rankings were disaggregated by participants' responses to demographic factors and analyzed for statistical significance. Demographic factors included: (a) region of the country in which participants worked, (b) urbanicity of the school in which they worked, (c) level of school in which they worked, (d) the number of years they had worked in education, and (e) their gender. The purpose of the current study was to determine which qualities of effective teachers that educators perceived as having the strongest link to student

achievement and to determine if demographic factors significantly influenced those perceptions.

Results revealed a general agreement between administrators and teachers concerning the rankings of overall teacher qualities as they impact student achievement. There was general agreement among administrators and teachers from various types of schools, regions of the country, levels of experience, and gender. There did emerge, however, a few significant differences among administrators and teachers in the study based on demographic criteria. Further, participants were asked to identify any additional qualities and indicators of quality that impact student achievement that were not presented in the survey. Content analysis revealed that administrators and teachers both believed there were two additional indicators of quality not included in the survey that impact student achievement.

Summary of Findings

Research Question One

Which qualities of effective teachers do administrators and teachers perceive as having the greatest impact on student achievement?

Administrators and teachers participating in the study ranked five general qualities of effective teachers in the order in which they perceived those qualities to impact student achievement. Those qualities were based on Stronge's (2007) framework and included: (a) *The Teacher as a Person*, (b) *Classroom Management and Organization*, (c) *Planning for Instruction*, (d) *Implementing Instruction*, and (e) *Monitoring Student Progress*. Administrators and teachers both ranked *Planning for Instruction* as the most important teacher quality impacting student achievement (M =

2.59, 1.96). Administrators ranked *Implementing Instruction* (M = 2.62) as the second and *Classroom Management and Organization* (M = 2.70) as the third most important quality. Teachers, on the other hand, ranked *Classroom Management and Organization* (M = 2.61) second and *Implementing Instruction* (M = 3.06) third. Administrators and teachers both ranked *The Teacher as a Person* fourth (M = 3.65, 3.74) and *Monitoring Student Progress* fifth (M = 3.44, 3.63).

There were 29 indicators of quality organized within the five general qualities examined in the study. Each general quality contained four to eight indicators. Participants also ranked these indicators of quality in the order in which they perceived them to impact student achievement. Table 40 contains a list of the indicators associated with each quality and the mean administrator and teacher rankings for indicators.

Table 40

Administrators' and Teachers' Mean Rankings of the Indicators of Quality

Administrators' Mean Rank	Indicators of Quality	Teachers' Mean Rank
	THE TEACHER AS A PERSON	
3	Demonstrates concern for the physical & emotional well-being of students.	3
5	Treats all students with fairness.	5
2	Treats all students with respect.	1
1	Interacts and fosters positive relationships with students.	2
6	Displays an excitement for subject area content.	6
4	Displays an excitement for teaching and learning.	4
8	Demonstrates and on-going commitment to the profession.	8
7	Uses reflection to improve his or her own practice.	7
	CLASSROOM MANAGEMENT & ORGANIZATION	
4	Maintains order and routines.	4
3	Prepares materials ahead of time and has them ready to use.	2
1	Maintains a physically and emotionally safe environment for students.	1
2	Reinforces expectations for positive behavior and responds to misbehaviors promptly.	3
	PLANNING FOR INSTRUCTION	
3	Limits interruptions and focuses classroom time on teaching and learning.	2
1	Establishes and communicates high expectations for student achievement.	1
6	Maintains appropriate pacing of instruction.	5
2	Considers student learning styles and plans instruction accordingly.	3
5	Links instruction to students' real-life situations.	4
4	Links instruction to objectives.	6
	IMPLEMENTING INSTRUCTION	
2	Employs a variety of techniques and instructional strategies to accomplish learning goals.	2
1	Designs lessons to actively engage students in the learning process.	1
4	Uses a variety of questioning techniques.	5
5	Provides clear examples and offers guided practice.	3
6	Uses effective grouping strategies.	6
3	Focuses instruction on higher-order skills rather than memorization of information.	4
	MONITORING STUDENT PROGRESS	
5	Uses homework to augment student learning.	5
4	Gives clear, specific, and timely feedback.	4
3	Re-teaches when students do not achieve mastery.	2
1	Uses data to make instructional decisions.	3
2	Selects appropriate assessment tools and strategies to evaluate student progress.	1

Table 40 demonstrates that administrators and teachers generally ranked the indicators of quality similarly to one another. Where discrepancies did occur, they tended

to be only one ranked difference. For example, within the quality, *The Teacher as a Person*, administrators and teachers ranked six of the eight indicators identically. The only discrepancy was that administrators ranked "Interacts and fosters positive relationships with students" first and teachers ranked it second. This represents a minor difference in the overall rankings of these indicators of quality.

More significant were the indicators in which the difference between administrator and teacher ranks was greater than one. This occurred in three places. First, within the general quality *Planning for Instruction*, administrators ranked "Links instruction to objectives" fourth, whereas, teachers ranked it sixth. This difference suggests that teachers regard other indicators as more important to promoting student achievement. For example, teachers ranked "Linking instruction to students' real-life situations" higher than they ranked "Linking instruction to objectives" (the opposite was true for administrator rankings). Perhaps teachers, who are in closer proximity to students than administrators believed that relevance is a more powerful motivator for learning than well-defined objectives. Second, teachers ranked "Provides clear examples and offers guided practice" as the third most important indicator of the quality *Implementing Instruction*, whereas, administrators ranked it fifth. Again, this difference may be the result of teachers in the classroom seeing first hand the benefits of guided practice as they relate to student achievement. Third, within the general quality, *Monitoring Student Progress,* administrators in the study ranked "Uses data to make instructional decisions" as the most important indicator of quality, whereas, teachers in the study ranked it third. The fact that administrators ranked this indicator as the most important relative to the others within *Monitoring Student Progress* is not surprising. Student achievement data

have become the yardstick by which schools and districts demonstrate proficiency to earn state accreditation and meet AYP goals. That teachers did not rank it as high may be an indication that discussions of "data" in schools have increasingly focused on end-of-course testing. Teachers' perceptions, unlike those of administrators, may be guided by a classroom-centered orientation. The difference in these rankings may be a function of what Guskey (2007) termed "different views of purpose" in explaining the dissimilar perceptions between administrators and teachers on sources of evidence of student learning. Administrators and teachers may have different purposes for using student achievement data and other indicators, and those differences may influence perceptions about the relative importance of each.

Research Question Two

Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement between administrators and teachers?

Results from the study indicate that administrators and teachers hold similar perceptions of the impact of certain teacher qualities on student achievement. Administrator and teacher mean rankings formed paired ordinal data that were correlated using the Spearman rank-order coefficient. Administrator and teacher rankings were correlated to a large degree ($r = .90$) though there were too few ordered pairs in the data to achieve statistical significance. Nonetheless, a strong directional relationship was established for rankings of the five general qualities. Spearman coefficients ranged from $r = .70$ to $r = .98$ for the indicators of the general qualities. This similarly suggests that administrators and teachers hold comparable beliefs about the relative importance of each of the qualities and indicators of quality. Further analysis was conducted by comparing

administrators' and teachers' mean rankings of the five general qualities. One-way ANOVA using participants' job as the independent variable revealed that the teacher mean rank for *Planning for Instruction* was significantly lower than the administrator mean rank. Conversely, the administrator mean was significantly lower than the teacher mean for *Implementing Instruction*. Differences in means, however, did not necessarily equate to differences in rankings. For example, a statistically significant difference emerged between administrator and teacher means for the general quality, *Planning for Instruction* (M = 2.59, 1.96). Yet, both groups ranked this quality as the most important quality related to student achievement. The other statistically significant difference occurred for the general quality, *Implementing Instruction*. In this case, differences in means did result in a difference in rankings. Administrators ranked this quality second and teachers ranked it third. Table 41 provides a list of the five general qualities, administrator and teacher means, and mean rankings.

Table 41

Administrator and Teacher Rankings of the Five General Qualities

Frequency of Administrator Ordered Responses	Admin Mean Rank	Admin. Mean	Std. Dev.	Quality	Frequency of Teacher Ordered Responses	Teacher Mean Rank	Teacher Mean	Std. Dev.
#1 = 26 #2 = 28 #3 = 16 #4 = 21 #5 = 9	1	2.59	1.32	Planning for Instruction	#1 = 35 #2 = 18 #3 = 7 #4 = 5 #5 = 5	1	1.96	1.24
#1 = 19 #2 = 25 #3 = 32 #4 = 23 #5 = 1	3	2.70	1.28	Classroom Management & Organization	#1 = 6 #2 = 15 #3 = 23 #4 = 21 #5 = 5	2	2.61	1.16
#1 = 21 #2 = 27 #3 = 23 #4 = 19 #5 = 10	2	2.62	1.07	Implementing Instruction	#1 = 10 #2 = 28 #3 = 18 #4 = 7 #5 = 7	3	3.06	1.08
#1 = 30 #2 = 8 #3 = 3 #4 = 6 #5 = 53	5	3.65	1.12	Monitoring Student Progress	#1 = 17 #2 = 3 #3 = 4 #4 = 11 #5 =35	5	3.74	1.03
#1 = 4 #2 = 12 #3 = 26 #4 = 31 #5 = 27	4	3.44	1.82	The Teacher as a Person	#1 = 2 #2 = 6 #3 = 18 #4 = 26 #5 =18	4	3.63	1.68

Patterns emerged in the rankings of the five general qualities that suggest some discrepancies between administrators and teachers. For example, administrator and teacher mean ranks both revealed that *Planning for Instruction* was the most important quality related to student achievement. However, frequency counts show parity in the number of administrators who ranked this quality first, second, third, and fourth (26% ranked first, 28% ranked second, 16% ranked third, 21% ranked fourth, and 9% ranked fifth). This indicates that administrators were not uniform in their selection of this quality

as the most important. Teacher rankings, on the other hand, revealed a stronger agreement that *Planning for Instruction* was, in fact, their choice as the most important general quality impacting student achievement (50% ranked first, 26% ranked second, 10% ranked third, 7% ranked fourth, and 7% ranked fifth). Thus, teachers appeared to have a stronger sense that this quality was the most important.

Research Questions Three and Four

Is there a significant difference in the perceptions regarding qualities of effective teachers that impact student achievement among administrators and among teachers (a) in different regions of the United States; (b) in rural, suburban, and urban schools; (c) in elementary, middle, and high schools; (d) with different years of experience; and (e) of different gender?

Administrators and teachers in the study ranked the five general qualities of effective teachers in the order in which they perceived those qualities to impact student achievement. They also each ranked the indicators of those qualities—29 in all—in the order in which they were perceived to impact student achievement. Thus, administrators and teachers each ranked 34 items—five general qualities and 29 indicators. Each ranking was then tested for statistical significance using one-way ANOVAs. For each ANOVA one of the following demographic factors served as the independent variable: (a) region of the country; (b) rural, suburban, or urban school; (c) elementary, middle, or high school; (d) years of experience; and (e) gender. When analyzing each factor, there were 68 possibilities for significant differences to emerge (34 items each ranked by administrators and teachers). There were five factors in the study, resulting in a total number of 340 potential differences. To illustrate, region could have accounted for 68

differences—34 among administrators and 34 among teachers. The same could be said for each of the five demographic factors. Results of the study, however, revealed that only 30 significant differences actually were found out of 340 possibilities (8.82%).

Administrators' rankings demonstrated that no significant differences among rankings of general qualities could be accounted for by region of the country, urbanicity, or an administrator's years of experience. For teachers, no significant differences for rankings among the five general qualities emerged for region, level of school, or gender. Thus, significant differences did emerge for administrator rankings for level of school and gender, and for teachers' urbanicity and years of experience. The only consistency was that region of the country did not account for any significant differences for administrator or teacher rankings of the five general qualities.

A review of the findings from the study follows. The review is organized by demographic characteristic of the participants and the schools in which they work—region of the country, urbanicity of school, level of school, years experience in education, and gender. This organization provides insight into how much influence each demographic factor played in shaping participants' perceptions about the impact of specific teacher qualities on student achievement.

Region. One of the demographic items in the study asked participants to identify the state in which they worked. States were then grouped into one of four regions identified by the United States Census Bureau: Northeast, Midwest, South, and West. Nearly half of all administrators responding to the survey were from the South (45%). Additionally, 27% were from the Midwest, 15% from the West, and 13% from the Northeast. Similarly, 56% of teachers who participated in the study were from the South,

24% from the Midwest, 13% from the West, and 7% from the Northeast. Participants had six different sets of information to rank. The first five sets were comprised of the indicators of quality for each of the five general qualities of effective teachers. The next set included the five general qualities themselves. Results of the study indicate that the region of the country in which participants worked did not account for any significant differences among rankings of the five general qualities of effective teachers. This suggests that neither administrators' nor teachers' perceptions of effective teaching are unduly influenced by the cultural characteristics that often distinguish one region of the country from another. However, caution should be used when making inferences about this finding because of the low number of participants in some of the regional subgroups.

Although region of the country accounted for no significant differences among administrators' and teachers' rankings of the five general qualities, it did account for five differences for the administrator rankings and three differences for teacher rankings of the 29 indicators of quality in the study. When combining administrator and teacher rankings, region accounted for significant differences in eight of 58 opportunities. The researcher sought to draw meaningful conclusions from any patterns that emerged between administrator and teacher rankings on the same indicators for the same variable (in this case, region). However, no discernable pattern emerged among these differences. Rankings of participants in the Midwest, for example, were significantly different from rankings of participants from other regions on three items. Midwestern administrators ranked "Providing clear and timely feedback" as significantly more important than administrators in both the South and West. Teachers in the Midwest ranked "designs lessons to actively engage students in the learning process" significantly higher than

teachers in the West. Midwestern teachers also ranked "displays excitement for teaching and learning" significantly higher than teachers in the South. Although Midwestern administrators and teachers did hold significantly different views on three indicators as compared to participants from other regions of the country, they did not differ on the same indicators with each other. Therefore, it was difficult to conclude that the condition of being in the Midwestern region had a meaningful impact on administrators and teachers that made them different from administrators and teachers in other parts of the country. In fact, the opposite appears to be true. Of the 29 indicators of quality each ranked by administrators and teachers, only three significant differences emerged that differentiated Midwestern educators from others in the study. Because administrators and teachers both ranked 29 indicators, meaning that those three differences aside, there were 55 times in which no such significant differences emerged. Thus, from a quantitative standpoint, the evidence appears overwhelming that region of the country played, at best, only a minimal part in influencing the perceptions that educators had about which teacher qualities impact student achievement.

Urbanicity. Urbanicity of schools was self-reported by participants. Thirty-four percent of participants reported working in rural schools, 39% reported working in suburban schools, and 27% reported working in urban schools. This division was similar for both administrators and teachers in the study. Whether schools were located in a rural, suburban, or urban area produced only a few significant differences in the administrator and teacher rankings. Of the five general qualities, there were no significant differences among administrators and only one emerged for teachers. Teachers in rural areas ranked the general quality *The Teacher as a Person* significantly higher than teachers in urban

areas. Of the 29 indicators of quality, only one significant difference emerged for teachers and only two for administrators. Rural teachers ranked the indicator of quality, "Maintains a physically and emotionally safe environment for students," as significantly more important than teachers in urban areas. Administrators in urban schools ranked the indicators, "Establishes and communicates high expectations for student achievement" and "Treats all students with fairness," as significantly more important than administrators in suburban schools. Thus, out of 68 possibilities for urbanicity to account for significant differences among administrators and teacher rankings, only four such differences emerged.

Level of School. Elementary administrators made up 26%, middle school administrators made up 42%, and high school administrators made up 32% of the administrator sample. Elementary teachers made up 39%, middle school teachers made up 37%, and high school teachers made up 29% of the teacher sample. Among the five general qualities, administrators in middle and high school ranked *The Teacher as a Person* significantly more important than administrators in elementary schools. There were four significant differences among the indicators of quality based on *Level of School.* First, teachers in high school ranked "Maintaining appropriate pacing of instruction" more importantly than elementary teachers. This finding is not surprising given the amount of subject-related content in most high school curricula. Second, high school and elementary teachers both ranked "Prepares materials and has them ready to use" higher than middle school teachers. Lastly, elementary teachers ranked "Uses data to make instructional decisions" higher than high school teachers. This third difference is interesting because elementary administrators also ranked "Uses data to make

instructional decisions" significantly more important than middle school administrators. This suggests that working in an elementary school either as an administrator or a teacher significantly impacts how one perceives using data to inform instruction. However, of the 68 potentialities for significance, administrator and teacher rankings of qualities and indicators based on level of school only produced five significant differences.

Experience. Participants in the study selected one of five possible ranges to represent their total years of experience working in education: (a) 1-5 years, (b) 6-10 years, (c) 11-15 years, (d) 16-20 years, and (e) 20 or more years. Nearly half of all participants reported having 20 or more years of experience in education. Interestingly, no significant differences for either the five general qualities or the 29 indicators of quality resulted from administrator rankings when the independent variable was years of experience. Four significant differences resulted from teacher rankings—three among the five general qualities and one among the 29 indicators of quality. First, teachers with the least and most experience ranked the general quality, *Classroom Management and Organization*, significantly less important than teachers with 11-15 years of experience. This trend was reversed for the general quality, *The Teacher as a Person*, as teachers with the least and most experience ranked this quality significantly higher than those with 11-15 years of experience. Lastly, teachers with 1-5 years of experience ranked the indicator "Re-teachers when students do not achieve mastery" as significantly more important than their more seasoned peers with 16-20 years of experience.

Gender. Females comprised 61% of all participants in the study. Fifty percent of administrators and 77% of teachers were female. These percentages are representative of administrators and teachers in the United States according to NCES statistics

(http://nces.ed.gov/programs/coe/2010/section4/indicator29.asp; http://nces.ed.gov/programs/coe/2010/section4/indicator27.asp). Among the five general qualities of effective teachers, gender accounted for two significant differences. Female administrators ranked *Classroom Management and Organization* significantly higher than male administrators who, in turn, ranked *The Teacher as a Person* significantly higher than female administrators. Of the 29 indicators of quality, four significant differences emerged for administrators' rankings. These differences were the result of female administrators ranking both "Linking instruction to objectives" and "Uses reflection to improve his or her own practice" significantly higher than male administrators. Male administrators ranked "Displays excitement for content" and "Displays excitement for teaching and learning" significantly higher then female administrators. Three differences emerged for teachers' rankings of the 29 indicators of quality. Male teachers ranked "Maintains appropriate pacing of instruction" and "Demonstrates an on-going commitment to the profession" significantly higher than female teachers. Female teachers, on the other hand, ranked "Uses data to make instructional decisions" significantly higher than male teachers. In all, gender accounted for nine significant differences among administrators and teacher rankings, more than any other factor.

Research Question Five

Do administrators and teachers believe that there are additional qualities of effective teachers that impact student achievement that are not represented by Stronge's (2007) framework, and if so, what are those qualities?

Participants in the study were asked to identify any qualities of effective teachers or indicators of those qualities that they believe impact student achievement that were not addressed in the survey. Content analysis was used to analyze this open-ended question. Three additional indicators of quality emerged. First, administrators and teachers both identified *flexibility* as an indicator of teacher quality that impacts student achievement. This is not surprising given the current atmosphere of accountability in which school accreditation is linked to AYP and the performance of all subgroups of students. Teachers and administrators recognize the importance of reaching all students including marginal, special needs, and at-risk students who may previously have slipped through the cracks. Second, administrators and teachers also identified *parent communication* as an important indicator of quality that impacts student achievement. This indicator was reported by participants in rural, suburban, and urban schools; elementary, middle, and high schools; all regions of the country; and was most evident among participants with the greatest number of years experience. This demonstrates the importance that experienced educators in every setting place on communicating with parents and the influence they believe that such communication has on student achievement. Lastly, administrators reported *collaboration with peers* as an additional indicator of quality. Collaboration allows effective teachers to share their expertise and influence the practice of their peers. One administrator from the Midwest described the purpose of

collaboration as the enrichment and improvement of instruction. Most administrators who identified collaboration as an indicator of quality referred to it as an ability—suggesting that some teachers are more capable of collaborating with colleagues than others. If this is the case, and if administrators perceive collaboration to be an important component of student achievement, then time and effort should be made to increase the ability of all teachers to be collaborators. Expending administrative energy toward an effective collaboration model within the school would be a useful way in which administrators can put into practice that which they believe about a teacher's influence on student achievement.

Discussion

Validation Support for Qualities of Effective Teachers

This study provides evidence that K-12 public school administrators and teachers across the United States hold similar beliefs about which teacher behaviors, qualities, and attributes have the greatest impact on student achievement. The study has also shown that perceptions of teacher quality both among administrators and among teachers are only minimally affected by region of the country, urbanicity of school, level of school, years of experience, and gender.

Administrator and teacher rankings in the study demonstrate which qualities and indicators that each group independently believed most affect student learning. The alignment of perceptions demonstrates inter-rater agreement and adds support for the validation of the qualities of effective teachers examined in the study. Inter-rater agreement in the study suggests the existence of a standard for effective teaching that administrators and teachers both support. Such a standard may be reflected in Stronge's

(2007) framework because it provided the organizational backdrop for the study. Inter-rater agreement for the framework was further strengthened by the initial field test for this study which required participants to rate the qualities and indicators of quality on a Likert-type scale. Results of the field test indicated that participants perceived all of the qualities and indicators to play an important role in student achievement with very little variation in ratings (Williams, 2008). Because qualities of effective teaching overlap in several frameworks, other frameworks may also be indicative of standards for effective teaching (see Danielson, 1996; Davis & Thomas, 1989; Marzano, 2007). Nonetheless, results of the study demonstrate that Stronge's framework is a valid representation, at least in terms of teachers' and administrators' perceptions, of the qualities educators believe to be associated with effective teachers.

The results of the study support the validation of particular teacher qualities and indicators of quality found throughout the literature (see Danielson, 1996; Marzano, 2007; Marzano, Pickering, and Pollock, 2005; Stronge, 2007). Strengthening the validity of effective teacher qualities contributes to a growing body of knowledge on teacher effectiveness. Specifically, results of the study demonstrated that administrators and teachers both agreed that *Planning for Instruction* is the most important component of a teacher's work that impacts student achievement. Additionally, administrators and teachers both ranked "Establishes and communicates high expectations for student achievement" as the most important indicator of the general quality, *Planning for Instruction*. Both ranked "Maintains a physically and emotionally safe environment for students" as the most important indicator of the general quality, *Classroom Management and Organization*. Both groups ranked "Designs lessons to actively engage students in

the learning process" as the most important and "Employs a variety of techniques and instructional strategies to accomplish learning goals" as the second most important indicator of the quality, *Implementing Instruction*. Although participants were given a list of qualities and indicators to rank, the precise alignment among these variables, as well as the general alignment among other variables, increases the validity that these are, in fact, perceived qualities of effective teachers. Participants also provided similar responses when prompted for additional qualities in an open-end question format. Administrators and teacher both agreed that flexibility and parent communication were important indicators of teacher quality not present in the survey that also impact student achievement. This finding lends to the validation of those additional indicators of quality.

The literature on teacher effectiveness is replete with research-based classroom practices and teacher qualities that positively and significantly impact student learning. If educators place more value on their own experiences to guide instructional practice than on empirical evidence, then student learning may suffer. Therefore, the degree to which educators allow their personal experiences to shape their professional practice is an important issue. There is evidence that perceptions of effective teaching are unduly influenced by personal experience (see Kane & Temple, 1997; Murphy, Delli, & Edwards, 2004; Snider & Roehl, 2007). If individual experience is the dominant factor in forming perceptions, then one might expect considerable variation among educators' perceptions of teacher effectiveness. Yet, results from this study showed the opposite to be true. Instead of rankings of the qualities and indicators of quality being divided by demographic factors, results showed homogeneity of perceptions among educators across factors. The like-mindedness among administrators and teachers in the study suggests

that situational factors associated with personal experience—region, level of school, urbanicity, years of experience, and gender—play a minimal role in shaping perceptions regarding teacher effectiveness. This finding supports the validation of research-based qualities of effective teachers, particularly those in Stronge's (2007) framework.

Implications for Improving Teacher Practice

Validation of effective teacher qualities provides a launching point for improving teacher practice. If education were viewed as an input-process-output model where student learning is the most important output, then teacher quality would be the most powerful of the process variables. Therefore, validating the qualities and practices of the most effective teachers contributes to the knowledge of what teachers should do to have the greatest effect on student learning. The fact that perceptions of educators in the study correspond to the literature on effective teaching makes it more probable that administrators and teachers who intend to improve student learning through the enhancement of teaching will be able to do so.

The fact that administrators and teachers ranked the qualities and indicators of quality for effective teachers similarly has at least three important implications for improving teacher practice: (a) teacher selection, development, and retention; (b) assessment and evaluation of teachers; and (c) creating a culture of teaching and learning within schools. First, a core responsibility of school administrators is to hire, develop, and retain effective teachers. This requires administrators to be able to recognize qualities in prospective teachers that will promote the greatest gains in student performance. Administrators must also be able to recognize qualities and practices among in-service teachers that do not produce desired effects so they can remediate and guide teachers in

developing those qualities essential to student learning. These efforts can be complicated by the multifaceted nature of teacher effectiveness. If characteristics of teacher effectiveness were dependent on demographic factors, then the task of hiring and developing effective teachers would become even more confused. Results of the study, however, demonstrate that administrators share perceptions of which teacher qualities have the greatest impact on student achievement. Those perceptions also align with teacher perceptions. Accordingly, efforts to recruit the most capable teachers and develop effective qualities in others should be less complicated than they would have been had administrators and teachers disagreed on which teacher qualities were most important.

Another important responsibility of administrators is to assess and evaluate teachers and to remediate those that are ineffective. If administrators and teachers hold differing views about what constitutes effective teaching, then this task could become confounded or even fruitless. Results from this study indicate that administrators and teachers hold similar beliefs about which teacher qualities most affect student achievement. Therefore, administrators wishing to improve the effectiveness of their teachers should be aided in doing so because they share common perceptions with teachers about the contribution that specific teacher qualities have on student achievement. Efforts to assess and evaluate teaching should revolve around these common perceptions. Like assessment of student learning, assessment of teaching is inextricably connected to improvement. Yet, if assessment of teacher performance were based on factors that conflicted with teacher beliefs, then improvement would not be likely. This study suggests that teachers already buy-in to administrator perceptions of effective teaching and that those perceptions are aligned with research-based qualities of

effective teaching. This increases the potential for assessment and evaluation of teacher performance to actually result in improved performance.

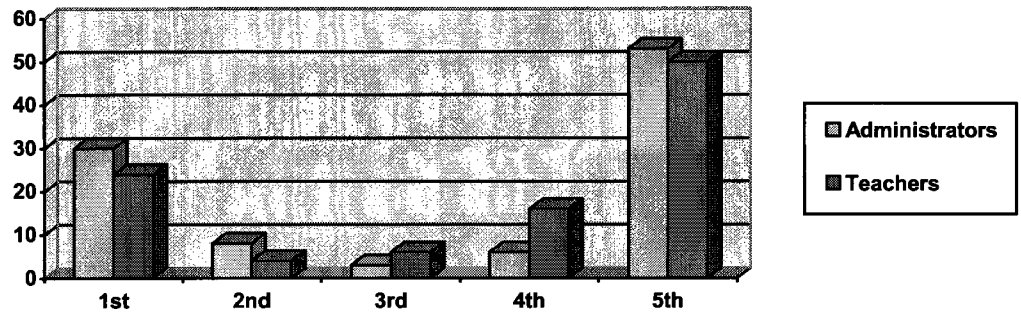
Lastly, administrators expend time and energy to create a culture for teaching and learning within their schools. Hoy and Miskel (2005) described organizational culture as "a system of shared orientations that hold the unit together and give it a distinctive identity" (p. 165). In educational settings, the outcome of these efforts is measured by student achievement. Administrators share a vision of success with their teachers and staff and guide all members of the school community toward the successful realization of that vision. This study demonstrates that administrators and teachers share common perceptions about which qualities and practices are most important. Therefore, the task of creating a culture of shared orientations among the school community should be less complicated than if administrator and teacher perceptions were greatly misaligned.

The Teacher as a Person

Administrators and teachers both ranked *The Teacher as a Person* as the fourth most important of the five general qualities in the study that impacts student achievement. Descriptive statistics revealed a bimodal distribution of ranks for both groups. Thirty percent of administrators and 24% of teachers ranked *The Teacher as a Person* as the most important quality, and 53% of administrators and 50% of teachers ranked it as the least important. In sum, 75% of participants ranked this quality as either the most or the least important general teacher quality impacting student achievement. Chart 3 shows the percentage of participants who ranked this quality from most important (1^{st}) to least important (5^{th}).

Chart 3

Bimodal Distribution of Scores for The Teacher as a Person



A teacher's personal qualities are often viewed as "fuzzy" variables (Ornstein & Lasley, 2000) that may be difficult to discern and measure. The bimodal distribution of ranks in the study demonstrates that a large portion of administrators and teachers viewed personal qualities as either most or least important. Analysis of no other general quality in the study revealed a similar distribution skewed toward both ends. This suggests that educators are divided as to the relative importance of a teacher's personal qualities.

Differences Based on Gender

Administrators and teachers both ranked five general qualities and 29 indicators of quality in the order in which they perceived them to impact student achievement. Thus, each group ranked a total of 34 items. Analyses were run to determine if any of five demographic factors—region, urbanicity, level of school, years of experience, and gender—influenced the rankings. When examining each factor there was a possibility for 68 significant differences to emerge—34 differences among administrators and 34 differences among teachers. Although there was general agreement among participants in the study, differences did occur. Gender accounted for nine differences, more than any other factor.

Table 42

Number of Significant Differences Based on Demographic Factors

Factor	General Quality	Indicators of Quality	Total
Region	0	8	8
Urbanicity	1	3	4
Level of School	1	4	5
Years of Experience	3	1	4
Gender	2	7	9

Educators' gender influenced perceptions more than any other factor in the study. Table 43 shows the number of significant differences ($p < .05$) based on the five demographic factors in the study. One explanation for these differences among teachers is the uneven distribution of female and male teachers by grade level. NCES data confirm that female teachers overwhelmingly outnumber male teachers at the elementary level and that the distribution is more equitable at the secondary level (http://nces.ed.gov/programs/coe/2010/section4/table-tsp-1.asp). This may account for two differences among teachers that appear to be based on gender. First, males in the study ranked the indicator of quality, "Maintains appropriate pacing of instruction," significantly higher than females. High school teachers also ranked this indicator significantly higher than elementary teachers. The fact that male teachers are more likely to be high school teachers than elementary teachers may explain this difference. Second, elementary teachers ranked the indicator, "Uses data to make instructional decisions," significantly higher than high school teachers. This indicator was also ranked significantly higher by females than males. This difference may be accounted for because there are so few male teachers in elementary schools.

Differences based on gender also emerged among administrators. These differences cannot be linked directly to different grade levels because there is parity in the distribution of female and male administrators in public schools. However, differences may be indirectly linked to grade level. School administrators typically have teaching experience. Therefore, administrator perceptions may be influenced by personal experiences as a classroom teacher. For example, male administrators in the study ranked "Displays an excitement for subject area content" significantly higher than female administrators. This may be linked to the fact that male administrators were more likely to have been secondary teachers than elementary teachers before moving into administration. Secondary teachers tend to teach one subject and develop expertise on that subject. Elementary teachers, on the other hand, typically teach a wide range of subjects. Male administrator perceptions of the relationship between content knowledge and student achievement may be attributable to the high proportion of male teachers working in secondary schools.

The effect that gender had on perceptions in the study produces a blurred picture. While some of the differences that appear to be based on gender may actually be attributable to grade level, other differences are not as readily explainable by other factors. For instance, female administrators in the study ranked *Classroom Management and Organization* significantly higher than male administrators. Male administrators ranked *The Teacher as a Person* significantly higher than female administrators. Male administrators also ranked the indicator of quality, "Displays an excitement for teaching and learning," significantly higher than females, and male teachers ranked "Demonstrates

an on-going commitment to the profession" significantly higher than female teachers. These differences appear to be the effect of gender.

There is evidence that gender plays a role in perceptions of teacher effectiveness. Two studies of pre-service teachers' perceptions of effective teaching found that males perceived subject matter expertise to be more important than females pre-service teachers (Minor, Onwuegbuzie, Witcher, & James, 2002; Mowrer-Reynolds, 2008). Studying the perceptions of national board certification (NCB), Okpala, James, and Hopson (2009) found that male educators viewed NCB teachers as more effective than female educators. Another study found that differences in perceptions of teacher effectiveness based on gender were greatest among pre-service teachers and diminished with years of experience (Behrens, Hoewisch, and Kazelskis, 1993). Interestingly, the same study also found only minimal differences in perceptions of teacher effectiveness between male and female administrators. Thus, while some of the differences in the current study based on gender may actually have been a function of grade level, other differences, indeed, may have been related to gender.

The Low Value of Monitoring Student Progress

Administrators and teachers in the study ranked *Monitoring Student Progress* as the least important teacher quality impacting student achievement. In ranking the five general qualities, only four percent of participants ranked *Monitoring Student Progress* as the quality having the greatest impact on student achievement, whereas, 60% of participants ranked it either fourth or fifth. Table 42 displays the percentage of participants who ranked *Monitoring Student Progress* as first, second, third, fourth, or fifth most important among the five general qualities of effective teachers examined in

the study. This finding suggests that educators consider assessment of student learning to be of lesser value than many of their other responsibilities. Results of the study indicate that administrators and teachers both consider planning, classroom management, classroom instruction, and a teacher's personal qualities to have a greater impact on student learning than assessment.

Table 43

Participants' Ranking of Monitoring Student Progress

Rank	Total Sample	Administrators	Teachers
1st	4%	4%	3%
2nd	10%	12%	8%
3rd	27%	27%	26%
4th	34%	31%	37%
5th	26%	27%	26%

The low value of *Monitoring Student Progress* in the study may be a function of the accountability movement and NCLB. Commenting on the mounting emphasis placed on external testing over the past decade, Gareis and Grant (2008) suggested that educators have increasingly come to view assessment as a negative external act that is done to them and their students. An example of this is found in a study of middle school teachers who perceived that state testing had negatively impacted instruction because it forced them to alter their selection of teaching and assessment strategies (Faulkner & Cook, 2006). The increased prominence of external testing has shifted the focus of assessment away from the formative and summative classroom assessments over which teachers have control to external summative assessments over which teachers have little or no control. Further, external testing is accompanied by sanctions for consistently underperforming schools which may exacerbate the negativity associated with

assessments. Thus, measuring school success using external assessments may account for educators' low perceptions of the importance of *Monitoring Student Progress*.

Another possible reason for the low ranking of *Monitoring Student Progress* is that educators may receive less formal training in the area of assessment than in other areas of effective teaching. Minor et al. (2002) found that preservice teachers' perceptions of effective teaching included qualities within the broad themes of enthusiasm for content and students, ethical behavior, and instruction and management. Preservice teachers' perceptions did not include assessment of student learning. This may be a function of the amount of attention traditionally given to assessment in teacher preparation programs. Stiggins (cited in Kohn, 2009) argued that virtually all teacher preparation programs lack adequate assessment training. This is supported by Good et al. (2006) who examined first year teachers' competency in three areas—assessment, classroom management, and implementation of instruction—and found that first year teachers had the greatest difficulty with assessment of student learning. Even teachers with many years of experience may undervalue the role of assessment in student achievement. Assessment carries the stigma of being traditionally viewed as an act separate from instruction. Teachers often consider assessment solely in the context of an event that takes place after instruction is finished. This perceived separation may lead teachers to devalue its importance in the learning process.

Administrators are the formal instructional leaders of schools. It is their responsibility to assist teachers in developing and using assessments to improve student learning. Yet, administrators also ranked *Monitoring Student Progress* as the least influential teacher quality affecting student achievement. This also may be a function of

inadequate training. Although administrators are trained as instructional leaders, that does not necessarily mean that their preparation included training in assessment leadership (Stiggins & Duke, 2008). Therefore, the low value of *Monitoring Student Progress* in the study may be a result of the traditional preparation that administrators and teachers receive.

Regardless of the reason for the low value of *Monitoring Student Progress* in the study, the practical implications are large. A major purpose of schooling is student learning, and assessment is the instrument by which teachers gain information about student learning (Gareis & Grant, 2008). Therefore, a low value of assessment makes it difficult for educators to accurately know if they are successful in fulfilling their purpose. The fact that educators in the study perceived other qualities to have a greater impact on student learning than assessment suggests that they focus their efforts on factors such as planning and implementing instruction. The consistent low ranking of *Monitoring Student Progress* among participants suggests that educators do not place the same emphasis on discovering if their planning and instructional efforts actually result in student learning.

The lack of emphasis on assessment means that administrators and teachers may be missing an important opportunity to maximize student learning. The power of assessment is in the information it provides to both teachers and students. This information, when properly used, increases student performance. Effective teachers use the information gained from assessments to communicate to students about their progress and how it can be improved. Studies on teacher feedback of student performance demonstrate that providing feedback is among the most powerful educational

interventions (Black & Wiliam, 1998; Hattie, 1999; Hattie & Timperley, 2007). Yet, results of the study suggest that this powerful intervention is undervalued. When teachers and administrators ranked the five indicators of quality for *Monitoring Student Progress*, both ranked "Provides clear, specific, and timely feedback" fourth. When combined with the low ranking of *Monitoring Student Progress*, this finding suggests that educators do not recognize the power of feedback and assessment on student achievement.

Conclusion

Effective teachers make a positive and significant impact on students' learning and achievement. They possess pedagogical knowledge and skills as well as personal attributes that stimulate student interest, inspire performance, and prolong learning beyond the confines of the classroom. Ineffective teachers, on the other hand, may actually impede student learning and academic growth. Thus, central to the task of improving student performance is the identification and promulgation of effective teaching practices. Students with effective teachers show significant learning gains. Effectiveness, however, can be difficult to discern especially given the complexities of teaching and learning. Several factors that are both under and beyond control of teachers affect student learning. Educators' perceptions of teacher effectiveness provide valuable insight into which teacher behaviors and attributes practitioners believe have the greatest impact on student learning. The current study contributed to this task by identifying the teacher qualities and indicators of quality that educators believe are most important to promoting student achievement.

Educators share the common goal of improving student learning. Ensuring that students have highly effective teachers is the most powerful way that educators can

improve student learning. Yet, educators' perceptions of effectiveness may differ based on demographic differences. Experience is a powerful informant that shapes perceptions and influences action. By the nature of the profession, educators have a certain degree of shared experience. Perceptions may also be formed around non-shared situational factors which may in turn shape instructional practices. If these factors play a significant role in shaping experiences and forming perceptions, then enhancing student performance through the identification of common qualities of effective teachers would be impractical.

The central finding of the study was congruence among participants' perceptions of which qualities of effective teachers have the greatest impact on student achievement. Perceptions were largely consistent between administrators and teachers and across the demographic factors (a) region of the country, (b) urbanicity of school, (c) level of school, (d) years of experience, and (e) gender. Where significant differences occurred, gender appeared to play the largest role. However, caution must be used when interpreting this finding. There is a possibility that some of the differences that appeared to be attributable to gender may actually be explained by the fact that males are significantly more likely to be high school teachers than elementary teachers. Some of the differences created by gender were similar to differences also attributable to differences between elementary and secondary educators.

These few differences aside, results of the study indicate that educators share a common understanding of the importance of particular teacher behaviors and attributes relative to others examined in the study. If experience is an important determinant of perception, then results of this study indicate that situational factors associated with experience are less important than educators' shared experiences in determining which

teacher qualities most impact student achievement. The aim of schooling is to improve student learning and teacher effectiveness is essential toward that end. Therefore, it is important that teachers and administrators have a common understanding of which qualities comprise an effective teacher. Results of this study indicate that such a common understanding exists among K-12 educators.

There is an increasing literature base on teacher perceptions of teacher effectiveness. A recent query on the Education Research Complete database yielded 148 matches for a combined search of the terms "teacher perceptions" and "teacher effectiveness." However, less than 10 results appeared for a similar search when "principal perceptions" and "administrator perceptions" replaced "teacher perceptions" in the query. Still fewer results were produced when attempting to find both administrator and teacher perceptions of teacher effectiveness. This study adds to the literature by comparing administrator and teacher beliefs about effective teaching.

Limitations

Generalizability of the study's results was affected by three factors. First, the study relied on a rank ordering survey instrument for data collection. Rank ordering is preferable to rating scales for several reasons, not the least of which is that rankings provide greater variability in results. Participants were forced to choose among competing variables and were not permitted to find all variables equally valuable. Caution must be used when interpreting the results of rank ordered responses because there cannot be an assumption of equal intervals between ranks (Gall, Gall, & Borg, 2007) as one would expect between intervals on a rating scale. Additionally, the wording used to describe the qualities and indicators of quality in the survey may have affected

participants' perceptions and rankings. Second, the low response rate (n = 170, 8.48%) reduced the power of the findings that resulted from statistical analysis. A larger sample size would have decreased the standard error of difference in the analyses (Kiess & Green, 2010). The third limitation is also related to the analyses of results. Multiple one-way ANOVAs were used to compare the means among participants employing a different independent variable for each test. However, the greater the number of analyses, the more likely for Type I errors to occur. Therefore, results regarding any perceived differences in the qualities of effective teachers must be interpreted cautiously because the number of ANOVA tests increased the likelihood that reported significant differences were actually differences that occurred by chance.

Recommendations for Future Research

Additional research may add to the understanding of educators' perceptions of effective teacher qualities. The following are recommended.

- In the current study, participants were provided with a set of qualities and indicators of quality to rank in the order in which they perceived them to impact student achievement. An additional feature that may yield important results would be to withhold the research-based framework from participants and simply ask them to identify which qualities they believe most affect student achievement. This could be accomplished through open-ended questionnaires or by individual or group interviews. The researcher could then compare the results to an established framework to determine if educators' responses correlate to research-based qualities.

- It would be interesting to learn if teacher licensure type as an independent variable would affect the rankings of effective teacher qualities. In the current study, no such data were collected. However, given the surge in accelerated teacher preparation and career-switcher programs across the country, it would be important to see if teachers with previous career experience who had undergone non-traditional training have similar beliefs about effective teaching as those who were traditionally prepared.
- Additional knowledge about the role of perceptions in teacher quality may be obtained from a replication of the current study with parents, students, and/or policy makers as participants. It would particularly be interesting to see if policy makers—from the local school board level up to the federal level—plan and implement policies concerning teacher effectiveness that are aligned with education practitioners perceptions.
- Greater understanding of the current study could be gained from a follow-up that involved focus group interviews. Focus groups could reveal the underlying reasons for rankings of particular qualities and indicators. Allowing participants to verbally express their perceptions may reduce the amount of error created by the specific wording of qualities and indicators on the survey instrument of the current study.

Appendix A

Survey

Administrator and Teacher Perceptions of the Qualities of Effective Teachers (modified from online format)

CLASSROOM MANAGEMENT & ORGANIZATION

Based on your knowledge and experience, please rank the following indicators of teacher quality from 1-4 in order of their impact on student achievement. (1=strongest impact; 4 = lowest impact)

_____ Maintains order and routines.

_____ Prepares materials ahead of time and has them ready to use.

_____ Maintains a physically and emotionally safe environment for students.

_____ Reinforces expectations for positive behavior and responds to misbehaviors promptly.

PLANNING FOR INSTRUCTION

Based on your knowledge and experience, please rank the following indicators of teacher quality from 1-6 in order of their impact on student achievement. (1=strongest impact; 6 = lowest impact)

_____ Limits interruptions and focuses classroom time on teaching and learning.

_____ Establishes and communicates high expectations for student achievement.

_____ Maintains appropriate pacing of instruction.

_____ Considers student learning styles and plans instruction accordingly.

_____ Links instruction to students' real-life situations.

_____ Links instruction to objectives.

IMPLEMENTING INSTRUCTION

Based on your knowledge and experience, please rank the following indicators of teacher quality from 1-6 in order of their impact on student achievement. (1= strongest impact; 6 = lowest impact)

_____ Employs a variety of techniques and instructional strategies to accomplish learning goals.
_____ Designs lessons to actively engage students in the learning process.

_____ Uses a variety of questioning techniques.

_____ Provides clear examples and offers guided practice.

_____ Uses effective grouping strategies.

_____ Focuses instruction on higher-order skills rather than memorization of information.

MONITORING STUDENT PROGRESS

Based on your knowledge and experience, please rank the following indicators of teacher quality from 1-5 in order of their impact on student achievement. (1=strongest impact; 5 = lowest impact)

_____ Uses homework to augment student learning.

_____ Gives clear, specific, and timely feedback.

_____ Re-teaches when students do not achieve mastery.

_____ Uses data to make instructional decisions.

_____ Selects appropriate assessment tools and strategies to evaluate student progress.

TEACHER AS A PERSON

Based on your knowledge and experience, please rank the following <u>indicators of teacher quality</u> from 1-6 in order of their impact on student achievement.
(1=strongest impact; 6 = lowest impact)

_____ Demonstrates concern for the physical & emotional well-being of students.

_____ Treats all students with fairness.

_____ Treats all students with respect.

_____ Interacts and fosters positive relationships with students.

_____ Displays an excitement for subject area content.

_____ Displays an excitement for teaching and learning.

_____ Demonstrates and on-going commitment to the profession.

_____ Uses reflection to improve his or her own practice.

TEACHER QUALITIES

Based on your knowledge and experience, please rank the following <u>teacher qualities</u> from 1-5 in order of their impact on student achievement.
(1=strongest impact; 5 = lowest impact)

_____ Teacher as a Person

_____ Classroom Management & Organization

_____ Planning for Instruction

_____ Implementing Instruction

_____ Monitoring Student Progress

<u>Please use the space below to list any additional qualities/indicators of quality that you believe are not represented in the survey.</u>

DEMOGRAPHIC INFORMATION

Which of the following best describes your current position?
_____ Teacher
_____ Administrator
_____ Other _____

Please indicate your gender.
_____Female
_____ Male

Please indicate the total number of years that you have worked in education.
_____ 1-5 years
_____ 6-10 years
_____ 11-15 years
_____ 16-20 years
_____ 20+ years

Which of the following best describes the school in which you currently work?
_____ Elementary School
_____ Middle School
_____ High School
_____ Other _____

Which of the following best describes the setting of the school in which you currently work?
_____ Rural
_____ Suburban
_____ Urban

Please use the drop down menu to select the state where you currently work.
_____

Appendix B

Email Sent to Participants

Thank you for reading this email!

My name is Rob Williams and I am a school administrator in Central Virginia and a doctoral student in the Education Policy, Planning, and Leadership program at the College of William and Mary.

To collect data for my dissertation, I have created a brief online survey titled "Teacher and Administrator Perceptions of the Qualities of Effective Teachers". The survey requires you to rank qualities of effective teachers against one another in terms of their impact on student achievement.

Click the link at the top of the page to begin the survey

The survey will take approximately 10-15 minutes to complete. Once you click on the link to begin the survey, the first page you will see is a Consent Agreement that describes the study and its ethical safeguards. Click the Start button at the bottom of that page to begin the survey.

If you would like a copy of the results of the study, send an email to rewill@email.wm.edu with "survey results" in the subject line.

Why were you selected to participate in the study?

I have employed the services of a vendor that maintains email addresses of educators. That vendor randomly selected 2,000 educators from across the United States to participate in the study. You have received this email because your email address was randomly selected from the vendor's database.

As an educator, I know how precious your time is. That's why I have designed the survey to be brief. I sincerely hope that you will take just a few minutes to complete the survey.

Thank you for taking the time to take my dissertation survey!

Appendix C

Consent for Participation

Please read the following Consent Agreement and then click the **Start** button at the bottom of the page to proceed to the survey.

I agree to participate in a dissertation study investigating the perceptions that K-12 teachers and administrators possess about the qualities of effective teachers. The purpose of this study is to determine which qualities of effective teachers participants believe have the greatest impact on student achievement. I understand that my selection to participate in the study is the result of a random selection process conducted by a third party vendor whose involvement in the study is limited exclusively to selecting and distributing information to potential participants. I understand that the researcher is conducting this study to fulfill the requirements of a doctoral program in Education Policy, Planning, and Leadership at the College of William and Mary in Williamsburg, Virginia.

As a participant, I understand that my involvement in the study is limited solely to taking an online survey. I understand that the survey requires the ranking of qualities against one another that are identified in the literature as those of effective teachers. As a participant in the study I will provide relevant demographic information used in the study to answer research questions. I understand that none of the information collected will be used to reveal my identity as a participant or to link my responses with my identity.

The survey is comprised of 12 rank-order items and one open-ended item, and may take approximately 10-15 minutes to complete. I further understand that I may request a copy of the study's results from the researcher by sending an email requesting results to rewill@email.wm.edu.

I understand that there may be minimal psychological discomfort directly involved with this research. Further, I understand that I do not have to answer every question asked of me, and I am free to withdraw my consent and discontinue participation in this study at any time simply by discontinuing the survey. If I have any questions or problems that arise in connection with my participation in this study, I should contact Dr. James Stronge, the project director at 757-221-2339 or jhstro@wm.edu. If I have any ethical concerns with the conduct of the study, I should contact Dr. Michael Deschenes, the chair of the Protection of Human Subjects Committee at the College of William and Mary at 757-221-2778 or mrdesc@wm.edu.

By taking the survey, I verify that I am at least 18 years of age, that I have received a copy of this consent form, and that I consent to participate in this study and the tasks outlined above.

Appendix D

Four Regions of the United States

http://www.census.gov/geo/www/us_regdiv.pdf

Northeast:

1. Maine
2. New Hampshire
3. Vermont
4. Massachusetts
5. Connecticut
6. Rhode Island
7. New York
8. Pennsylvania
9. New Jersey

Midwest:

1. Ohio
2. Michigan
3. Indiana
4. Illinois
5. Wisconsin
6. Minnesota
7. Iowa
8. Missouri
9. Kansas
10. Nebraska
11. South Dakota
12. North Dakota

West:

1. Montana
2. Wyoming
3. Colorado
4. New Mexico
5. Arizona
6. Utah
7. Idaho
8. Washington
9. Oregon
10. Nevada
11. California
12. Alaska
13. Hawaii

South:

1. Delaware
2. Maryland
3. Virginia
4. West Virginia
5. Kentucky
6. Tennessee
7. North Carolina
8. South Carolina
9. Georgia
10. Florida
11. Alabama
12. Mississippi
13. Louisiana
14. Arkansas
15. Oklahoma
16. Texas

Appendix E

Disaggregated Administrator Additional Qualities

Level

ELEMENTARY	MIDDLE	HIGH
Technology Collaboration (2) Flexible (2) Parent Communication (2)	Flexible (4) Parent Communication (2) Continuing Education Humor	Flexible Parent Communication (2) Collaboration (4)

Urbanicity

RURAL	SUBURBAN	URBAN
Parent Communication (2) Flexible (3) Collaboration (2)	Technology Collaboration Flexible (3) Parent Communication (3) Continuing Education Humor	Flexible Collaboration (3) Parent Communication

Gender

FEMALE	MALE
Flexible (5) Technology Collaboration (3) Parent Communication (3)	Parent Communication (3) Collaboration (3) Flexible (2) Continuing Education Humor

Years of Experience

1-5	6-10	11-15	16-20	20+
n/a	Flexible Cont Education	Collaboration Flexible	Flexible Parent Com Humor	Flexible (4) Technology Collaboration (5) Parent Com (5)

Region

Northeast	Midwest	South	West
Technology Collaboration (3) Flexible (2) Parent Com (2)	Flexible Parent Com (3) Collaboration Cont Education	Flexible (3) Collaboration (2) Parent Com Humor	Flexible

Parent Com – Parent Communication

Cont Education – Continuing Education

(#) - Number of times item appeared in the survey as an additional quality

Appendix F

Disaggregated Teacher Additional Qualities

Level

ELEMENTARY	MIDDLE	HIGH
Flexible (2)	Parent Communication (2) Values Honest Continuous Improvement	Parent Communication (4) Teacher Dress

Urbanicity

RURAL	SUBURBAN	URBAN
Parent Communication (3) Flexible	Parent Communication (2) Flexible Honest Continuous Improvement	Parent Communication Values Teacher Dress

Gender

FEMALE	MALE
Parent Communication (4) Flexible (2) Values Honest Continuous Improvement	Parent Communication (2) Teacher Dress

Years of Experience

1-5	6-10	11-15	16-20	20+
Values	Flexible	Parent Com (2)	Flexible	Parent Com (4) T Dress Honest Cont Imp

Region

Northeast	Midwest	South	West
	Parent Com (3)	Parent Com (2) Flexible Values T Dress Honest Cont Improvement	Parent Com Flexible

Parent Com – Parent Communication
T Dress – Teacher Dress
Cont Improvement – Continuing Improvement
(#) – Number of times item appeared in the survey as an additional quality

References

Akey, T. M. (2006, January). *School context, student attitudes and behavior, and academic achievement: An exploratory analysis.* New York: MDRC. Retrieved March 13, 2010 from http://www.mdrc.org/publications/419/full.pdf

Akiba, M., LeTendre, G. K., & Scribner, J. P. (2007). Teacher quality, opportunity gap, and national achievement in 46 countries. *Educational Researcher,* 36, 369-387. doi:10.3102/0013189X07308739

Alazzi, K. (2007). Attitudes of Jordanian female students toward social studies education. *Journal of Social Studies Research, 31*(2), 3-11. Retrieved October 25, 2009 from the Education Research Complete database.

Allen, M., Witt, P. L., & Wheeless, L. P. (2006). The role of teacher immediacy as a motivational factor in student learning: Using meta-analysis to test a causal model. *Communication Education, 55*(1), 21-31. doi:10.1080/03634520500343368

Au, W. (2007). High stakes testing and curricular control: A qualitative metasynthesis. *Educational Researcher, 36*(5), 258-267. doi:10.3102/0013189X07306523

Auwarter, A. E., & Aruguete, M. S. (2008). The effect of student gender and socioeconomic status on teacher perceptions. *Journal of Educational Research, 101*, 243-246. Retrieved February 1, 2010 from the Education Research Complete database.

Bacolod, M. (2007). Who teaches and where they choose to teach: College graduates of the 1990s. *Educational Evaluation and Policy Analysis, 29,* 155-168. doi:10.3102016237370730558 6

Baker, D. P., Fabrego, R., Galindo, C., & Mishook, J. (2004). Instructional time and national achievement: Cross-national evidence. *Prospects, 34*(3), 311-334. Retrieved November 21, 2009 from the Education Research Complete database.

Banfield, S. R., Richmond, V. P., & McCroskey, J. C. (2006). The effect of teacher misbehaviors on teacher credibility and affect for the teacher. *Communication Education, 5*(1), 63-72. doi:10.1080/03634520500343400

Barney, D. (2005). Elementary physical education student teachers' interactions with students. *Physical Educator, 62*(3), 130-135. Retrieved October 29, 2008 from Consumer Health Complete Database.

Beishuizen, J. J., Hof, E., van Putten, C. M., Bouwneester, S., & Asscher, J. J. (2001). Students' and teachers' cognitions about good teachers. *British Journal of Educational Psychology, 71,* 185-201. Retrieved September 23, 2009 from the Education Research Complete database.

Behrens, R. Hoewisch, A. & Kazelskis, R. (1993, November). *Effects of gender on perceptions of teacher influence.* Paper presented at the annual meeting of the Mid-South Educational Research Association, New Orleans, LA. Retrieved September 29, 2010 from the ERIC database.

Benner, A. D. & Mistry, R. S. (2007). Congruence of mother and teacher educational expectations and low-income youth's academic competence. *Journal of Educational Psychology, 99*(1), 140-153. doi:10.1037/0022-0663.99.1.140

Berliner, D. C. (2005). The near impossibility of testing teacher quality. *Journal of Teacher Education,56*, 205-231. doi:10.1177002248710527590 4

Bitter, C., O'Day, J., Gubbins, P., & Socias, M. (2009). What works to improve student literacy achievement? An examination of instructional practices in a balanced literacy approach. *Journal of Education for Students Placed at Risk, 14,* 17-44. doi:10.1080/10824660802715403

Black, P, & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education, 5*(1), 7-75. Retrieved September 28, 2010 from the Education Research Complete database.

Brualdi, A. C. (1998). *Classroom questions.* Washington, D.C.:ERIC Clearinghouse on Assessment and Evaluation. (ERIC Identifier ED422407)

Bruce, C. D. & Ross, J. A. (2008). A model for increasing reform implementation and teacher efficacy: Teacher peer coaching in grades 3 and 6 mathematics. *Canadian Journal of Education, 31*, 346-370. Retrieved October 26, 2009 from the Education Research Complete database.

Burchinal, M. R., Peisner-Feinberg, E., Pianta, R., & Howes, C. (2002). Development of academic skills from pre-school through second grade: Family and classroom predictors of developmental trajectories. *Journal of School Psychology, 40,* 415-436. doi:10.1016/S0022-4405(02)00107-3

Cameron, C. E., Connor, C. M., & Morrison, F. J. (2005). Effects of variation in teacher organization on classroom functioning. *Journal of School Psychology, 43*, 61-85. doi:10.1016/j.jsp.2004.12.002

Cameron, C. E., Connor, C. M., & Morrison, F. J., & Jewkes, A. M. (2008). Effects of classroom organization on letter-word reading in first grade. *Journal of School Psychology, 46*, 173-192. doi:10.1016/j.jsp.2007.03.002

Carlson, E., Lee, H., & Schroll, K. (2004). Identifying attributes of high quality special education teachers. *Teacher Education and Special Education, 27*(4), 350-359. Retrieved March 23, 2010 from the Education Research Complete database.

Cassidy, W. & Bates, A. (2005). "Drop-outs" and "push-outs": Finding hope at a school that actualizes the ethic of care. *American Journal of Education, 112,* 66-101. Retrieved February 11, 2009 from Education Research Complete database.

Cheesebro, J. L. (2003). Effects of teacher clarity and nonverbal immediacy on student learning, receiver apprehension, and affect. *Communication Education, 52*, 135-147. doi:10.1080/0363452032000085108

Comedena, M. E., Hunt, S. K., & Simonds, C. J. (2007). The effects of teacher clarity, non-verbal immediacy, and caring on student motivation, affective and cognitive learning. *Communication Research Reports, 24*(3), 241-248. Retrieved October 28, 2008 from the Communication and Mass Media Complete database.

Connor, C. M., Jakobsons, L. J., Crowe, E. C., & Meadows, J. G. (2010). Instruction, student engagement, and reading skill growth in Reading First classrooms. *The Elementary School Journal, 109*(3), 221-250. Retrieved March 13, 2010 from the Education Research Complete database.

Cool, V. A. & Keith, T. Z. (1991). Testing a model of school learning: Direct and indirect effects on academic achievement. *Contemporary Educational Psychology, 16,* 28-44. Retrieved January 11, 2010 from the Education Research Complete database.

Cooper, H. (1989). *Homework.* White Plains, NY: Longman.

Cooper, H., Jackson, K., Nye, B., & Lindsay, J. (2001). A model of homework's influence on the performance evaluations of elementary school students. *Journal of Experimental Education, 69*(2), 181. Retrieved January 7, 2010 from the Education Research Complete database.

Cooper, H., Robinson, J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research, 76*(1), 1-62. Retrieved January 10, 2010 from the Education Research Complete database.

Cotton, K. (2001, January). *Expectations and student outcomes.* Retrieved November 15, 2008 from http://www.nwrel.org/scpd/sirs/4/cu7.html

Craig, J. & Cairo, L. (2005). *Assessing the relationship between questioning and understanding to improve learning and thinking (QUILT) and student achievement in mathematics: A pilot study.* Charleston, WV: Appalachia Educational Laboratory at Edvantia, Inc. Retrieved February 8, 2010 from the Education Research Complete database.

Cuccio-Schirripa, S. & Steiner, H. E. (2000). Enhancement and analysis of science question level for middle school students. *Journal of Research in Science Teaching, 37,* 210-234. Retrieved February 10, 2010 from the Education Research Complete database.

Danielson, C. (1996). *Enhancing professional practice: A framework for teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Darling-Hammond, L. (2000, January 1). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, (8)1.* Retrieved October 8, 2006, from http://epaa.asu.edu/epaa/v8n1/

David, J. L. (2008). Pacing guides. *Educational Leadership, 66*(2), 87-88. Retrieved March 10, 2009 from the Education Research Complete database.

Davis, E. A. (2006). Characterizing productive reflection among preservice elementary teachers: Seeing what matters. *Teaching and Teacher Education, 22,* 281-301. Retrieved January 25, 2009 from the ScienceDirect database.

Davis, G. A. & Thomas, M. A. (1989). *Effective schools and effective teachers.* Boston, MA: Allyn & Bacon.

Dee, T. S. (2007). Teachers and the gender gaps in student achievement. *The Journal of Human Resources, 42*(3), 528-554. Retrieved February 1, 2010 from the Education Research Complete database.

Del Carlo, D., Hinkhouse, H. & Isbell, L. (2010). Developing a reflective practitioner through connection between educational research and reflective practices. *Journal of Science Education and Technology, 19*(1), 58-68. doi:10.1007/s10956-009-9178-y

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process.* Boston, MA: D. C. Heath and Company.

Doherty, R. W. & Hilberg, R. S. (2007). Standards for effective pedagogy, classroom organization, English proficiency, and student achievement. *Journal of Educational Research, 101*(1), 24-34. Retrieved October 29, 2008 from the Education Research Complete database.

Dolezal, S. E., Welsh, L. M., Pressley, M., & Vincent, M. M. (2003). How third-grade teachers motivate student academic achievement. *The Elementary School Journal, 103,* 239-267. Retrieved January 25, 2009 from the Education Research Complete database.

Dunn, R., Honigsfeld, A., Doolan, L. S., Bostrom, L., Russo, K., Schiering, M. S., et al. (2009). Impact of learning style instructional strategies on students' achievement and attitudes: Perceptions of educators in diverse institutions. *Clearing House, 82*(3), 135-140. Retrieved March 23, 2010 from the Education Research Complete database.

Ellett, C. D. & Teddlie, C. (2003). Teacher evaluation, teacher effectiveness and school effectiveness: Perspectives from the USA. *Journal of Personnel Evaluation inEducation, 17*(1), 101-128. Retrieved from http://www.springerlink.com.proxy.wm.edu/content/v8302hg360rh0506/fulltext.pdf

English, F. W. (2000). *Deciding what to teach and test: Developing, aligning, and auditing the curriculum.* Thousand Oaks, CA: Corwin Press.

English, F. W. (2008). *The art of educational leadership: Balancing performance and accountability.* Thousand Oaks, CA: Sage Publications.

Farkas, R. D. (2003). Effects of traditional versus learning-styles instructional methods on middle school students. *Journal of Educational Research, 97*(1), 42-51. Retrieved February 13, 2010 from the Education Research Complete database.

Faulkner, S. A. & Cook, C. M. (2006). Teaching vs. testing: The perceived impact of assessment demands on middle grades instructional practices. *Research in Middle Level Education Online, 29*(7), 10848959. Retrieved from the Education Research Complete database October 2, 2010.

Ferreira, M. W. (2000). *Caring teachers: Adolsecents' perspectives.* Paper retrieved from the ERIC Database (ED441682) on February 21, 2009.

Fisher, D. (2009). The use of instructional time in the typical high school classroom. *The Educational Forum, 73*, 168-176. Retrieved February 1, 2010 from the Education Research Complete database.

Fraser, J. W. (2007). *Preparing America's teachers: A history*. New York: Teacher's College Press.

Furer, C. & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology, 95*(1), 148-162. doi:10.1037/0022-0663.95.1.148

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction (8^{th} ed.).* Boston, MA: Pearson.

Gallavan, N. P. (2009). *Developing performance-based assessments: Grades K-5.* Thousand Oaks, CA: Corwin Press.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

Gareis, C. R. & Grant, L. W. (2008). *Teacher made assessments: How to connect curriculum, instruction, and student learning.* Larchmont, NY: Eye on Education.

Geithman, B. W. (2009). *Examining principal perceptions, and teacher and school effectiveness through a value-added accountability model.* (Doctoral dissertation, University of Southern California). Retrieved from the Proquest database (AAT 3355255).

Good, T. L. & Brophy, J. E. (1987). *Looking in classrooms.* New York, NY: Harper & Rowe.

Good, T. L., McCaslin, M., Tsang, H. Y., Zhang, J., Wiley, C. R. H., Bozack, A. R., et al. (2006). How well do 1st year teachers teach: Does type of preparation make a difference? *Journal of Teacher Education, 57,* 410-430. doi:10.1177/0022487106291566

Goodlad, J. I. (2004). *A place called school (Special 20th anniversary edition).* New York, NY: McGraw-Hill.

Gronlund, N. E. (2006). *Assessment of student achievement.* Boston, MA: Pearson.

Gupta, R. & Saravanan, V. (1995). Old beliefs impede student teacher learning of reading instruction. *Journal of Education for Teaching, 21,* 347-360. Retrieved from the Education Research Complete database (AN9602192756).

Guskey, T. R. (2007, Spring). Multiple sources of evidence: An analysis of stakeholders' perceptions of various indicators of student learning. *Educational Measures: Issues and Practice,* 19-27. Retrieved March 5, 2009 from the Education Research Complete database.

Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H. et al. (2004). Increasing reading comprehension and engagment through concept-oriented reading instruction. *Journal of Educational Psychology, 96*(3), 403-423. doi:10.1037/0022-0663.96.3.403

Hailikari, T., Katajavuori, N., Lindlblom-Ylanne, S. (2008). The relevance of prior knowledge in learning and instructional design. *American Journal of Pharmeceutical Education, 72*(5), 1-8. Retrieved March 13, 2010 from the Education Research Complete database.

Hamre, B. K. & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72,* 625-638. Retrieved October 30, 2009 from the Education Research Complete database.

Hamre, B. K. & Pianta, R. C. (2005). Can instruction and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949-967. Retrieved February 22, 2009 from EbscoHost.

Hanushek, E. A. (1992). The trade-off between child quantity and quality. *Journal of Political Economy, 100,* 84-117. Retrieved March 6, 2010 from the Education Research Complete database.

Hardre, P. L. & Sullivan, D. W. (2009). Motivating adolescents: High school teachers' perceptions and practices. *Teacher Development, 13*(1), 1-16. doi:10.1080/13664530902858469

Hattie, J. (1999). *Influences on student learning* (Inaugural Address: Professor of Education). Auckland, New Zealand: University of Auckland.

Hattie, J. (2003, October). *Teachers make a difference: What is the research evidence?* Paper presented at the Australian Council on Educational Research Annual Conference on Building Teacher Quality, Melbourne, Australia. Retrieved from http://www.aiceonline.com/Resources/RC2003_Hattie_TeachersMakeA-Difference.pdf

Hattie, J. & Timperley, H. (2007). The power of feedback. *Review of Educational Research 2007.* doi:10.3102/003465430298487

Hayes, C. B., Ryan, A., & Zseller, E. B. (1994). The middle school child's perception of caring teachers. *American Journal of Education, 103,* 1-19. Retrieved February 11, 2009 from the Education Research Complete database.

Helding, L. (2009). Howard Gardner's Theory of Multiple Intelligences. *Journal of Singing, 66*(2), 193-199. Retrieved June 25, 2010 from the Education Research Complete database.

Herzberg, F., Mausner, B., & Snyderman, B. B. (1993). *The motivation to work (12th ed.).* Retrieved from http://books.google.com/books (Original work published in 1953).

Hoy, W. K. & Miskel, C. G. (2005). *Educational administration: Theory, research, and practice.* New York, NY: McGraw-Hill.

Hudson, P. (2007). High impact teaching for science. *Teaching Science, 53*(4), 18-22. Retrieved October 25, 2009 from the Education Research Complete database.

Hughes, J. N., Cavell, T. A., & Willson, V. (2001). Further support for the developmental significance of the teacher-student relationship. *Journal of School Psychology, 39,* 289-301. doi:10.1016/S00224405(01)00074-7

Huyveart, S. H. (1998). *Time is of the essence: Learning in schools.* Needham Heights, MA: Allyn & Bacon.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499-534. Retrieved September 3, 2009 from the Education Research Complete database.

Jacobs, H. H. (2010). A new essential curriculum for a new time. In H. H. Jacobs (Ed.), *Curriculum 21: Essential education for a changing world* (pp. 7-17). Alexandria, VA: Association for Supervision and Curriculum Development.

Jay, J. K. (2003). *Quality teaching: Reflection as the heart of practice.* Lanham, MD: The Scarecrow Press.

Johnson-Leslie, N. A. (2007). Effective vs. ineffective teachers educating our children. *International Journal of Learning, 13,* 133-142. Retrieved October 25, 2009 from the Education Research Complete database.

Kane, P. R. & Temple, E. (1997). Who is a good teacher? Who is a good school head? *Independent School, 56,* 50-57. Retrieved from the Education Research Complete database (AN9708226249).

Karsenti, T. P. & Thibert, G. (1995, April). *What type of motivation is truly related to school achievement? A look at 1428 high-school students.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Kaya, O. N., Dogan, A., Gokcek, N., Kilik, Z., & Kilik, E. (2007, April 9-13). *Comparing multiple intelligences approach with traditional teaching on eight grade stuents'achievement and attitudes toward science.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Kiess, H. O. & Green, B. A. (2010). *Statistical concepts for the behavioral sciences (4th ed.).* Boston, MA: Allyn & Bacon.

Kohn, A. (2006). Rethinking homework. *Principal, 86*(3), 35-38. Retrieved January 11, 2010 from the Education Research Complete database.

Kohn, L. J. (2009). The need for assessment literate teachers. *Southeastern Teacher Education Journal, 2*(4), 33-42. Retrieved October 2, 2010 from the Education Research Complete database.

Korkmaz, I. (2007). Teachers' opinions about the responsibilities of parents, schools, and teachers in enhancing student learning. *Education, 127,* 389-399. Retrieved November 14, 2009 from the Education Research Complete database.

Kunter, M., Tsai, Y., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. *Learning and Instruction, 18,* 468-482. Retrieved October 28, 2008 from the Science Direct database.

Kyriakides, L. & Campbell, R. J. (2003). Teacher evaluation in Cyprus: Some conceptual and methodological issues arising from teacher and school effectiveness research. *Journal of Personnel Evaluation in Education, 17*(1), 21-40. Retrieved from http://www.springerlink.com.proxy.wm.edu/content/x70611rrm831u6x3/fulltext.pdf

Law, C. & Kaufhold, J. A. (2009). An analysis of the use of critical thinking skills in reading and language arts instruction. *Reading Improvement, 46*(1), 29-34. Retrieved from the Education Research Complete database April 18, 2010.

Lee, I. (2007). Ten mismatches between teachers' beliefs and written feedback practices. *ELT Journal, 63*(1), 13-22. doi:10.1093/elt/ccn010

Lewis, R., Romi, S., Qui, X., Katz, Y. J. (2005). Teachers' classroom discipline and student misbehavior in Australia, China and Israel. *Teaching and Teacher Education, 21,* 729-741. doi:10.1016/j.tate.2005..05.008

Little, S. G. & Little-Akin, A. (2008). Psychology's contributions to classroom management. *Psychology in Schools, 45*(3), 227-234. doi:10.1002/pits.20293

Long, J. F. & Hoy, A. W. (2005). Interested instructors: A composite portrait of individual differences and effectiveness. *Teaching and Teacher Education, 22,* 303-314. Retrieved March 7, 2009 from the Education Research Complete database.

Lovelace, M. K. (2005). Meta-analysis of experimental research based on the Dunn and Dunn model. *Journal of Educational Research, 98*(3), 176-183. Retrieved March 22, 2009 from the Education Research Complete database.

Lou, Y., Abrami, P. C., Spence, J. C., Poulson, C., Chambers, B., & d'Apollonia, S. (1996). Within-class grouping: A meta-analysis. *Review of Educational Research, 66,* 423-458. Retrieved March 8, 2010 from the Education Research Complete database.

Lui, S. & Meng, L. (2009). Perceptions of teachers, students, and parents of the characteristics of good teachers: A cross-cultural comparison of China and the United States. *Educational Assessment, Evaluation, and Accountability, 21,* 313-328. doi:10.1007/s11092-009-90077-z

Lumpkin, A. (2007). Caring teachers: The key to student learning. *Kappa Delta Pi Record, 43*(4), 158-160. Retrieved February 11, 2009 from the ERIC database.

Marzano, R. J. (2007). *The art and science of teaching: A comprehensive framework for effective instruction.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J. & Marzano, J. S. (2003). The key to classroom management. *Educational Leadership, 61*(1). 6-13. Retrieved March 14, 2010 from the Education Research Complete database.

Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2005). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Upper Saddle River, NJ: Pearson.

Matsumara, L. C., Patthey-Chavez, G. G., Valdez, R., & Garnier, H. (2002). Teacher feedback, writing assignment quality, and third-grade students' revision in lower- and higher-achieving urban schools. *Elementary School Journal, 103*(1), 3-25. Retrieved November 1, 2009 from the Education Research Complete database.

McKnown, C. & Weinstein, R. S. (2002). Modeling the role of child ethnicity and gender in children's differential response to teacher expectations. *Journal of Applied Social Psychology, 32*(1), 159-184. Retrieved February 2, 2010 from the Educational Research Complete database.

Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Student/teacher relations and attitudes toward mathematics before and after the transition to junior high school. *Child Development, 60*, 981-992. doi:101111/1467-8624.ep9676559

Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *The Journal of Educational Research, 96*(2), 116-127. Retrived September 7, 2009 from the Educational Research Complete database.

Mitra, A., Jain-Shukla, P., Robbins, A., Champion, H., & Durant, R. (2008). Differences in rate of response to web-based surveys among college students. *International Journal on E-Learning, 7*(2), 265-281. Retrieved February 21, 2010 from the Education Research Complete database.

Mowrer-Reynolds, E. (2008). Pre-service educators' perceptions of exemplary teachers. *College Student Journal, 42*(1), 214-224. Retrieved September 29, 2010 from the Educational Research Complete database.

Muijs, D. & Reynolds, D. (2001). *Effective teaching: Evidence and practice.* London, England: Paul Chapman Publishing.

Munoz, M. A. & Chang, F. C. (2008). The elusive relationship between teacher characteristics and student academic growth: A longitudinal multilevel model for change. *Journal of Personnel Evaluation in Education, 20,* 147-164. Retrieved March 3, 2010 from the Education Research Complete database.

Murdock, T. B., Miller, A. & Kohlhardt, J. (2004). Effects of classroom context variables on high school students' judgments of the acceptability and likelihood of cheating. *Journal of Educational Psychology, 96*(4), 765-777. Retrieved October 28, 2008 from the PsychARTICLES database.

Murphy, P. K., Delli, L. M., & Edwards, M. N. (2004). The good teacher and good teaching: Comparing beliefs of second grade students, pre-service teachers, and in-service teachers. *Journal of Experimental Education, 72*(2), 69-92. Retrieved from the Education Research Complete database (AN12585135).

Murray, S., Ma, X., & Mazur, J. (2009). Effects of peer coaching on teachers' collaborative interactions and students' mathematics achievement. *The Journal of Educational Research, 102*(3), 203-212. Retrieved October 26, 2009 from the Education Research Complete database.

Noddings, N. (2005). *The challenge to care in schools: An alternative approach to education.* New York: Teachers College Press.

Noddings, N. (2006). Educational leaders as caring leaders. *School Leadership and Management, 26*(4), 339-345. Retrieved February 21, 2009 from the ERIC database.

Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis, 26,* 237-257. doi:10.3102016237370260032 37

O'Connor, K. (2007). *A repair kit for grading: 15 fixes for broken grades.* Portland, OR: Educational Testing Service.

Okpala, C. D., James, I., & Hopson, L. (2009). The effectiveness of national board certified teachers: Policy implications. *Journal of Instructional Psychology, 36*(1), 29-34. Retrieved September 29, 2010 from the Education Research Complete database.

Olson, J. K. (2008). The crucial role of the teacher. *Science and Children, 46*(2), 45-49. Retrieved January 19, 2009 from the ERIC database (EJ815769).

O'Neil, J. (1992). On tracking and individual differences: A conversation with Jeannie Oakes. *Educational Leadership, 50*(2), 18-22. Retrieved March 8, 2010 from the Education Research Complete database.

Ornstein, A. C. & Lasley II, T. J. (2000). *Strategies for effective teaching (3rd ed.).* Boston, MA: McGraw-Hill.

Ostorga, A. N. (2006). Developing teachers who are reflective practitioners: A complex process. *Issues in Teacher Education, 15*(2), 5-20. Retrieved January 25, 2009 from the ERIC database (EJ796265).

Otteson, E. (2007). Reflection in teacher education. *Reflective Practice, 8*(1), 31-46. Retrieved January 25, 2009 from the Education Research Complete database.

Painter, L. (2003). *Homework.* New York, NY: Oxford University Press.

Panasuk, R., Stone, W., & Todd, J. (2002). Lesson planning strategy for effective mathematics teaching. *Education, 122*(4), 808-827. Retrieved November 21, 2009 from the Education Research Complete database.

Park, S. (2005). Student engagement and classroom variables in improving mathematics achievement. *Asia Pacific Educational Review, 6*(1), 87-97. Retrieved March 13, 2010 from the Education Research Complete database.

Patrick, B. C., Hisley, J., Kempler, T., & College, G. (2000). What's everybody so excited about? The effects of teacher enthusiasm on student intrinsic motivation and vitality. *Journal of Experimental Education, 68*(3), 217-236. Retrieved March 7, 2009 from the Education Research Complete database.

Patrick, J. & Smart, R. M. (1998). An empirical evaluation of teacher effectiveness: The emergence of three critical factors. *Assessment and Evaluation in Higher Education, 32*(2), 166-178. Retrieved November 4, 2009 from the ERIC database (EJ570425).

Patton, M. Q. (2002). *Qualitative research & evaluation methods (3rd ed.).* Thousand Oaks, CA: Sage Publications.

Polk, J. A. (2006). Traits of effective teachers. *Arts Education Policy Review, 107*(4), 23-29. Retrieved from the Education Research Complete database (AN 21700286).

Pressley, M., Rapael, L. Gallagher, J. D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for African Americans works. *Journal of Educational Psychology, 96*(2), 216-235. Retrieved February 22, 2009 from the PsycARTICLES database.

Quillin, I. (2009). More top scores found in tracked schools. *Education Week, 29*(15), 4. Retrieved March 8, 2010 from the Education Research Complete database.

Rock, M. L (2005). Use of strategic self-monitoring to enhance academic engagement, productivity, and accuracy of students with and without exceptionalities. *Journal of Positive Behavior Interventions, 7*(1), 3-17. Retrieved March 9, 2009 from the Education Research Complete database.

Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record, 104*(4), 842-866. Retrieved March 7, 2009 from the Education Research Complete database.

Roehrig, A. D., Turner, J. E., Grove, C. M., Schneider, N,. & Liu, Z. (2009). Degree of alignment between beginning teachers' practices and beliefs about effective classroom practices. *The Teacher Educator, 44,* 164-187. doi:10.1080/08878730902951445

Rosenthal, R. & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development.* New York, NY: Holt, Rinehart and Winston, Inc.

Rubie-Davies, C. Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *British Journal of Educational Psychology, 76,* 429-444. doi:1348/000709905X53589

Rutherford, C. (2009). Distributed leadership and comprehensive school reform: Using the distributed perspective to investigate the distribution of teacher leadership. *International Journal of Teacher Leadership, 2*(2). 49-68. Retrieved March 14, 2010 from http://www.csupomona.edu/~ijtl/pdfs/Distributed%20Leaderhip.pdf

Saleh, M., Lazonder, A. W., & JOng, T. D. (2005). Effects of within-class ability grouping on social interaction, achievement, and motivation. *Instructional Science, 33,* 105-119. doi:10.1007/s11251-004-6504-z

Sanders, W. L. (2000). Value-added assessment from student achievement data: Opportunities and hurdles. *Journal of Personnel Evaluation in Education, 14*(4), 329-339. Retrieved March 3, 2010 from the Education Research Complete database.

Schulte, D. P., Slate, J. R., & Onwuegbuzie, A. J. (2008). Effective high school teachers: A mixed investigation. *International Journal of Educational Research, 47,* 351-361. doi:10.1016/j.ijer.2008.12.001

Scott, C. (2010). The enduring appeal of learning styles. *Australian Journal of Education, 54*(1), 5-17. Retrieved June 23, 2010 from the Education Research Complete database.

Shogren, K. A., Faggella-Luby, M. N., Bae, S. J., & Wehmeyer, M. L. (2004). The effect of choice-making as an intervention for problem behavior: A meta-analysis. *Journal of Positive Behavior Interventions, 6*(4), 228-237. Retrieved March 9, 2009 from the Education Research Complete database.

Shroeder, C. M., Scott, T. P., Tolson, H., Huang, T. Y., & Lee, Y. H. (2007). A meta-analysis of national research: Effects of teaching strategies on student achievement in science in the United States. *Journal of Research in Science Teaching, 44,* 1436-1460. doi:10.1002/tea20212.

Silver, R. B., Measelle, J. R., Armstrong, J. M., & Essex, M. J. (2005). Trajectories of classroom externalizing behavior: Contributions of child characteristics, family characteristics, and the teacher-child relationship during school transition. *Journal of School Psychology, 43,* 39-60. doi:10.1016/j.jsp.2004.11.003

Snider, V. E. & Roehl, R. (2007). Teachers' beliefs about pedagogy and related issues. *Psychology in the Schools, 44*(8), 873-886. doi:10.1002/pits

Spalding, E. & Wilson, A. (2002). Demystifying reflection: A study of pedagogical strategies that encourage reflective journal writing. *Teachers College Record, 104,* 1393-1421. Retrieved March 7, 2009 from the Single Journals database.

Stiggins, R. & Duke, D. (2008). Effective instructional leadership requires assessment leadership. *The Phi Delta Kappan, 90*(4), 285-291. Retrieved October 2, 2010 from the Education Research Complete database.

Stiggins, R. & Chappuis, J. (2008, January). Enhancing student learning. *District Administration,* 43-44. Retrieved March 23, 2010 from the Education Research Complete database.

Stronge, J. H. (2007). *Qualities of effective teachers* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20,* 165-184. Retrieved October 25, 2008 from http://www.springerlink.com.proxy.wm.edu/content/w2j686n2mqu04v31/fulltext.pdf

Suldo, S. M., Friedrich, A. A., White, T., Farmer, J., Minch, D., & Michalowski, J. (2009). Teacher support and adolescents' subjective well-being: A mixed-methods investigation. *School Psychology Review, 38*(1), 67-85. Retrieved November 4, 2009 from the Education Research Complete database.

Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools. *The Elementary School Journal, 101*(2), 121-165. Retrieved March 10, 2009 from the Education Research Complete database.

Teven, J. J. (2001). The relationship among teacher characteristics and perceived caring. *Communication Education, 50*(2), 159-169. Retrieved October 27, 2009 from the Education Research Complete database.

Teven, J. J. (2007). Teacher caring and classroom behavior: Relationships with students affect the perceptions of teacher competence and trustworthiness. *Communication Quarterly, 55*(4), 433-450. doi:10.1080/01463370701658077

Teven, J. J. & Hanson, T. L. (2004). The impact of teacher immediacy and perceived caring on teacher competence and trustworthiness. *Communication Quarterly, 52*(1), 39-53. Retrieved October 27, 2009 from the Communication and Mass Media Complete database.

Tomlinson, C. A. (2008). Learning to love assessment. *Educational Leadership, 65*(4), 8-13. Retrieved March 5, 2009 from the Education Research Complete database.

Torff, B. & Sessions, B. N. (2005). Principals' perceptions of the causes of teacher ineffectiveness. *Journal of Educational Psychology, 97*(4), 530-537. Retrieved September 28, 2009 from the Education Research Complete database.

Trautwein, U. & Ludke, O. (2007). Students' self-reported effort and time on homework in six school subjects: Between-students differences and within-student variation. *Journal of Educational Psychology, 99*(2), 432-444. Retrieved March 5, 2009 from the Education Research Complete database.

Tsai, C. (2007). Teacher's scientific epistemological views: The coherence with instruction and student views. *Science Education, 91*(2), 222-243. doi:10.1002/sce20175

Using positive student engagement to increase student achievement. (2007, April). *Center for Comprehensive School Reform and Improvement.* Retrieved March 13, 2010 from the ERIC database [ED497205].

Valli, L. (1997). Listening to other voices: A description of teacher reflection in the United States. *Peabody Journal of Education, 72*(1), 67-88. Retrieved October 24, 2009 from the Education Research Complete database.

Vatterott, C. (2009). *Rethinking homework: Best practices that support diverse need.* Alexandria, VA: Association for Supervision and Curriculum Development.

Viadero, D. (2008). Black-white gap widens faster for high achievers. *Education Week, 27*(33), 1-13. Retrieved from March 22, 2009 from the ERIC database.

von Frank, V. (2009). Districts harness the power and expertise of the classroom teacher. *Teachers Teaching Teachers, 5*(1), 1-4. Retrieved October 26, 2009 from the Education Research Complete database.

Walker, R. J. (2008). Twelve characteristics of an effective teacher: A longitudinal, qualitative, quasi-research study of in-service and pre-service teachers' opinions. *Educational Horizons, 87*(1), 61-68. Retrieved November 9, 2009 from the Freely Accessible Social Science Journal database.

Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002). The characteristics of effective and ineffective teachers. *Teacher Education Quarterly, 29*(1), 39-48. Retrieved October 25, 2009 from the Education Research Complete database.

Walsh, J. A. & Sattes, B. D. (2005). *Quality questioning: Research-based practice to engage every learner.* Thousand Oaks, CA: Corwin Press.

Warren, S. R. (2002). Stories from the classrooms: How expectations and efficacy of diverse teachers affect the academic performance of children in poor urban schools. *Educational Horizons, 80,* 109-116. Retrieved February 2, 2010 from the Education Research Complete database.

Watherhouse, L. (2006). Inadequate evidence for multiple intelligences, Mozart effect, and emotional intelligence theories. *Educational Psychologist, 41*(4), 247-255. Retrieved June 25, 2010 from the Education Research Complete database.

Wenglinsky, H. (2000). *How teaching matters: Bringing the classroom back into the discussion of teacher quality.* Princeton, NJ: Milikan Family Foundation and Educational Testing Service.

Wenglinsky, H. (2004). The link between instructional practice and the racial gap in middle schools. *Research in Middle Level Education Online, 28*(1), 1-13. Retrieved from the ERIC database (EJ807416).

Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89*(3), 411-419. Retrieved February 21, 2009 from the ERIC Database.

Wiggins, G. & McTighe, J. (1998). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

Williams, R. E. (2008). [Administrator perceptions of the qualities of effective teachers]. Unpublished raw data.

Winger, T. (2009). Grading what matters. *Educational Leadership, 67*(3), 73-75.

Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 57-67. Retrieved March 3, 2010 from the Education Research Complete database.

Zacharias, N. T. (2007). Teacher and student attitudes toward teacher feedback. *Regional Language Centre Journal, 38*(1), 38-52. doi:10.1177/0033688206076157

Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003). Teaching practices for smaller classes. *Educational Leadership, 61*(1), 75-77. Retrieved March 10, 2009 from the Education Research Complete database.

Vita

Robert Eugene Williams

Birthdate: September 12, 1966

Birthplace: Richmond, Virginia

Education:

2010	The College of William and Mary Williamsburg, Virginia Doctor of Philosophy
1995	Virginia Commonwealth University Richmond, Virginia Master of Teaching
1995	Virginia Commonwealth University Richmond, Virginia Bachelor of Arts

Publications and Presentations:

Williams, R. E. (2010, October). *Monitoring student progress: What educators believe matters most.* Poster session presented at the annual conference of the Consortium for Research in Education and Teacher Evaluation, Williamsburg, Virginia.

Leeper, L., Tonneson, V. C., & Williams, R. E. (2010). Preserservice elementary education graduate students' perception of teacher leadership. *International Journal of Teacher Leadership, 3*(3), 16-31.

Professional Experience:

Assistant Principal (2008-present). Flat Rock Elementary School, Powhatan, Virginia.

Social Studies Teacher (1996-2008). Powhatan High School, Powhatan, Virginia.