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Teacher Factors and Student Achievement as Measured by the ACT Assessment and Subsequent
Teacher Perceptions of Those Factors

A dissertation

presented to

the faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Educational Leadership

by

Jessica Holt Weaver

May 2019

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Dr. Don Good

Keywords: Educator Experience, Professional Development, Performance Factors, School
Improvement, School Reform, Student Performance, Teacher Education

ABSTRACT

Teacher Factors and Student Achievement as Measured by the ACT Assessment and Subsequent

Teacher Perceptions of Those Factors

by

Jessica Holt Weaver

The purpose of this quantitative study was to investigate educator factors that have an impact on student achievement and overall school performance as indicated in the American College Test (ACT) scores from the district and the individual schools. Educators from a moderate-sized public school district participated in an anonymous online survey. According to the Tennessee Department of Education (TDOE) Report Card, the district ACT composite is a 20.1 (TDOE, 2018e). Two of the district's schools' results are higher than the district composite, while the other five are consistent with or below the district composite. Participants of this study shared their number of years of experience, amount of professional development, and education level obtained, as well as their perceptions of these factors. All data were collected through an online survey distributed to 9th-12th teachers by email from school principals. The analysis of data was based on the responses of 67 teachers from this school district. For this study, non-experimental quantitative research was used with a comparative and correlational design. As indicated in the findings of this study, teacher experience, teacher professional development hours, teacher education level, and teachers' perceptions of these factors did not play a significant role on student performance on nationally standardized tests, specifically the ACT.

DEDICATION

I dedicate this dissertation first to God, and then, to my family. My faith in Jesus Christ has given me the opportunity to have peace in my times of struggle and no matter what happens or what I achieve, He is always there beside me. My family has stood by me throughout this entire process providing me with encouragement and support in achieving this endeavor.

First, I would like to recognize my husband, Brad, and my son, Henry. This road has not been easy, but I appreciate Brad's patience and support as I have gone through these past few years. I thank him for allowing me to follow my dreams and never giving up on me. Henry was the reason I never gave up. I hope he can always be proud of me and know if he sets a goal, he can achieve it!

Second, I would like to thank my parents. They have been there for me when I truly needed to be picked up. Whether it was driving me six hours to study, washing a load of clothes, watching Henry, cooking us supper, or even simply just praying, they never complained once about helping me. They have been my rock and have never lost faith in me. I owe them more than they ever know, and I would not have accomplished this without them.

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This is for all of you! Thank you for never giving up on me.

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CHAPTER 1

INTRODUCTION

Until the 1800s, education was scarce and a privilege for a select few. The 1800s brought about laws governing the requirements of public education and school attendance mandates (Daggett & Kruse, 1997; Lauderdale, 1987; Webb, 2006). In the 1800s, assessments were not at the forefront of education as much as educating all social classes (Lauderdale, 1987). It was not until the early 1900s that a call for an intellectual assessment was enacted nationwide. This progressive era movement of nationwide assessment laid the groundwork for the evaluative processes still used in education today (Webb, 2006).

The age of school reform began in the 20th century as test scores became a major determinate of a successful education for American students and accountability measures were established for students, teachers, and school leaders. These measures were put into place by standardized testing and reforms dating back to the 1980s with the publication of the federal report *A Nation at Risk* in 1983 (Alvy, 2017; Daggett & Kruse, 1997; DuFour & Marzano, 2011), the 1994 Improving America's School Act (IASA) (Webb, 2006), the 2001 No Child Left Behind Act (NCLB) (DuFour & Marzano, 2011; Webb, 2006), and to even the most recent Every Student Succeeds Act (ESSA) put into place in 2015 (Alvy, 2017). NCLB placed an emphasis on the ability of testing to create motivation through incentives; good schools were rewarded while bad schools were punished (Bolman & Deal, 2013; DuFour, 2016). ESSA is a newer version of NCLB adding more attention to the college and career readiness of students (USDOE, 2018).

One major area of many of these reforms was teacher quality. Past research (e.g. Cochran-Smith and Fries, 2005; Eaker and Keating, 2012; Fullan, 2003; Stronge, 2010; Theoharis, 2009; Whitaker, 2004; Webb, 2006) suggests that teacher quality is an essential component of student achievement. Educational reforms emphasized the quality of teachers; however, teachers asserted that too much attention to testing by the reforms undermined teachers' work and debilitated students' learning possibilities (Bolman & Deal, 2013). Furthermore, if teacher quality is to increase, teacher factors that have positive effects on student achievement must be researched. Podgursky (2016) notes that research has failed to generate the formula for producing quality teachers due to the difficulty of defining "what outcomes might show effectiveness and how those outcomes should be measured" (Stronge, 2002, p. viii).

Even without this formula, schools and teachers whose students produce higher test scores are doing well and being rewarded while other institutions or teachers who do not have students with high test scores are stigmatized and either placed under watch or penalized (Bolman & Deal, 2013; DuFour, 2016; Marshall, 2016). As a result, teachers are being encouraged and sometimes mandated to increase their knowledge through additional education or further targeted professional development. Frontier and Mielke (2016) note that some states have approved plans for weak teachers with low achievement. In the wake of test scores increasingly becoming the final indicator in the success of education, teachers' perspectives on that impact should be examined.

One component in question when dealing with standardized testing lies with the teacher. The impact on student success on standardized tests compared to teachers' years of service, their time spent in and the quality of professional development, and their education level could be crucial to the success of the school districts across the nation. Furthermore, teacher perceptions

of these specific factors as they relate to student success on standardized tests could offer insight to the administrators who lead them. This study focuses on the ACT Assessment® and three teacher factors: number of years of experience, amount and quality of professional development each year, and education level obtained. Along with these demographic factors, teacher perceptions are being considered. This quantitative dissertation was designed to discover if certain factors teachers possess are beneficial to the success of students on ACT Assessment® at the high school level and what perceptions teachers have of these factors as they relate to the ACT Assessment®. Non-experimental quantitative methodology with a comparative and correlational design was used in this study.

Statement of Problem

The many educational reform movements throughout the past few decades in the United States have caused test scores to become a major element of teacher evaluations and perceived student success (Alvy, 2017; Barrier-Ferreira, 2008; Bolman & Deal, 2013; Marshall, 2016; Podgursky, 2006; Spring, 2011; Webb, 2006). The debate over assessments, especially their validity, is ongoing (Ainsworth & Viegut, 2006; Brookhart, 2016; Sunderman, 2006; Wiggins & McTighe, 2005). One major assessment, the ACT Assessment®, has gained credibility through much use in the American educational system because it “provides an objective measure of students’ academic achievement and readiness for college and includes four curriculum-based tests of educational development: English, mathematics, reading, and science” (Allen & Scoring, 2005, p. 1). In addition, the ACT has become “the leading U.S. college admissions test measuring what you learn in high school to determine your academic readiness for college” (ACT, 2018). The ACT Assessment® is used by the Tennessee Board of Regents (TBR), The

College System of Tennessee, for entrance into colleges. The use of tests such as the ACT Assessment® for postsecondary entrance and workforce employment has allowed this major assessment to achieve worthiness of use in Tennessee schools (TBR, 2016).

With the use of so many assessments like the End of Course (EOC) test, TNReady, the ACT Assessment®, the SAT Assessment, and other state and national assessments, there is a great deal of emphasis put on the teacher and his or her role in student test scores (City, Elmore, Fiarman, & Teitel, 2011; Eaker & Keating, 2012; Gay, 2010; Spring, 2011; Theoharis, 2009; Wiggins & McTighe, 2005). Bolman and Deal (2013) claim that many teachers and schools find themselves either rewarded or penalized due to student scores on standardized tests.

In the world of test accountability, teachers are being encouraged and sometimes forced to increase their knowledge through additional schooling or professional development. Two examples of this exist in Tennessee with the professional development points (PDPs) and the Tennessee Educator Acceleration Model (TEAM) achievement measure. PDPs is a new points system put in place for advancing or renewing teacher licensure, which requires a teacher to earn points through various modes of further education. With a lack of PDPs, a teacher will not be able to advance or renew his or her license. Another quantitative measure, TEAM, calculates both student growth and student achievement. The Tennessee Educator Acceleration Model (TEAM) provides teachers with a 15 percent achievement measure, which is aligned closely with their teaching assignment to reflect both student growth and student achievement over the course of the year. The ACT is one of the measures that can be selected by a teacher; however, this is only one of the many choices a teacher can choose prior to knowing the actual data. If a teacher's rating is below a three for a certain amount of time, he or she will lose licensure (TDOE, 2018b; TDOE, 2018c; TDOE, 2018d; TDOE, 2018f).

Research Questions

The following research questions pertaining to ACT scores and teacher factors (years of experience, amount of professional development each year, and education level obtained) and teacher perceptions of those factors were investigated:

1. Is there a significant correlation between teachers' years of service and student ACT scores?
2. Is there a significant relationship between teachers' perceptions of the value of years of service and ACT scores?
3. Is there a significant correlation between the number of hours teachers spent in professional development during the year and student ACT scores?
4. Is there a significant relationship between teachers' perceptions of the value of number of hours in professional development attended during the year and ACT scores?
5. Is there a significant relationship between teachers' perceptions of the quality of professional development and ACT scores?
6. Is there a significant correlation between teachers' education levels and student ACT scores?
7. Is there a significant relationship between teachers' perceptions of the value of teacher education level and ACT scores?

Significance of Study

The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated on ACT scores from the district and the individual schools within the district. Findings contribute to the greater body of literature on instructional

practices, professional development, leadership in professional development activities, teacher placement, pay, experience, education, and student success on assessments.

Hightower et al. (2011) determined that teacher experience could positively impact student performance. Stronge (2002) found studies supporting the conclusion that teachers with a strong understanding of pedagogy and professional practices are more adept to distinguish the individual needs of students and implement differentiated instruction. He also found research supporting that fully prepared and certified teachers resulted in gains in student learning and positive student outcomes. Other than some studies showing positive student achievement from teachers with advanced degrees in math and science, the evidence is limited on the extent to which teacher degrees impact student learning (Hightower et al., 2011). Shaha and Ellsworth (2013) state that some studies show that professional development can result in a positive effect on student achievement; yet, Hightower et al. (2011) find that this is not always the case and knowledge gained in professional development might not make an improvement to student learning.

Information within this study may potentially be used to guide future school, district, and state leaders to make informed decisions on teacher placement and pay based on teacher degree level, experience, professional development involvement, and student success on the ACT. District administrators may use this research to guide teachers in self-assessment and self-reflection of strengths and weaknesses. District administrators may also analyze student performance related to teacher factors such as years of service, annual hours spent in professional development, and education level.

This quantitative study investigated educator factors and educator perceptions of those factors that have an impact on overall school performance as indicated in ACT scores from a

district in Southern Middle Tennessee and the individual high schools servicing the approximately 3,500 students within the school district. If test scores are the final indicator in the “success” of education in America, it is imperative to consider what qualities and characteristics of teachers are most influential for student success on assessments and to explore teacher perceptions of these qualities and characteristics as they relate to assessment.

Definitions of Terms

The terms and definitions below will aid the reader in understanding the content of the research.

1. **Accountability** – Assessment is an aim to hold districts, schools, teachers, and students answerable for achieved outcomes (Education Week, 2004).
2. **ACT Assessment** – “The ACT is a nationally recognized benchmark assessment for college and career readiness. By taking the ACT, students can gain valuable information on their readiness for college and career. The ACT, or SAT, is required for admission to many technical schools, two-year colleges, and four-year colleges” (TDOE, 2018a).
3. **Assessment** – Assessment is intentional methods and approaches that evaluate student performance when opposed to particular standards, principles, and benchmarks. It offers tools that provide confirmation that the desired outcomes are attained and to what degree they are attained (Wiggins & McTighe, 2005).
4. **Data** – Data are “the results of measurements or observations, such as assessment scores; census, enrollment, or attendance rates; results of parent surveys; and a wide range of demographic data” (McLaughlin, 2009, p. 68).

5. **Professional development** – Professional development is “a comprehensive, sustained, and intensive approach to improving teachers’ and principals’ effectiveness in raising student achievement” (NSDC, 2009, para. 34).
6. **School reform** – “Education reform comprises any planned changes in the way a school or school system functions, from teaching methodologies to administrative processes” (rand.org, 2019).
7. **Stakeholder** – A stakeholder is a person or party vested in an institution and interested in the attainment of the institution’s objectives, vision, and goals (Paine & McCann, 2009).
8. **Standardized test** – Standardized tests are assessments that are “administered and scored in the same manner for all test-takers, such that scores can be compared from one administration to another” (Brookhart, 2016, p. 126).
9. **Teacher quality** – Teacher quality encompasses competent teachers who are committed to students and student learning, hold an expansive knowledge of content, have the ability to monitor and adapt based on student learning, can evaluate, adjust, and reflect upon current practices, and are able to establish a network in and out of school involving anyone who could play a role in the learning of students (Mitchell, Robinson, Plake, & Knowles, 2002). Teacher quality is evident in evaluative measures such as achievement measures, observations, and growth scores (Hanushek, 2002; TDOE, 2018f).

Limitations and Delimitations

Limitations of this study include test scores and teacher factors. This study examined schoolwide composite averages on the ACT instead of linking exact teacher scores with individual students due to confidentiality. The study examined the school as a whole in terms of

the teachers within. The data may not be representative of the population because not every high school teacher completed the survey. Furthermore, transferred teachers or new hires may not have been at the specified school at the time of the ACT score report, but they are linked to that school. Additionally, some teachers who are more experienced or higher educated may not teach an ACT specific course. Finally, some teachers may have a degree outside of education.

This study was limited to a single school district in Southern Middle Tennessee that consists of ten elementary schools (K-4), four middle schools (5-8), four high schools (9-12), three unit schools (K-12), and one alternative school (K-12) with the focus being on teachers in grade levels 9-12. The results of this study may or may not be generalized to other settings or populations. Nevertheless, the results may be useful in determining a professional development plan that may be used to target school improvement district-wide.

Overview of the Study

This study is arranged into five chapters. Chapter 1 includes the context, setting, and history of issue, statement of problem, overarching research questions, significance of study, definition of terms, delimitations, and limitations. Chapter 2 is a review of literature examining teacher roles, characteristics, experience, professional development, education, degree level, and educational reform. Chapter 3 is an overview of the methodology used in this study including the research questions and null hypotheses, instrumentation, population and sample, data collection methods including a comparative and correlational design, and data analysis. Chapter 4 contains participant demographics, survey questions and results, and an analysis of data. Chapter 5 ends the study with a discussion of the findings along with recommendations for practice and future research.

CHAPTER 2

REVIEW OF LITERATURE

Many factors exist which relate to the success of student learning including the following: socioeconomic status, teacher quality, school location, parental participation, and culture. Of those factors, many believe the teacher is one of the major components of student achievement. Whitaker (2004) supports the view that the quality of teachers is key to the quality of the school and thus school district. If teachers are less qualified, perceptions of the school and the teachers may be less than desirable. A review of literature regarding teacher factors on student success displays that certain teacher factors do impact student achievement while others do not. Additionally, a review of the literature will allow this researcher to investigate “qualified teacher” status and how to measure student achievement using test scores. Finally, teacher pay, educational reform, and stakeholders within education add to the literature review. Whitaker (2004) acknowledges, “All the way from kindergarten through college, the quality of the teachers determines our perceptions of the quality of the school” (p. 9).

The “Qualified” Teacher and Teacher Characteristics

The NCLB reform was a proponent of standardized testing and accountability with the goal to achieve 100% proficiency of all students (City et al., 2011). One of the constituents of NCLB was that all classrooms would have a “highly qualified” teacher (Webb, 2006). Highly qualified, though not in use any longer, is a significant phrase to consider because of the factors associated with it. Initially, to be highly qualified, teachers had to meet the following conditions:

The law requires that all teachers of core academic subjects in the classroom be highly qualified. This is determined by three essential criteria: (1) attaining a bachelor's degree or better in the subject taught; (2) obtaining full state teacher certification; and (3) demonstrating knowledge in the subjects taught. (USDOE, 2006, para. 2)

The conditions of the law were tough and heightened the sense of accountability for multiple stakeholders. Podgursky (2006) found that perfect compliance to state and NCLB requirements was virtually impossible and there was no magic button for improving teacher quality. NCLB did, however, serve as a reminder to the public, “that schools have urgent problems including unacceptable dropout rates and achievement and opportunity gaps that adversely affect historically underserved students” (Alvy, 2017, p. 139).

Robinson (2011) conducted a study with an emphasis on the NCLB requirements for highly qualified teachers. The focus was to see if highly qualified teachers benefited students in special education. The study was conducted in a Florida school district with 10 teachers and 94 9th grade students with disabilities. The teachers used were placed into four groups based on qualification status: highly qualified, not highly qualified, highly qualified plus, and highly qualified alternative plus. A similar feature of all students was that they all were part of an intensive reading course in both 8th and 9th grade. The Florida Comprehensive Achievement Test (FCAT) was used to measure the students’ reading achievement. The 8th grade FCAT scores were used as a covariate/pretest. Teacher covariates were data collected from teacher surveys and county data. The results showed the reading achievement of students taught by non-highly qualified teachers and the four types of highly qualified teachers was not significant. Therefore, suggesting that highly qualified status as a factor does not play a role in student achievement.

Nevertheless, highly qualified teachers were labeled throughout the United States during NCLB reform movement. Currently, teachers in Tennessee are being evaluated through the TEAM rubric and determining what traits in teachers are most effective is important (Marshall, 2016; Nye, Konstantopoulos, & Hedges, 2004; Schumacher, Grigsby, Vesey, 2015; Whitaker, 2004); however, one problem stems from the different perceptions of “effective” teachers (Stronge, 2002). Kennedy (2006) determined that many people have different views on teacher quality usually focusing on concepts like personality, beliefs and values, and innate teacher attributes; yet, all these views lead to an ambiguous answer as to what makes a good teacher. Stronge (2002) presented that in determining effective teachers, some prefer to use measures of student achievement, some evaluation scores, and some the viewpoints of various stakeholders.

In the *College Ready* report issued in 2009 by the Gates Foundation, there were three strategies outlined to be used for increasing graduation rates; one of the three “focused on improving the quality of teachers by linking teacher evaluation to student test scores” (Spring, 2011, p. 26). In today’s accountability world, a teacher’s being effective usually lies within the scores produced by the students within the teacher’s classroom (Alvy, 2017; Popham, 2008). Eaker and Keating (2012) explain American education for teachers by citing Charles Dickens, “These are the best of times and the worst of times.” They point out that teachers work in a time of unpredictability and concern because the bar has been set very high ever since NCLB was put into place. Teachers fear the inability to be able to reach the expectation of educating all students to a level of proficiency.

Although it is a worthwhile venture to educate all students at high levels, this task is both difficult and daunting for teachers because there is not one correct method, curriculum, teaching style, or instructional strategy that works for all students (Fisher, Frey, & Hite, 2016; Gay, 2010).

While teachers continue to work hard, they are often discouraged due to new accountability measures, higher demands, and public examination caused by educational reforms and reversals of those reforms (Alvy, 2017). DuFour, DuFour, Eaker, Many, and Mattos (2016) report that schools are not failing, and much success has been accounted for; however, with such a diverse population and high demands for every student to be ready for the postsecondary world, demands of teachers have drastically increased. With education being a demanding and dynamic profession, teachers must be comprehensive, instinctive, and versatile (Baines & Stanley, 2000).

Consequently, the struggle for American education is finding a way to keep highly qualified teachers in the profession. Highly qualified teachers do exist, yet they are not staying in the profession (Eaker & Keating, 2012). Allensworth (2012) poses that the aim of many approaches for developing better teaching is the teacher. Current policy recognizes this by looking to draw in, retain, and compensate quality teachers and determine unqualified teachers and eliminate them. Many stakeholders like politicians and the media present schools and educators as failures, yet in recent years, schools have found much success (DuFour et al., 2016). With failure or success, evaluating teacher effectiveness matters because quality teachers are vital to student achievement and school success (Stronge, 2010). Current policy places an importance on identifying strong teachers and poor performing teachers because those poor performing teachers not only hurt the success of students in their classrooms, but they also negatively impact the climate of the entire school (Fullan, 2003). However, Allensworth (2012) expresses that school climate, which is not included in teacher evaluation systems, could play a role in the effectiveness of teachers. DuFour et al. (2016) present that the evaluation process of individual teachers is tricky, and the focus should be helping teachers learn to build on strengths and develop areas of weakness in order to improve their practice.

Whitaker (2004) supports the view that the quality of teachers is key to the quality of the school. If teachers are less than qualified, so then will the perception of the school be less than qualified. According to Fullan (2003), quality public schools cannot exist “without a dedicated, highly competent teaching force—teachers in numbers, working together for the continuous betterment of the schools” (p. 5). Allington (2002) affirms:

It has become clearer that investing in effective teaching – whether in hiring decisions or professional development planning – is the most “research-based” strategy available. If we are to hope to attain the goal of “no child left behind,” we must focus on creating a substantially larger number of effective, expert teachers. (p. 740)

Bill and Melinda Gates made a point to call for more data useful to identify qualified teachers. In their report, *College Ready*, the Gates foundation asserted that effective teaching is pivotal for successful learning; however, data is needed in order to separate and determine the good teachers from the bad (Spring, 2011). Eaker and Keating (2012) further this point, “Not only are excellent teachers important, it is virtually impossible to have a significant impact on student learning without excellence in teaching” (p. 17). Stronge (2002) emphasizes the lifelong impact teachers can have on students and the importance of discerning what teachers need to do in order to foster and cultivate rewarding learning outcomes for students.

The research on teacher quality has evolved since the 1960s where research has moved from a focus on teacher characteristics to a focus on teacher behavior and performance and now, to a focus on student achievement mainly with test scores (Sheetz & Martin, 2006). In Haycock’s 1998 findings in various studies on student achievement, the teacher was the foremost ingredient in the recipe for increasing student achievement. Cochran-Smith and Fries (2005) state, “Nationwide there is an emerging consensus that teacher quality makes a significant

difference in school children's learning and in overall school effectiveness" (p. 40). Whitaker (2004) contends, "There are really two ways to improve a school significantly: Get better teachers. Improve the teachers in the school" (p. 9). Whitaker reiterates Cochran-Smith and Fries's claim, responding that, "...the main variable in the classroom is *not* the students. The main variable is the teacher" (p. 37). Hurst and Redding (1999) suggest this about teachers:

As the old saying goes, "Nothing succeeds like success." Nowhere is that idea truer than in the classroom. Success snowballs. One student happens onto a little success and all the others want to jump on the bandwagon. Good teachers take advantage of that.

They plant seeds, water, feed, and nurture, and one day success blossoms. (p. 222)

Furthermore, Clement (2009) agrees, "Competent, caring, qualified teachers are the keys to enhanced student achievement" (p. 22). Based on the work of Haycock (1998), Hurst and Redding (1999), Cochran-Smith and Fries (2005), and Whitaker (2004), it is clear that quality teachers are the core of our educational world and make one of the largest impacts on the success of students.

The world of education consists of many teachers who each present different characteristics in their teaching, and there are many discussions and much research on how those different characteristics impact student achievement. Fisher, Frey, and Hite (2016) express, "The purpose of teaching is to foster learning, and any measure of teaching must address its impact on student learning. Of course, numerous factors magnify a student's ability or inability to learn" (p. 142). Wright, Horn, and Sanders (1997) and Whitaker (2004) claim that the most important factor in student learning and variable in the classroom is the teacher. Moreover, Harris (2010) affirms this with the findings that teacher factors such as instructional strategies have a significant impact on student achievement. In a systematic review of literature dealing with the

relationship of teacher characteristics to student achievement, Wayne and Youngs (2003) deduced that students do learn more from teachers who have specific characteristics. No matter the specific characteristics, Whitaker (2004) establishes that the teacher must look inwardly to himself or herself in order to change the success of the classroom. The teacher is the only one who can change the classroom environment by making classrooms meaningful for both the teacher and the student (Hurst & Redding, 1999; Protheroe, 2010). They state, “If we burn out because of lack of passion, we cannot effectively help our students” (p. 221). Hurst and Redding later reiterate, “One of the secrets of being a good teacher is to continue to enjoy teaching. One way to continue to enjoy teaching is to work to make teaching meaningful for ourselves” (p. 223).

Overall, the teacher plays a major role in the success of the classroom. The teacher is the dominant, autonomous figure in the classroom, and when the door is closed, the teacher becomes a profound influence with complete control of the subject matter disclosed to students (Daggett and Kruse, 1997; Marzano, Pickering, & Pollock, 2001). In the classroom, the primary influence, the teacher can impact what students learn and improve student results (Theoharis, 2009). Moreover, Eaker and Keating (2012) contribute, “Teachers will remain the most important resource in the battle for high-quality learning for all students” (p. 189).

However, there are some opposing views that disagree with the qualities of teachers having such a large impact on student learning. In one study (Allensworth, 2012) that explored professional capacity, the researchers found “that the individual qualifications of teachers were not nearly as important as the ways in which teachers worked together” (p. 31). Hoy and Miskel (2013) agree stating that it is important for professional teachers to have respect for, commitment to, and cooperation with colleagues. Another factor to consider is the school context.

Allensworth (2012) also noted another study in Chicago that dealt with teacher qualifications and the school context. The study brought forth that when the teaching staff had more knowledge, experiences, and skills, there was an increase in student growth; yet, in the schools with weak learning environments, there was no link found between teacher quality and student growth. The study suggested that even if a staff has higher human capital, students at schools with poor learning climates would not likely yield student growth.

With the background thought that teacher effectiveness plays a vital role in student achievement, Schumacher, Grigsby, and Vesey (2015) find teacher quality important in so much that they believe administrators should generate interview questions that address teacher personal characteristics. Schumacher, Grigsby, and Vesey found, “The thought processes and practices effective teachers utilized while organizing their classrooms, determining expected behaviors and consequences, preparing for instruction, and monitoring student progress and potential are key to student success” (p. 148). The researchers suggested for hiring administrators to consider teacher quality through specific questioning verses hiring solely based on likeability and personal attributes because teacher quality is such a large factor in student success and achievement. Theoharis (2009) remarked that principals in his study held the belief that hiring the right people was significant in moving their schools in the right direction for improved teaching and curriculum in social justice.

Likewise, Clement (2009) confirms that administrators or hiring officials need to consider the specific position and focus questions on what attributes of effective teachers are needed such as, “questions about content knowledge, lesson planning, methods of teaching, classroom management, student diversity, motivation, assessment, communication, and professionalism” (p. 22). Clement refers to this as “high-stakes hiring” because effective or

ineffective teachers can positively or negatively influence student achievement, school performance, and teacher morale.

Teacher Experience

Novice teachers and veteran teachers each hold a unique set of qualities that help students learn (Stronge, 2002). Novice teachers are just starting out on their journey in education ready to teach, but they must figure out how to teach, and sometimes it is a “sink or swim” mentality where teachers must determine the best practices that will help them to hold on and be successful (Feiman-Nemser, Carver, Schwille, & Yusko, 1999). Smith, Frey, Pumpian, and Fisher (2017), make a distinction between expert and experienced teachers. They explain that both early career teachers and teachers with many years of experience can still be novice teachers with the opposite true as well. Teachers who are experts know how students learn and use that to guide their teaching (Fisher, Frey, Hite, 2016). Further, Rice (2010) suggests, “Experience matters, but more is not always better” (p. 1) while Frontier and Mielke (2016) take caution with the idea that teachers become experts after a few years. They state:

Although many practitioners in complex fields such as teaching, medicine, or music achieve competence, expertise is difficult to obtain. Expertise does not simply mean being good at something; nor does it mean that someone has done the same thing for a long time. Expertise means that someone has mastered the complexity of a chosen domain by developing the ability to deploy the right strategy, in the right way, at the right time, to obtain intended results. (p. 122)

Yet, Stronge (2002) does describe a distinction between rookie teachers and experienced teachers in that experienced teachers “attain expertise through real-life experiences, classroom

practice, and time” (p. 9). Feiman-Nemser et al. (1999) indicate that novice teachers are still in the learning stage, do not have the same skill set as veteran teachers, should have different expectations and assignments, and should be involved in observation, coplanning, collaborative teams, and reflection. Frontier and Mielkes (2016) emphasize that teaching is complex and requires a large number of skills and strategies that teachers can gain overtime through opportunities for improvement and formative feedback.

Although novice teachers do try to find ways to survive, sometimes the profession is too difficult, and many new teachers leave the profession (DuFour et al., 2016; DuFour & Fullan, 2013; Hightower et al., 2011). Veteran teachers are also being affected. Coppenhaver and Schaper (1999) point out that experienced teachers are leaving the teaching profession causing schools to lose many valuable assets who hold an abundance of knowledge and experience. Similarly, Ingersoll, Merrill, and May (2016) state this exodus continues, and the attrition of teachers is higher than many other professions causing problems for educational leaders who struggle filling these positions. In the 2012 Met Life Survey of the American Teacher (Markow & Pieters, 2012), results exhibited that teacher satisfaction dropped 23% from the 2008 survey, and many teachers felt stressed and underpaid. DuFour and Fullan (2013) express, “We have to contemplate what kind of places our schools really are if so many people would rather be somewhere else” (p. 4). According to Riggs (2013), 40% of people with undergraduate teaching degrees never teach and almost 16% of teachers leave the profession every year.

The teaching force is becoming less stable each year and working conditions must entice educators to stay (Scherer, 2016). Marzano, Pickering, and Heflebower, 2011, indicate that as time passes, educators may lose the passion and excitement they had when they began teaching, and it is important for them to remind themselves why they became teachers. The job of

teaching is not an easy task for an educator of any age. According to the 2016 National Teacher and Principal Survey conducted by the National Center for Educational Statistics, the average teacher had taught for 14 years putting in around 13 hours of overtime work a week (Walker, 2018). Teachers are inundated with multiple duties including planning lessons to accommodate all learners; managing a large amount of paperwork including grading; displaying time management inside and outside the classroom; and appeasing school leaders, students, and parents, all of which are demanding for any level educator (Brighton, 1999; Moore, 2016).

No matter why teachers are leaving, it is a detriment to student success when teachers leave the profession (DuFour et al., 2016). When teachers leave early in their profession, there are short-term and long-term effects such as a shortage of qualified teachers and experienced teachers and a decline in student achievement (Ingersoll, Merrill, & May, 2016; Turk, 1999). At-risk, low-performing, high-minority schools seem to suffer from teacher turnover more than others (DuFour et al., 2016; Markow & Pieters, 2012; Rice, 2010). Despite this, school leaders can work to create a culture where teachers have a positive work environment and productive collegial interactions to increase retention rates (DuFour et al., 2016; DuFour & Fullan, 2013)

Although novice teachers struggle, many of them do stay and gain experience, eventually bringing wisdom to the teaching profession. Historically, early findings in the Intermediate Science Curriculum Study (ISCS) concluded that teacher performance was related to experience with the program. Neither grade level taught, number of science hours studied, number of physical science hours studied, nor highest degree level earned was found to be relevant to effective ISCS teaching (Snyder & Kellogg, 1970). Likewise, Kocakaya and Kocakaya (2014) found that expert teachers had a positive impact on math and science achievement. Kunter et al. (2013) completed a literature review and concluded in the review that age and experience was

possibly a factor, specifically teachers who had been in the profession for over 22 years. In contrast, Rice (2010) states that teachers' first years are the most productive, and research shows that high school teachers' effectiveness declines after a certain point. Betts, Zau, and Rice found that experience could make a difference; however, inexperienced teachers still are effective (New Insights, 2003). Hightower et al. (2011) state, "The effects of teacher experience on student achievement depend on the number of years of experience and the grade level taught," while Rice (2010) places the significance on the teacher's education level and subject area.

Educators teach for many reasons, but Hurst and Redding (1999) point out the main reason educators teach is to make a difference, and they remain because of the impact students make on their lives. Hurst and Redding state, "From prospective teachers to retired teachers, all have an energy, a light, that keeps finding its way into our eyes when we talk about learning and kids" (p. 222).

Teacher Professional Development

According to a nationwide survey by Corwin, Learning Forward, and the National Education Association (NEA) conducted in 2017, 75% of teachers spend more than one hour each week on professional learning (Walker, 2017). As noted by Whitaker (2004) one of the two ways to improve a school is to improve the teachers in the school. In order to do that, the school and school system must use professional development diligently (Ainsworth and Vieget, 2006). Beach and Reinhartz (2000) agree with this noting that both schools and organizations rely on the growth and improvement of their members in order to continue to be effective. Schools can become considerably more effective if they embrace a new standard that allows them to operate as learning organizations (DuFour & Eaker, 1998; Protheroe, 2010). Likewise, Eaker and

Keating (2012) suggest, “it is disingenuous and unproductive to expect faculty and staff to perform at high levels, yet fail to provide them with the training and resources to be successful” (p. 82). Teachers need to be lifelong learners continually exploring new concepts and ideas that yield the result of increased student learning (Fullan, 2003; Popham, 2008; Stronge, 2010).

America is losing both novice and veteran teachers (Coppenhaver & Schaper, 1999; DuFour et al., 2016; DuFour & Fullan, 2013; Hightower et al., 2011). Feiman-Nemser et al. (1999) explain that new teachers must have learning opportunities that are meaningful and continuous for quality teaching to occur. Both novice teachers and veteran teachers need continual professional development to aid in increasing student achievement (Stronge, 2010). However, sometimes teacher perceptions of professional development can be negative. As DuFour and Eaker (1998) indicate, terms like staff development, inservice, and professional development have negative connotations due to the nature of how they have been presented and set up in the past. Ainsworth and Vieget (2006) specify the importance in leaders’ organization of professional development, and for administrators and teachers to see the value of professional development in the improvement of teaching and learning, professional development must be organized and presented differently than in past ventures.

Good, quality teachers want to continually learn and improve for the betterment of themselves and success of the students they teach (Kent, 2004). The teacher is the expert and should stay up-to-date in the subject matter, and when the teacher fails to hold that fire, it is time to move on to another profession (Baines & Stanley, 2000). Whitaker (2004) states, “Good teachers consistently strive to improve and they focus on something they can control-their own performance” (p. 38). Teachers must first look inwardly and focus on what they need to do in order to stay competent; this is the key to success in any profession is keeping up with any recent

advancements in their area of expertise (Popham, 2008). Charles (2006) adds that teachers as professionals should have a focus on the improvement of learning. Popham (2008) agrees proposing, “one fundamental tenant of professionalism is that the professional keeps up” (p. 110). Coppenhaver and Schaper (1999), similarly to Eaker and Keating (2012), feel that teachers are active learners who take part in their professional development where all play a role, whether leader or participant, and are important to the success of the work at hand. Teachers need to be advocates of their own learning and the learning of their peers (Smith, et al., 2017). The quality of education can change and improve with the use of professional development (Kennedy, 2006).

Professional development can be beneficial, but for it to be profitable, the quality of the professional development becomes much more important than the quantity (City et al., 2011).

Popham (2008) clarifies:

If a professional development program is going to have a reasonable chance of success, it must last over an extended period of time, nurture teachers who are attempting to adopt new practices, and be powerful enough to have at least a possibility to alter the classroom behaviors of busy teachers who are, for the most part, employing instructional procedures they’ve been using for years. (p. 111)

Kent (2004) advocates how imperative high-quality professional development is for improved teacher quality and student success.

Also, the quality has to do a great deal with the administrator. It is the role of the administrator to figure out the best plan for implementation of the professional development so that resources are used successfully resulting in student success (Alvy, 2017). For school improvement, the principal must also determine, comprehend, and reinforce the top strategies and focus professional development on classroom learning experiences (Martin-Kniep and

Shubert, 2017). Danielson (2016) contends that the principal is best positioned to make professional development decisions based on the needs of the teachers and the school. Martin-Kniep and Shubert (2017) point out that professional learning is viable when it is based on teachers' needs and sustainable when it is applied in teachers' classrooms. Gattstein, a principal at P.S. 204 in the Bronx until 2014, states, "Quality professional development takes hold when it becomes a part of the culture of the school" (as cited in Martin-Kniep and Shubert, 2017, p. 56). Leaders need to involve educators and help create a shared culture of ownership in improving practices and in using new strategies learned in professional development (Ainsworth and Vieget (2006); Danielson, 2016; Martin-Kniep and Shubert, 2017). Professional development must be shared and ongoing, and the current view of professional development being just a few days a year must change (DuFour & Fullan, 2013).

One way schools may get this mindset of shared learning in professional development is through professional learning communities (PLCs). Eaker and Keating (2012) advocate PLCs and find them to be "the most effective framework for leading the work of schools" (p. 1). They maintain that PLCs promote both adult and student learning, encourage the constant review of evidence of student and teacher success, and help both groups to improve and succeed. PLCs enhance continuous teacher learning and school improvement (Mooney & Mausbach, 2008). PLCs are high priority in schools because PLCs move beyond set professional development to allow teachers to continually grow by targeting student learning, collaborating with others, using best practices, moving to action, committing to goals, and assessing and adapting based on results (DuFour, DuFour, Eaker, & Many, 2006; Smith et al., 2017). Professional development is meant to impact student learning; however, by moving professional

development and learning into the PLC concept, not only are students affected, but teachers are affected, too (DuFour & Fullan, 2013).

Professional development is not a means to minimize the admirable work that teachers do daily with students, but it is a way to provide struggling teachers support and to help other teachers reach excellence (Danielson, 2016). Yoon, Duncan, Lee, Scarloss, and Shapley (2007) conducted a meta-analysis of multiple studies on professional development uncovering that if teachers received professional development, the average control group of students would boost their performance by 21 percentile points. Professional development has multiple purposes like honing in on improvement of teachers' skills and teaching methods to keeping up with new advancements in the field (Hightower et al., 2011).

Teacher Education and Degree Level

According to the 2016 National Teacher and Principal Survey conducted by the National Center for Educational Statistics, the amount of public school teachers who hold a post baccalaureate degree (i.e., a master's, educational specialist, or doctoral degree) rose from 47% in 2000 to 57% in 2016 with nearly 59% of secondary teachers holding a post baccalaureate degree (Walker, 2018). The literature and views on education level are varied. Some scholars do not accept that master's level or additional degrees gained by teachers influence student achievement. Miller and Roza (2012) insist that teachers with a master's level degree are "no more effective, on average, than their counterparts without master's degrees," (p. 1) with exception to master's degrees earned in math or science.

However according to Darling-Hammond and Post (2000), a major factor in the success of students is effective teachers. They posit, "Teachers who know a lot about teaching and

learning and who work in environments that allow them to know students well are critical elements of successful learning” (p. 130). They also cited research studies conducted in Georgia, Michigan, and Virginia where researchers found that students achieve more and stay in school when teachers have certification in their specific subject, a master’s degree, or are in a graduate class. Kocakaya and Kocakaya (2014) determined the school as an environmental factor of student academic achievement. Teacher experiences and teacher’s education level are considered part of the school’s environment. Looking to fill a gap in the literature, the authors wanted to determine if the number of teachers and expert teachers played a role in academic achievement. Their research showed there was a positive effect on math and science on the Level Determination Exam (SBS). The authors suggest there is credence in increasing teacher expertise through further education and professional opportunities such as in-service training and graduate education.

Teacher education is an important aspect of schools in America as in most places certification is needed, and educators must receive a state license to teach. Valente and Valente (2005) assert, “To be eligible for employment as a teacher or school professional, a person must have credentials that are specified by state law, usually in the form of a state certificate” (pp. 156-157). In the data provided by Podgursky (2006), there is evidence that most teachers in America have the correct certification for their chief teaching areas. Teaching requires a great deal of knowledge that stretches across multiple domains. Because education requires an extensive amount of knowledge that is constructed from teacher preparation programs and is eventually added to by on the job learning tasks, Howard (2006) asserts that teacher education is a lifelong endeavor.

Fisher, Frey, and Hite (2016) suggest that a teacher needs to acquire two types of knowledge: content knowledge and pedagogical knowledge. This knowledge can be obtained in college education courses that Baines and Stanley (2000) regard as rigorous and relevant in helping teachers learn how to teach content effectively. Coppenhaver and Schaper (1999) support the view that teacher education is important as they state, “Our goal is to develop strong professionals who are ready to join other educators on the journey to student success” (p. 64). Stronge (2010) agrees that pedagogical coursework is critical for teachers at all levels; however, content knowledge is more pertinent at the secondary level. Further, Baines and Stanley (2000) indicate that high school students want to learn from teachers who are knowledgeable and well informed about the subject they are teaching.

Kunter et al. (2013) concentrated on exploring connections between professional competence of teachers, teacher instructional quality, and the influence of teacher behaviors (pedagogical content knowledge, professional beliefs, work-related motivation, and self-regulation) on student outcomes. The authors found that student outcomes were affected by pedagogical content knowledge, enthusiasm for teaching, and self-regulatory skills on instructional quality; however, teacher’s general academic ability did not affect instruction. Darling-Hammond and Post (2000) concluded that teachers who have been prepared and certified excel more than those who are not. Yet, there is a misalignment between teacher preparation programs and real classroom teaching (Brighton, 1999; DeMonte, 2016). Banks, series editor, as cited in Howard (2006), states:

Effective teachers in a diverse and flat world need an education that enables them to attain new knowledge, paradigms, and perspectives on the United States and the world. They should acquire the knowledge and skills that will enable them to examine the

assumptions that undergird concepts such as “the Westward Movement” and “American Exceptionalism.” Teachers should also be able to examine the gap between American ideals and realities, and to develop a commitment to act to help close it. (pp. xi-xii)

Policy makers in educational reform today must get out of the mindset from years past that teaching is a profession in which little skill and knowledge is required and realize that there is a large amount of knowledge and skill needed to educate students (City et al., 2011).

Teaching is a difficult, yet meaningful, profession. According to Beach and Reinhartz (2000), teaching is “a complex and complicated endeavor” that can be viewed as “an art, a science, or both” (p. 212). Moir, Gless, and Baron (1999) articulate, “Universities, schools, administrators, teachers, bargaining units, and teacher educators must come together to create systems grounded in the principles of effective teacher education and professional development” (p. 106). Scherer (2016) recommends continual learning especially when part of a career dedicated to educating others.

Teacher Pay

Pay will not bring in more qualified teachers nor is pay a determinate of higher student achievement (Podgursky, 2006). Even so, according to the 2016 National Teacher and Principal Survey conducted by the National Center for Statistics, 55% of teachers feel they are not paid enough (Walker, 2018). Many educators must work second jobs just to be able to make ends meet (Garcia, 2018; Rosales, 2018). DuFour (2016) insists that money shows what people value and that value is not being put on education. Educators need to be compensated, and America needs to view educators as other countries view them: as “nation builders” because “teaching is the profession that creates all other professions” (p. 16).

Hubbard (2012) reported that Tennessee teachers are in jeopardy of losing their annual raises based on years of service and level of degrees earned. Goodman and Turner (2011) conducted a study on whole school performance pay; they concluded that the success of merit pay is dependent on the structure of the merit pay and the payment scheme such as small teaching staffs or staffs that work well together. Greenwald, Hedges, and Laine (1996) also found that other variables such as school and class size and other variables account for student success when determining resource variables. According to Spring (2011), teachers have historically been paid based on years of experience and education level; however, some of them do not agree that master's level or additional degrees gained by teachers influence student achievement; therefore, those believe that teachers should not be given incentive pay when additional degrees are gained.

Brandt (2011) presents the idea of talent management in education so that qualified personnel are teaching in America's schools. As stated by Weisberg, Sexton, Mulhern, and Keeling (2009), "Fifty-nine percent of teachers and 63% of administrators say their district is not doing enough to identify, compensate, promote, and retain the most effective teachers" (p. 33). In Spring's (2011) publication, the Green Party sustains, "Classroom teachers at the elementary and high school levels should be given professional status and salaries comparable to related profession requiring advanced education, training and responsibility" (p. 145). However, Hanushek and Rivkin (2007) deem increasing salaries as not only expensive but also ineffective.

Podgursky (2006) contends that teachers are paid a salary comparable to other professions when looked at on a weekly basis, and this fact is enough to pull people into the teaching vocation. He also disputes that pay is not a determinate of higher student achievement and provides evidence from a review of 17 studies, 14 of which showed teachers' pay to have no

effect on better student outcomes. Assessing schoolwide performance pay for a New York City bonus program, Goodman and Turner (2011) found no evidence that linked performance pay to student achievement. Kelly (2004) conducted a study to see if high salaries helped with attrition rates and determined that salaries only had a slight effect on teachers leaving the teaching profession and other factors like further schooling or professional development played a role in teachers staying in the profession. Guthrie (2011) notes all these factors, especially education level, are important to consider since they are continually under scrutiny when it comes to educational budget cutting. Overall, Greenwald, Hedges, and Laine (1996) state that school resources need to be dispersed in a way that benefits both the teacher and the student so that students' learning needs are met.

Assessment

When analyzing the importance or necessity of assessments, the question that lends itself is what do students need to know to be educated and how is that knowledge to be assessed? Educational reform has increased the amount of testing and the emphasis placed on testing as an indicator of success in American schools. Assessment is a tool that grants external entities the ability to see the levels of success within the classroom. Large-scale assessments have become a staple of education in most states. McGhee and Griffith (2001) indicate, "The reasoning seems to be that the results of these large-scale assessments will provide much needed individual student data, allowing states, districts, schools, and teachers to make instructional decisions that are data driven" (p. 137). Even though large-scale standardized testing has existed for quite a while in some places, Whitaker (2004) states that testing is continually undergoing changes such as modifications in the tests, the dates of the tests, and grade levels tested. Spring (2011)

maintains that politicians like test-driven policies because it helps with accountability, and although some do support assessment, most students, teachers, and administrators find other factors more essential to determining a good education. Smith et al. (2017) believe in the power of assessment to guide students in making decisions about courses that can lead to either college, postsecondary technical schools, military service, or employment, allowing students to make selections that equip them for making the right choices about their future.

In an interview, educator and linguist, Noam Chomsky (2013) replied to a comment on ways to interest students in learning. He states:

There are ways of teaching that simply drive away any sensible person's curiosity and interest, no matter what you're teaching. In 2012, programs of <<teaching to tests>> are deadening to the mind: they just undermine any likelihood of the children wanting to learn or gain the capacities to proceed on their own.

Some feel that all the pressure that comes with high-stakes standardized tests irritates teachers and in turn makes them feel or seem far less than effective or expert at what they do sometimes even being referred to as “technicians who simply implement prepackaged curriculums and standardized tests as part of the efficiency-based relations of market democracy and consumer pedagogy” (Giroux, 1998, para. 19). Even so, Whitaker (2004) believes that if a teacher is effective, he or she will not let standardized tests rule the plans or environment of the classroom. These teachers can look at test scores as a guide to student learning in terms of doing what is best for students like making the curriculum better and more aligned toward student learning. Smith et al. (2017) note there is much written work, which upholds that assessment is beneficial and connected to high caliber teaching.

However, due to reforms in education and the push for testing, many individuals believe schools are more interested in preparing students for tests than an educational system that prepares students for the world and society of the 21st century making high-stakes testing one of the consequences of school reform (Spring, 2011; Webb, 2006). The USDOE and the TDOE maintain that the assessment of students is essential and valuable. Assessment of students allows educators to be able to determine that students are “equipped with the knowledge and skills to successfully embark on their chosen path in life” (TDOE, 2018b), and these assessments “provide necessary information for educators, families, the public, and students themselves to measure progress and improve outcomes for all learners” (USDOE, 2015).

Standardized testing began in part by the measurement movement of the early 1900s. This movement asserted, “If education were to be studied using the principles of scientific inquiry, and greater efficiency obtained, things must be measured” (Webb, 2006). There were multiple people influential in the standardized testing movement including: Edward L. Thorndike, Alfred Binet, Theodore Simon, and Lewis Terman. Thorndike, known as a major leader among this group, revealed the following illustration:

Whatever exists at all exists in some amount. To know it thoroughly involves knowing its quantity as well as its quality. Education is concerned with changes in human beings; a change is a difference between two conditions; each of these conditions is known to us only by the products produced by it—things made, words spoken, acts preformed, and the like. To measure any of these products means to define its amount in some way so that competent persons will know how large it is, better than they would without measurement. (as cited in Webb, 2006, p. 228)

Another major contributor to the success and continuance of standardized tests was World War I. Standardized testing allowed “mass testing” in a quick way that disseminated those fit and unfit for service both educationally and physically (Webb, 2006; Fletcher, 2009). Because of advancements and benefits of the wartime testing in identification of attested soldiers, education found these assessments useful for determining and diagnosing the placement of students (Webb, 2006).

Although critics did and still do exist when it comes to assessment, assessments still play a vital role in education. While many assessments exist, one major assessment that is recognized nationally and has been validated through a long-term existence is known as the American College Testing assessment (ACT). It is a vital standardized test given to high school students across the nation to assess and score students for entrance into colleges, universities, other postsecondary institutions, and the work industry. The ACT has been in existence since 1959 when an education professor from the University of Iowa created it in response to the Scholastic Aptitude Test (SAT) created in 1926 (Fletcher, 2009). The purpose of the ACT gives all stakeholders a view of what students’ college and career readiness is by honing in on the students’ knowledge gained through K-12 education (TDOE, 2018a). The ACT is important to consider because teachers in all subject areas can impact it. Jon Erickson, ACT president who recently retired in 2015, believes:

ACT has proposed a multidimensional model of college and career readiness that takes into account much more than just core academic skills. Also included are the student’s behavioral skills, career navigational skills, and important abilities like critical thinking, collaboration, and problem solving. (ACT, 2015, p.3)

However, Jean Paul Mather, ACT's first president states, "It is clear that these correlations will not provide a magic index for infallible predictions. There are dozens of factors which we cannot test" (p.3). Yet, Mather also stated in 1960, "[The ACT] provides public institutions of higher education and high schools, as well as private institutions, with test scores and statistical data that, when combined with the student's high school record, constitute predictors of academic performance in college that are as reliable as any yet available" (ACT, 2015, p. 4).

For this study, test scores are being used to measure student achievement; however, it is important to remember test scores are not the end all be all for measuring student achievement. According to Whitaker (2004), effective educators also focus on student achievement in terms of "social skills, self-worth, behavior, responsibility, involvement in school, and other such characteristics" (p. 111). City et al. (2011) argue, "You improve schools by using information about student learning, from multiple sources, to find the most promising instructional problems to work on, and then systematically developing with teachers and administrators the knowledge and skill necessary to solve those problems" (p. 9).

As stated earlier, the Gates Foundation found the use of data pivotal to pinpointing good teachers (Spring, 2011). McLaughlin (2009) supports the use of data as well stating, "Data become information when they improve the knowledge of the people using the data so they are better able to make a decision. Principals need to know which data are important and which are not useful to their school improvement efforts" (p. 68). Principals who are in support of data driven decisions feel that data allows them "to understand the realities of their school and use data to help build that understanding for their teachers as well as for themselves" (Theoharis, 2009, p. 43). Although the opinion of principals in Theoharis' study is that assessment can marginalize students, one principal called high-stakes testing a necessary "evil" but also a means

for carefully monitoring all students. Gay (2010) proposes, “In the present climate of standards teachers often are confused about whether to teach anything that is not tested...The tension is over standardization or one way of teaching, learning, and assessment for all” (p. xxix).

Educational Reform

Reformation in education has been evolving for many years. Ideologies and philosophies have proposed multiple viewpoints on the focus of education. Educational theorists have educational focuses, which fit to their beliefs. Beginning in the 1940s, Essentialists were focused on the basics in education. By the 1970s, standardized test scores began to drop. Essentialists like Bestor, Richover, and others recognized the need to focus on basic knowledge and skills which students needed in order to be successful in America.Sizer concluded that schools should focus more on the quality of learning students were getting verses the quantity; therefore, enabling both the students’ mind and intellect. Overall, in most views, the current curriculum lacked the rigor for successful functioning in a democratic society (Webb, 2006).

Neo-essentialist, E.D. Hirsch, Jr. promoted cultural literacy in art, religion, science and culture, and after review of the National Assessment of Education Progress (NAEP) in 1987, Ravitch and Chester affirmed that literature and history were significant components of education that all Americans should learn, but scores showed student failures in these areas. Neo-perennialists, however, held a different view, which coincided with more traditional standards. Scholars like Adler and Bloom sustained these more traditional views supporting the study of the Great Books and cultural teachings where life lessons could be passed on to American school children. Constructivists hold the belief that students build upon their learning. The knowledge that students gain can be expounded upon by their experiences in life by making

them active in their learning (Webb, 2006). DuFour and Eaker (1998) contend that many of the reform movements like the Excellence Movement of the 1980s and the Restructuring Movement of the 1990s of the time had failed and caused much disappointment in public schools.

Large-scale reform has existed since the 1980s after the releasing of the United States government's report, *A Nation at Risk* (1983), because people held the view that American schools were lagging and trailing behind globally (Fullan, 2003; Senge et al., 2012). Smith et al. (2017) state:

So, what's our output? What kind of student do we want to send out into the world? A century ago, the answer was that we wanted a worker – someone who could perpetuate an existing society. Educators, therefore, were tasked with preparing students to assume their place in a class system that was governed by rules associated with wealth, race, ethnicity, and gender. Two world wars, a Soviet satellite launch, a civil rights movement, and a race to the moon contributed to a shift in society's expectations of education. (p. 167)

In a recent poll completed by the NEA, 1,000 educators were polled to find out what they felt students needed access to most. The top three opportunities educators felt students needed access to were “fine arts, foreign language, daily physical education, library/media, and career technical education (85%), health and wellness programs, including social and emotional well-being (73%), and fully qualified teachers including Board-certified teachers (65%)” (Alvarez, 2016). Fullan (2003) suggested that academics and social and personal progress are central functions for students to access in American schools. The 2016 Phi Delta Kappan (PDK) poll of the Public's Attitudes Toward the Public Schools was unclear about education's purpose in the United States. The poll assessed what public education in America should focus on

instructionally: academics, citizenship, or career-ready instruction. Although there were unclear results, 68% of participants would rather schools place focus on career/technical skills-based instruction. Only 45% of the participants felt that academic achievement was a top priority (Walker, 2016). Bolman and Deal (2013) uphold that families want an education system that promotes student success, and businesses hope for the same because they need compliant and knowledgeable employees.

Reforms in education have a recurring effect. Venables (2018) compared educational reform movements in America to the 1993 comedy *Groundhog Day*:

Actor Bill Murray plays a common man who experiences the same day over and over with only minor differences each time – a scenario that resonates with many veteran teachers. One of the biggest adversaries of school change is the collective institutional memory of similar changes that were attempted in the past, failed, and were quickly abandoned despite well-intentioned administrator’s initial enthusiasm and vows that the change was “here to stay.” That history stays vivid in the minds of all those teachers who bought into the idea and who now look back at their trust with scorn and see the energy they expended as a waste of time. Teachers who have been with the school or district for a significant length of time have probably seen this phenomenon repeat itself again and again. Can we really blame these teachers for their skepticism, distrust, and resistance to the new change we are proposing? Why should they believe that somehow this time things will play out differently? Every previously failed initiative contributes to a cumulative reduction in faculty faith that the next one will work. (p. 25)

Educational reform will always be around, and it affects teachers, students, and anyone connected with education. Yet, any reform decision made by policy makers should reflect what

is most needed for students, and educators should work to fit new ideas into what is already working for students (Whitaker, 2004). DuFour and Fullan (2003) determine that there is too much inconsistency with reform initiatives causing schools and the individuals within to be overwhelmed, confused, exhausted, and skeptical instead of seeing improvement in student achievement. City et al. (2011) feel that the only way schools will improve is “through the complex and demanding work of teaching and learning” (p. 25).

Stakeholders' Views of Education

Many people in and out of education have had different views on what education in America should look like (Breese, 2017; Paine & McCann, 2009; Resnick & Hall, 1998; Spring, 2011; Webb, 2006). According to Fullan (2003), all people hold a shared investment in the business of education. When it comes to the measure of schools, the value of the education students receive correlates to the value of life people in society experience. Thus, a sturdy public education system can bolster a diplomatic, advantageous, and self-governing society. Likewise, Senge et al. (2012) argue that successful schools, which promote learning, cause various stakeholders within the school and outside the school to see what is best for the good of the individual as well as what is best for all. Fisher, Frey, and Hite (2016) advocate that ventures in education should be placed at the front of the public's file of concerns. Additionally, Barrett (2004) asserts that stakeholders must work together to promote a quality education for young people because education plays an integral role in America's future and is crucial for America's economic power.

Arguments exist over what curriculum should be taught, what standards or expectations should be upheld, and what the purpose of education should be (Resnick & Hall, 1998; Spring,

2011). These arguments include views by parents, students, school staff, teachers, school administrators, district staff, foundations, school board members, interest groups, politicians, taxpayers, the business community, other community members, postsecondary teachers, and the media who are all stakeholders in the public school system of America (Paine & McCann, 2009; Spring, 2011). Bolman and Deal (2013) suggest outside influences can play a role in public schools in the areas of resources and outcomes. Schools are more liable to give into external forces due to an inability to maintain items required for everyday needs and an inability to generate the expected outcomes. Educators should welcome these external forces like students, families, and policy makers because not only can teachers validate their work, but they can show they are efficient and effective at their job (Fisher, Frey, & Hite, 2016).

Politicians maintain that schools are negatively affecting America in scope of the global economy and there is an urgent need to “fix” public schools (Spring, 2011). These “governors and mayors, like Congress and the president” work to change public education with reform ideas like “adopting tougher graduation requirements, investing in developing the teaching force, pouring technology into schools, or creating new forms of governance” (Resnick & Hall, 1998, p. 89). These policy makers are interested in the connections between postsecondary institutions, the work world, and secondary education in order “to better meet the needs of a stronger economy” (“A Report to Stakeholders,” 2002, p. 25).

Likewise, postsecondary teachers and business employers assert that young people are going into postsecondary institutions and professions unprepared to complete the work at hand (Barrett, 2004; Resnick & Hall, 1998; Senge et al., 2012). A survey conducted by a research and advisory firm, Maguire Associates in Boston, found that “84 percent of [college] faculty members say that high-school graduates are either unprepared or are only somewhat well

prepared to pursue a college degree” (Sanoff, 2006, para. 5). Conley (2007) finds this to be the case because college and high school standards and expectations do not match causing students to lack the endurance and work ethic to be college ready.

In like manner, employers find high school graduates to be ill prepared for the workforce, lacking “skills essential to job success” (Casner-Lotto & Barrington, 2006, p. 10). The Workforce Readiness Report Card disclosed several deficiency areas of workforce entrants coming directly from high school. These include deficiencies in: “basic knowledge and skills of Writing in English, Mathematics, and Reading Comprehension... Written Communications and Critical Thinking/Problem Solving, both of which may be dependent on basic knowledge and skills... Professionalism/Work Ethic” (Casner-Lotto & Barrington, p. 11). “Over 40 percent (42.4 percent) of employer respondents rate new entrants with a high school diploma as “deficient” in their Overall Preparations for the entry-level jobs they typically fill” (Casner-Lotto & Barrington, p. 13). Applied skills such as “Professionalism/Work Ethic, Oral and Written Communications, Teamwork/Collaboration, Critical Thinking/Problem Solving, and Ethics/Social Responsibility” (Casner-Lotto & Barrington, p. 23) are key concepts high school students need to be taught in order to be successful in the 21st Century Workplace. J. Willard Marriott, Jr., Chairman and CEO, Marriott International, Inc. declares:

To succeed in today’s workplace, young people need more than basic reading and math skills. They need substantial content knowledge and information technology skills; advanced thinking skills, flexibility to adapt to change; and interpersonal skills to succeed in multi-cultural, cross-functional teams. (as cited in Amos, 2006, para. 8)

Moreover, like Marriot, Jacobson (2001) charges that employers are motivated to employ workers who are educated and can work both autonomously and collectively.

Similarly, Senge et al. (2012) claim that parents and students in America are disappointed in the education being provided by school systems. Smith et al. (2017) believe that parents' concerns should be heard because "parents should be seen as partners in the process of education" (p. 101); however, Fisher, Frey, and Hite (2016) suggest that parents may feel hesitant, cautious, or unable to come into the classroom.

Teachers and students also feel disappointment. Spring (2011) explains students and teachers hold a major concern with the excess and emphasis on testing. Testing has consumed classroom instruction causing a decrease in the value of time spent in school. Testing impacts the climate and culture of the classroom and school, and culture and climate essentially could be of impact in teacher quality (Allensworth, 2012). Students are going to be most successful in a climate and culture where "learning is valued above all else" (Fisher, Frey, & Hite, 2016, p. 60). Teachers ridicule the practice of using one specific assessment to determine teacher quality and student achievement; however, Spring (2011) states in general, teachers are content with their schools. Fisher, Frey, and Hite (2016) establish that "students must understand the products that are expected from the learning task and be held accountable for the overall result as well as their individual contributions" (p. 103).

Although these arguments do exist and each stakeholder believes in the importance of good schools, most people postulate that there is much room for improvement in America's current school system (Bolman & Deal, 2013). The TDOE presents this mission statement: "Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark upon their chosen path in life" (TDOE). TDOE also asserts that a top educational priority for the state is to bridge high school education with postsecondary completion.

A major issue of concern for stakeholders is standardized testing. Standardized testing is current, past, and future in American education, there are conflicting views as to whether students should be scored on one standardized assessment. Barrier-Ferreira (2008) contends that standardized testing limits the teaching of the whole child and the true success of education needs to reach beyond the score of a test to what measures success in life. Barrier-Ferreira states, “Although standardized testing will ensure that we do not lose focus of academic excellence, we must be equally cognizant of allowing for opportunities within the educational setting to nurture the personal growth of each child” (p. 140). Even with this view in mind, Gay (2010) identifies an increase in implementation of standardized testing in school due to politicians and policy makers requiring more evidence based in data that shows students are performing at the levels they need to be.

No matter the view, standardized tests are a major business proponent of education. They are seen as a gateway into the success of classrooms across America. The Federal Government now requires the testing of students after the passage of laws such as NCLB and Race to the Top. Because of this push, testing companies are major stakeholders in education. These companies have created an industry in education, and they make a huge impact on educational policies promoting their products for use in the educational world (Spring, 2011). Spring states:

...global test producers, such as Pearson, McGraw Hill, and Educational Testing Services, benefit from educational systems that rely on standardized tests for promotion, graduation, and college entrance, and on English as the global language of commerce.
(p. 237)

A major question of research is determining who is to be held most accountable for student success. Students, teachers, and parents are three main stakeholders who are important

in determining what impacts student learning. Peterson et al. (2011) investigated those beliefs and found a great deal of differentiation. Students placed a lot of responsibility on the teacher; teachers and parents focused on the student.

What stakeholders believe makes a difference in how education in America works, as stakeholders can be a motivating force and drive effective change in schools (Paine & McCann, 2009). In discussing evaluation, supervision, and reflection in professional growth, Frontier and Mielke (2016) conclude, “Only by clarifying the premise, purpose, and payoffs...can board members, administrators, and teachers...move toward a system that builds capacity to improve teaching” (p. 29). Bolman and Deal (2013), propose, “Successful change requires an ability to frame issues politically, confronting conflict, building coalitions, and establishing arenas for negotiating differences into workable pacts” (p. 386). Paine and McCann, 2009, promote:

When parents and other community members advocate for the kinds of systemic changes that can help sustain improved outcomes (e.g., policies, goals, dedicated funding), schools and districts are more likely to focus on these changes and thereby be able to sustain recent improvements.” (p. 8)

Chapter Summary

In conclusion, a teacher, whether deemed effective or ineffective, will have a positive or negative impact on student achievement. The question remains about the factors or characteristics of a teacher that have the largest effect on student achievement. Various teacher factors have been researched to see their effect on student achievement such as: instructional strategies, attendance, pedagogical content knowledge, enthusiasm for teaching, self-regulatory skills, and grade level taught (Harris, 2010; Snyder & Kellogg, 1970; Roby, 2013; Kunter et al.,

2013; Gray, 2011). Nonetheless, with more and more accountability being placed on teachers, further research needs to be conducted. Teachers need to be aware of the factors that affect student learning most so that they will be able to adapt their individual characteristics to find the best fit for their students.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated in ACT scores from the individual schools and to explore teacher perceptions of those factors. Specifically, this research was an analysis of teachers' number of years of experience, amount of professional development, and education level obtained as well as perception of these particular factors in relation to overall school performance on the ACT. For this study, non-experimental quantitative research is used with a comparative and correlational design. This chapter outlines the research questions and null hypotheses, research design, population, instrumentation, data collection, and analysis of data.

Research Questions and Null Hypotheses

The following research questions and null hypotheses pertaining to ACT scores and teacher factors (years of experience, amount of professional development each year, and education level obtained) and teacher perceptions of those factors were investigated:

1. Is there a significant correlation between teachers' years of service and students' ACT scores?

H₀1. There is no significant correlation between teachers' years of service and students' ACT scores.

2. Is there a significant relationship between teachers' perceptions of the value of years of service and students' ACT scores?

H₀2. There is no significant relationship between teachers' perceptions of the value of years of service and students' ACT scores.

3. Is there a significant correlation between the number of hours teachers spent in professional development during the year and students' ACT scores?
H₀3. There is no significant correlation between the number of hours teachers spent in professional development during the year and students' ACT scores.
4. Is there a significant relationship between teachers' perceptions of the value of number of hours in professional development attended during the year and students' ACT scores?
H₀4. There is no significant relationship between teachers' perceptions of the value of the hours in professional development attended during the year and students' ACT scores.
5. Is there a significant relationship between teachers' perceptions of the quality of the professional development and students' ACT scores?
H₀5. There is no significant relationship between teachers' perceptions of the quality of the professional development and students' ACT scores.
6. Is there a significant correlation between teachers' education levels and students' ACT scores?
H₀6. There is no significant correlation between teachers' education levels and students' ACT scores.
7. Is there a significant relationship between teachers' perceptions of the value of teacher education level and students' ACT scores?
H₀7. There is no significant relationship between teachers' perceptions of the value of teacher education level and students' ACT scores.

Instrumentation

This study used data that were collected through a survey and through public data from the Tennessee State Report Card in order to determine if there is a significant correlation between teacher factors and ACT school composite scores and to measure relationships between teacher perceptions of those factors and ACT school composite scores.

An online survey was created to collect teacher data. The survey was developed through the online platform of Google Forms. The voluntary survey consists of four demographic items and 15 items measuring teacher perceptions of those factors. Teacher identification by name was not necessary thus keeping the surveys entirely confidential. The survey responses were used to determine relationship to schoolwide ACT composite scores.

For school composite data, schoolwide composite ACT scores were used. The ACT assessment is comprised of four distinctive sections: English, math, reading, and science. It is a timed assessment that lasts approximately four hours. It assesses not only what students learn in high school but also determines if students are college and career ready. The schoolwide composite scores encompass the data from any student within grades 9-12 who has taken the ACT assessment.

Population and Sample

The population for this study consisted of high school teachers from a single school district in Southern Middle Tennessee in grades 9th through 12th who taught in the district during the 2018-2019 school year. The district includes three high schools and three unit schools, along with several elementary and middle schools. There are approximately 250 high school teachers in the district. All were eligible and were asked to complete a voluntary survey (see Appendix

A). These were teachers who taught in grades 9th through 12th during the 2018-2019 school year. All high school students who had participated in the ACT were represented through their schoolwide composite ACT scores. The data reported by ACT to the state, from the three high schools and three unit schools in the district, were gathered for use in this study. High school teachers were chosen for this study because of their direct link to the ACT, as it is a main test all students take and given to all high school juniors in Tennessee.

Data Collection

The supervisor of instruction and assistant director of schools from the school district granted permission to collect teacher and student data for research. The IRB of East Tennessee State University was then contacted for approval to conduct research. Once approval was obtained, information about the survey was given to the supervisor of instruction and emailed to high school and unit school principals and the teachers at these schools. Teachers were given the link to survey and two weeks to complete and submit the survey. Reminders were sent out throughout the two weeks and on the final day to submit the survey. There was no need to link teacher to student due to using schoolwide data. The data was compiled from the Tennessee State Report Card. This is a public site the Tennessee State Department of Education created for various stakeholders to view pieces of data that relate to student achievement. Part of the data on this site is schoolwide ACT composite scores for districts and schools across Tennessee.

Data Analysis

Data collected from each responding teacher's survey was paired with schoolwide ACT composite scores from the current school year. *Statistical Package for Social Sciences (SPSS)* data analysis software was used to implement all data analysis procedures for this study.

There were seven research questions and seven null hypotheses. Research Questions 1 through 5 and Research Question 7 were analyzed using a series of Pearson correlation tests. The Pearson Correlation coefficient r "describes the linear relationship between pairs of variables for quantitative data" (Witte & Witte, 2010, p. 133). Research Question 6 was analyzed using Spearman correlation, which is a "descendent of Pearson correlation coefficient" that is used for ordinal data (Witte & Witte, 2010, p. 144). All data were analyzed at the .05 significance level. The items from the teacher survey that aligned with each research question were averaged to determine the overall rating of teachers' responses on the perceptions of the factors given.

Chapter Summary

This study investigated educator factors, specifically, teachers' number of years of experience, amount of professional development, and education level obtained, that have an impact on overall school performance as indicated in ACT scores from the district and individual schools. The study also investigated teacher perceptions of those factors as they relate to ACT scores. Teachers and students in grades 9th through 12th during the 2017-2018 school year from a district in Middle Tennessee were selected for the population for this study. A survey instrument along with data from the Tennessee State Report Card was used to collect the data for this research. Pearson correlation tests and Spearman correlation tests were conducted in order to analyze the research questions. The results of these tests are discussed in Chapter 4.

CHAPTER 4

FINDINGS

The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated in ACT scores from the individual schools and to explore teacher perceptions of those factors. Specifically, this research was an analysis of teachers' number of years of experience, amount of professional development, and education level obtained as well as teachers' perceptions of these particular factors in relation to overall school performance on the ACT.

In this chapter, data are presented and analyzed to address seven research questions and seven null hypotheses. Data from 19 survey items were analyzed. Four items contained demographic information while the other 15 items pertained to teacher perceptions. The survey was distributed, and reminder emails were sent. Approximately 250 teachers were requested to complete the survey, and 67 teachers responded. The participants were assured that the survey was completely anonymous and confidential, and the demographic information could not be used to identify participants.

Research Question 1

Research Question 1: Is there a significant correlation between teachers' years of service and students' ACT scores?

H₀1. There is no significant correlation between teachers' years of service and students' ACT scores.

A Pearson correlation coefficient was computed to test the relationship between teachers' years of service and students' ACT scores. The results and analysis revealed a weak, negative relationship between teachers' years of service (M=15.5, SD=8.36) and ACT score (M=19.6, SD= .73) and correlation that was not statistically significant [$r(63) = -.124, p=.325$]. See Table 1 and Figure 1 below. As a result of the analysis H_0 was not rejected. In general, the results suggest there is not a significant relationship between years of teacher experience and ACT scores of students.

Table 1.

Teachers' Average Years of Experience

School	Average Years of Experience	ACT Composite Score
1	14.13	19.3
2	19.23	18.9
3	14	19.6
4	16.14	18.6
5	12.1	20.1
6	15.56	20.6
7	26	19.6

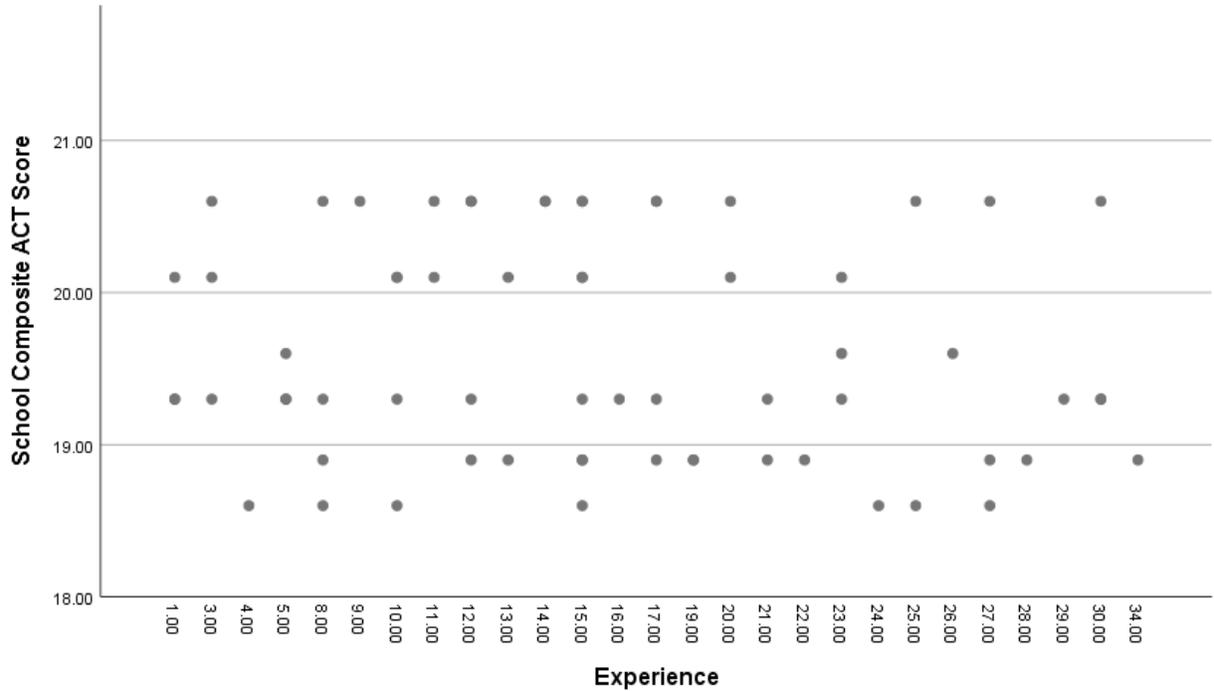


Figure 1. Participants' Responses Regarding Teachers' Years of Experience and School ACT Composite Scores.

Research Question 2

Research Question 2: Is there a significant relationship between teachers' perceptions of the value of years of service and students' ACT scores?

H₀2. There is no significant relationship between teachers' perceptions of the value of years of service and students' ACT scores.

A Pearson correlation coefficient was computed to test the relationship between teacher perception of the value of years of service and students' ACT scores. The results of the analysis revealed a weak, negative relationship between teachers' perceptions of the value of years of service (M=3.20, SD=. 53) ACT scores (M=19.6, SD=. 73) and a correlation that was not statistically significant [$r(64) = -.067, p = .596$]. See Table 2 below. As a result of the analysis

H₀₂ was not rejected. In general, the results suggest there is not a significant correlation between teachers' perceptions of the value of teacher experience and students' ACT scores.

Table 2.

Teachers' Perceptions of the Success of Veteran Teachers compared to Novice Teachers

Teachers' Perceptions	Success of Veteran Teachers > 10 Years of Teaching	Success of Novice Teachers <10 Years of Teaching
Strongly Agree	4.5%	3%
Agree	27.3%	4.5%
Neutral	45.5%	54.5%
Disagree	19.7%	34.8%
Strongly Disagree	3%	3%

Research Question 3

Research Question 3: Is there a significant correlation between the number of hours teachers spent in professional development during the year and students' ACT scores?

H₀₃. There is no significant correlation between the number of hours teachers spent in professional development during the year and students' ACT scores.

A Pearson correlation coefficient was computed to test the relationship between the number of hours teachers spent in professional development and students' ACT scores. The results and analysis revealed a weak, negative relationship between teacher professional development hours (M=14.1, SD=21.66) and ACT score (M=19.6, SD=. 73) and a correlation that was not statistically significant [$r(57) = -.088, p=. 510$]. See Table 3 and Figure 2 below.

As a result of the analysis H₀₃ was not rejected. In general, the results suggest there is not a

significant relationship between the number of professional development hours and ACT scores of students.

Table 3.

Teachers' Average Hours of Professional Development

School	Average Hours of Professional Development	ACT Composite Score
1	14.38	19.3
2	22.92	18.9
3	17	19.6
4	8.14	18.6
5	9.6	20.1
6	12.07	20.6
7	25	19.6

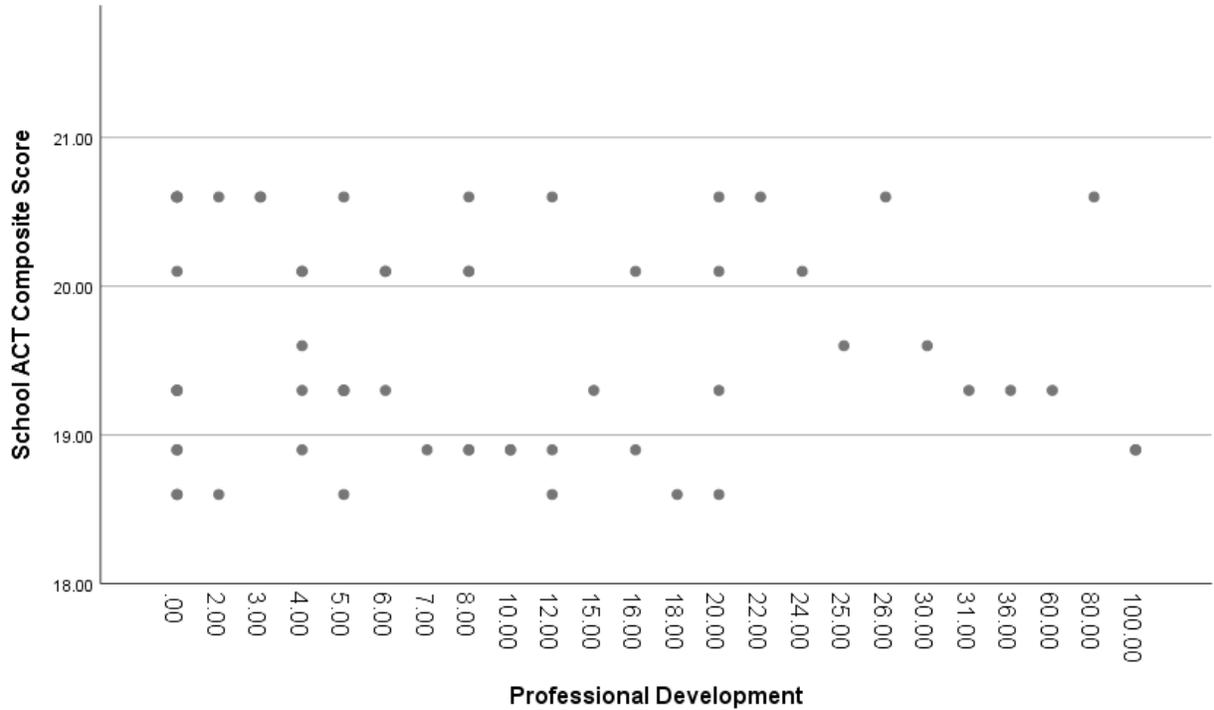


Figure 2. Participants’ Responses Regarding Teachers’ Hours of Professional Development and School ACT Composite Scores

Research Question 4

Research Question 4: Is there a significant relationship between teachers’ perceptions of the value of hours in professional development attended during the year and students’ ACT scores?

H₀4. There is no significant relationship between teachers’ perceptions of the value of hours in professional development attended during the year and students’ ACT scores.

A Pearson correlation coefficient was computed to test the relationship between teachers’ perceptions of the value of hours spent in professional development and students’ ACT scores. The results of the analysis revealed a weak, positive relationship between teacher perception of the value of professional development (M=3.26, SD=. 78) and ACT scores (M=19.6, SD=. 73)

and a correlation that was not statistically significant [$r(64) = .015, p = .906$]. See Table 4 below. As a result of the analysis H_04 was not rejected. In general, the results suggest that there is not a significant relationship between teachers' perceptions of the value of number of hours spent in professional development and students' ACT scores.

Table 4.

Teachers' Perceptions on the Value of Professional Development in General, Mandated by the District or School, and Self-Chosen Professional Development

Teachers' Perceptions	Professional Development in General	District or School Mandated Professional Development	Self-chosen Professional Development
Strongly Agree	10.6%	4.5%	13.8%
Agree	39.4%	25.8%	41.5%
Neutral	19.7%	31.8%	36.9%
Disagree	24.2%	30.3%	7.7%
Strongly Disagree	6.1%	7.6%	0%

Research Question 5

Research Question 5: Is there a significant relationship between teachers' perceptions of the quality of the professional development and students' ACT scores?

H_05 . There is no significant relationship between teachers' perceptions of the quality of the professional development and students' ACT scores.

A Pearson correlation coefficient was computed to test the relationship between teachers' perceptions of the value of the quality of professional development and students' ACT scores. The results of the analysis revealed a weak, positive relationship between teachers' perceptions of the value the quality of professional development ($M=3.37, SD=.57$) and ACT scores

(M=19.6, SD=. 73) and a correlation that was not statistically significant [$r(64) = .140, p = .261$]. See Table 5 and Table 6 below. As a result of the analysis H_05 was not rejected. In general, the results suggest there is not a significant relationship between teacher perceptions of the value of quality of professional development and students' ACT scores.

Table 5.

Teachers' Perceptions of the Quality of Professional Development

Teachers' Perceptions	Quality of Professional Development in General	Quality of District or School Mandated Professional Development	Quality of Self-chosen Professional Development	Quality of District or School Mandated Professional Development Versus Quality of Self-chosen Professional Development
Strongly Agree	31.8%	3%	9.1%	1.5%
Agree	43.9%	25.8%	36.4%	24.6%
Neutral	16.7%	27.3%	37.9%	36.9%
Disagree	6.1%	37.9%	15.2%	29.2%
Strongly Disagree	1.5%	6.1%	1.5%	7.7%

Table 6.

Teachers' Perceptions of the Overall Experience of Quality of Professional Development

Teachers' Perceptions	Overall Experience of District or School Mandated Professional Development	Overall Experience of Quality of Self-chosen Professional Development
Highly Satisfactory	4.8%	27.3%
Satisfactory	44.4%	50%
Neutral	25.4%	19.7%

Table 6. (Continued)

Unsatisfactory	19%	3%
Highly Unsatisfactory	6.3%	0%

Teachers in the district were asked what they felt the district could do to better their professional development experience. (see Table 7 below). These perceptions were based on the professional development offered at the school or district level throughout the school year. Some teachers added their perceptions were based on other experiences not mandated by the school or district. The survey item was for a perception of professional development in general; however, 18.18% of the teachers provided responses that related to the ACT.

Table 7.

Teacher Responses on Current Professional Development Experiences Offered by the District

School	Percent of Responses Related to the ACT	Responses	ACT Composite Score
1	12.5%	<p>General</p> <ul style="list-style-type: none"> • They are doing a good job now. • More class offerings related to technology. • Tim for professional development instead of meaningless PD's to make us jump through hoops • Focus on pedagogy in individual subject areas more. • Choose highly rated by teachers' professional development. • Less time spend on cross referencing standards 	19.3

Table 7. (Continued)

1		<ul style="list-style-type: none"> • Allow teachers a greater role in choosing presenters and allow us to visit other districts to observe their successful programs of interest. (e.g. visit a successful STEM school to apply their experience to our situation) <p>ACT Related</p> <ul style="list-style-type: none"> • Make it relate more the teaching. We spend time listening to suicide prevention, homelessness, securely harassment. It seems that education is more concerned with emotional issues than academic ones. I realize that it all goes together but these issues affect a small number of students and the majority is left lacking. Regardless of education background, teachers need specific professional development related to the ACT. Any teacher can help students if they have the strategies. 	
2	7.7%	<p>General</p> <ul style="list-style-type: none"> • Make it more content specific...not one size fits all • The good ones have primarily been teacher lead and allowed for the participants to address real issues and share real solutions each has had in meeting the unrealistic and often changing demands of the state. • I am satisfied with the current set up of Professional Development. • Focus on fewer things. Stop trying to implement so many things – let us be good in something rather than trying to survive all of the new programs • Stop with the numbers and data and encourage the teachers to teach. • Give more incentives for attending PD’s (possibly pay for them if we have to go off-campus). • Stay focused on what is most important for tested subjects • Allow follow up time to prepare for implementation of newly acquired information • More relative to subjects taught 	18.9

Table 7. (Continued)

2		<ul style="list-style-type: none"> • Focus on a few things and get better rather than coming up with so many things that we can't get good at anything – so we just try to survive. • I have 4 supervisors. It would be helpful if they were consistent with each other. • Allow more grade/subject specific courses <p>ACT Related</p> <ul style="list-style-type: none"> • Provide training for ACT 	
3	50%	<p>General</p> <ul style="list-style-type: none"> • Most classes geared towards high school <p>ACT Related</p> <ul style="list-style-type: none"> • Give us something relevant like ways to help with the ACT scores 	19.6
4	0%	<p>General</p> <ul style="list-style-type: none"> • I teach in the arts. Professional development at MAP meetings and on mandatory PD days seldom focuses on the arts or is of any use to my classroom. • Rehire High Schools that Work for PD. They were great. • Give us a list of professional development activities and let us pick which ones to attend. Or pay for professional development that we pick. • Content specific facilitated by someone with experience in content area. • Consult with and get approval from ACTIVE teachers in the discipline area for discipline-specific training. Require teachers to seek out and recommend training for themselves as individuals, as departments, and as countywide discipline areas. • Make them more relevant 	18.6
5	33.3%	<p>General</p> <ul style="list-style-type: none"> • Our principal brought in a professional for just our school. It was more effective than a district mandated would have been. • More outside sources than teacher led. • Needs to apply to what I teach • Try to implement a mentorship program between teachers and students 	20.1

Table 7. (Continued)

5		<p>ACT Related</p> <ul style="list-style-type: none"> • The professional development for ACT that I have been required to take has not offered me any real help in teaching students strategies to improve or do well on the ACT. • Focus on ACT prep, totally...no other trainings...one test to rule them all. It's a prep test for PSE...then use it as the gauge... 	
6	25%	<p>General</p> <ul style="list-style-type: none"> • Allow teachers to choose their own professional development to attend • Offer more of variety of areas • Stop countywide PD. This is FOR ALL but not specific to anyone. • Tailor it better to content specific, not lumping teachers in sessions that do not apply. • Use people who are qualified to give it, who have experience and results. • Hands on and more time for PD that can be used to enhance student projects. <p>ACT Related</p> <ul style="list-style-type: none"> • Focusing on incorporating the material into your existing teaching opposed to adding additional topics to cover. How can we weave it in seamlessly in order to be able to cover ACT material and EOC material? • Provide more ACT input from their company 	20.6
7	100%	<p>ACT Related</p> <ul style="list-style-type: none"> • Train teachers in areas they are deficient as well as provide resources. Teachers who do not teach core classes are being required to teach ACT prep and RTI with next to no resources. This is ridiculous. 	19.6

Research Question 6

Research Question 6: Is there a significant correlation between teachers' education levels and students' ACT scores?

H₀6. There is no significant correlation between teachers' education levels and students' ACT scores.

A Spearman's rho correlation coefficient was computed to test the relationship between teachers' education levels and students' ACT scores. The results and analysis revealed a weak, negative relationship between teachers' education levels (M=2.69, SD=. 77) and ACT score (M=19.6, SD=. 73) and correlation that was not statistically significant [$r(63) = -.099, p=. 430$]. See Table 8 and Figure 3 below. As a result of the analysis H_06 was not rejected. In general, the results suggest there is not a significant relationship between teachers' education levels and ACT scores of students.

Table 8

Teachers' Education Levels from Each School Compared to ACT Composite Score

School	High School Diploma/Associates Degree	Bachelor's Degree	Master's Degree (+18/+30)	Educational Specialist Degree	Doctor of Education or Doctor of Philosophy	ACT Composite Score
1	0	5	10	1	0	19.3
2	0	4	6	3	0	18.9
3	0	1	1	0	0	19.6
4	1	2	4	0	0	18.6
5	0	6	3	0	1	20.1
6	1	6	8	0	1	20.6
7	0	0	1	0	0	19.6

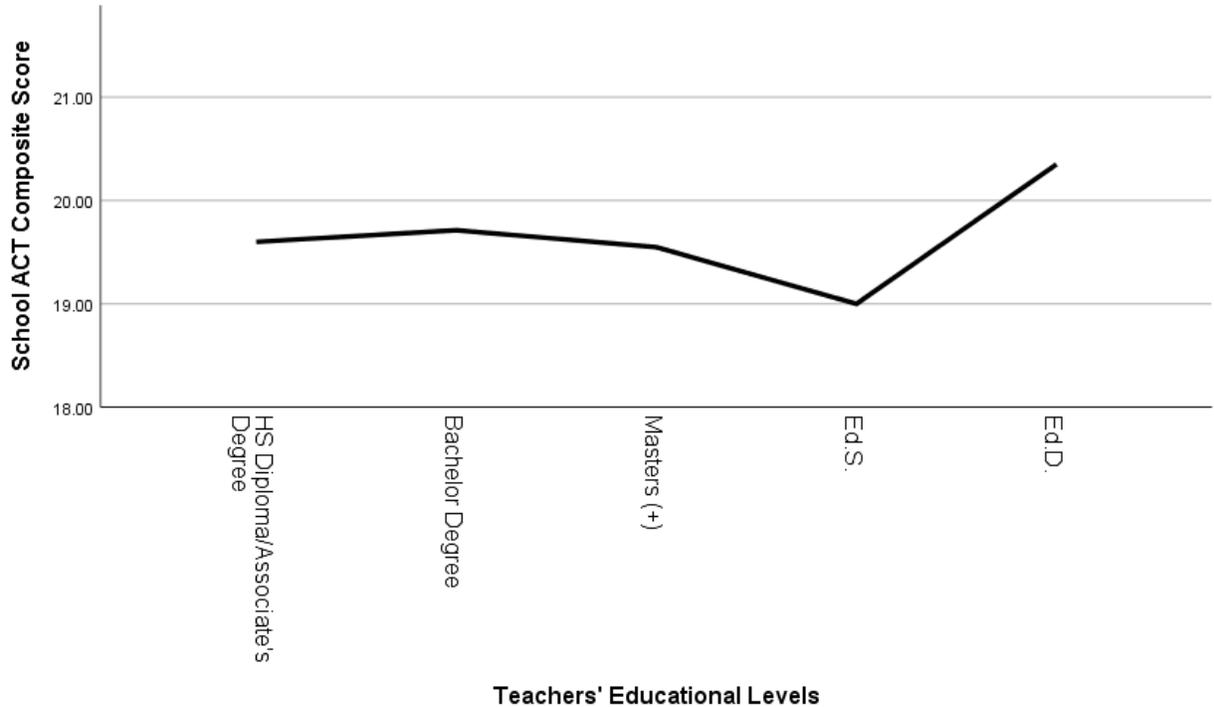


Figure 3. Participants' Responses Regarding Teachers' Education Levels and School ACT Composite Scores.

Research Question 7

Research Question 7: Is there a significant relationship between teachers' perceptions of the value of teacher education level and students' ACT scores?

H₀7. There is no significant relationship between teachers' perceptions of the value of teacher education level and students' ACT scores.

A Pearson correlation coefficient was computed to test the relationship between teachers' perceptions of the value of teacher education level and students' ACT scores. The results of the analysis reveal a weak, negative relationship between teachers' perceptions of the value of teacher education level (M=2.88, SD=. 47) and ACT scores (M=19.6, SD=. 73) and a correlation that was not statistically significant [$r(64) = -.082, p = .512$]. See Table 9 below. As a result of the analysis H₀7 was not rejected. In general, the results suggest there is not a significant

relationship between teachers’ perceptions of the value of teacher education level and students’ ACT scores of students.

Table 9

Teachers’ Perceptions of Education Level

Teachers’ Perceptions	Success of Teachers with Master’s Degrees or Higher	Success of Teachers with a Bachelor’s Degrees	Education Level in General
Strongly Agree	1.6%	1.5%	6.1%
Agree	10.9%	7.6%	9.1%
Neutral	43.8%	54.5%	43.9%
Disagree	35.9%	31.8%	31.8%
Strongly Disagree	7.8%	4.5%	9.1%

Chapter Summary

In this chapter, data from 67 teachers who taught in grades 9th through 12th during the 2017-2018 school year from a district in Middle Tennessee were analyzed. There were seven research questions and seven null hypotheses. Teacher data were collected through an online survey in Google Forms distributed via email and school ACT composite scores were accessed on the Tennessee State Report Card online. Overall, there were no significant relationships found between teacher factors and student ACT scores and teacher perceptions of those factors and student ACT scores.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a summary of the findings, conclusions, and recommendations for practice and future research. The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated in students' ACT scores from the individual schools and to explore teacher perceptions of those factors. Specifically, this research was an analysis of teachers' number of years of experience, amount of professional development, and education level obtained as well as teachers' perceptions of these particular factors in relation to overall school performance on the ACT. This could be helpful for readers who will use the results as a resource when considering instructional practices, planning professional development, leadership in professional development activities, teacher placement, pay, experience, and student success on assessments. This study was conducted from data from an online survey collected from a moderate size school district in Middle Tennessee.

Summary

The statistical analysis reported in this study was based on seven research questions and seven null hypotheses presented in Chapter 1 and 3. Research Questions 1 through 5 and Research Question 7 were analyzed using a series of Pearson correlation tests. Research Question 6 was analyzed using Spearman correlation. All data were analyzed at the .05 significance level. The items from the teacher survey that aligned with each research question were averaged to determine the overall rating of teachers' responses on the perceptions of the factors given. An additional survey question was asked regarding suggestions for the district in order to provide a better professional development experience. The total number of participants

in the study was 67 teachers in grades 9-12. Only 66 responses are recorded in the findings in Chapter 4 due to one person not agreeing on the informed consent and could go no further into the survey. Findings indicated that years of experience, professional development hours, and education level and the perceptions of those factors did not play a significant role in the ACT composite scores.

Conclusions

The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated in students' ACT scores from the individual schools and to explore teacher perceptions of those factors. Specifically, this research was an analysis of teachers' number of years of experience, amount of professional development, and education level obtained as well as perception of these particular factors in relation to overall school performance on the ACT. The following conclusions were made based on the findings from the data in this study:

1. There was no significant relationship between teacher years of experience and ACT composite score. Teachers in the district who completed the survey ranged in experience from 1 year to 34 years. In the schools, the average age of experience ranged from 12 years to 26 years. In order to measure the relationship between years of experience and ACT composite scores, items 1 and 2 from the survey were analyzed.
2. There was no significant correlation between teachers' perception of years of experience and ACT composite scores. In order to measure the relationship between years of experience and ACT composite scores, survey items 5 and 6 were analyzed. Teacher perceptions of veteran teachers' success (teachers with more than 10 years of experience)

and their success were 4.5% strongly agreed, 27.3% agreed, 45.5% were neutral, 19.7% disagreed, and 3% strongly disagreed. Teacher perceptions of novice teachers' success (teachers with less than 10 years of experience) and their success were 3% strongly agreed, 4.5% agreed, 54.5% were neutral, 34.8% disagreed, and 3% strongly disagreed.

3. There was no significant relationship between teacher hours spent in professional development and ACT composite scores. Teachers who completed the survey spent anywhere between 0 to 100 hours in professional development outside of the school mandated professional development hours with an average of 14 hours. In order to measure the relationship between the number of hours of professional development and ACT composite scores, items 1 and 3 from the survey were analyzed.
4. There was no significant relationship between teacher perception of the hours spent in professional development and ACT composite scores. Teacher perceptions of professional development in general were 10.6% strongly agreed, 39.4% agreed, 19.7% were neutral, 24.2% disagreed, and 6.1% strongly disagreed. Teacher perceptions of district or school mandated professional development were 4.5% strongly agreed, 25.8% agreed, 31.8% were neutral, 30.3% disagreed, and 7.6% strongly disagreed. Teacher perceptions of self-chosen professional development were 13.8% strongly agreed, 41.5% agreed, 36.9% were neutral, 7.7% disagreed, and 0 responses were strongly disagree. In order to measure the relationship between the perception of the hours spent in professional development and ACT composite scores, items 7, 8, and 9 from the survey were analyzed.
5. There was no significant relationship between teacher perceptions of the quality of professional development and ACT composite scores. Teacher perceptions of the quality

of professional development in general were 31.8% strongly agreed, 43.9% agreed, 16.7% were neutral, 6.1% disagreed, and 1.5% strongly disagreed. Teacher perceptions of the quality of district or school mandated professional development were 3% strongly agreed, 25.8% agreed, 27.3% were neutral, 37.9% disagreed, and 6.1% strongly disagreed. Teacher perceptions of the quality of self-chosen professional development were 9.1% strongly agreed, 36.4% agreed, 37.9% were neutral, 15.2% disagreed, and 1.5% strongly disagreed. Teacher perceptions of the quality of district mandated versus self-chosen professional development were 1.5% strongly agreed, 24.6% agreed, 36.9% were neutral, 29.2% disagreed, and 7.7% strongly disagreed. Teacher perceptions of the quality of experience of district mandated professional development were 4.8% highly satisfactory, 44.4% satisfactory, 25.4% neutral, 19% unsatisfactory, and 6.3% highly unsatisfactory. Teacher perceptions of the quality of experience of self-chosen professional development were 27.3% highly satisfactory, 50% satisfactory, 19.7% neutral, 3% unsatisfactory, and 0 responses were highly unsatisfactory. In order to measure the relationship between the perceptions of the quality of professional development and ACT composite scores, items 10, 11, 12, 13, 14, and 15 from the survey were analyzed. Survey item 16 was focused on what the district could do in order to make teachers' professional development experiences better. Responses were varied and ACT related responses accounted for 18.18% of the responses given.

6. There was no significant relationship between teacher education level and ACT composite scores. Teachers who completed the survey ranged in degree level from high school diploma to educational doctorate. In order to determine a relationship between education levels and ACT composite scores, items 1 and 4 from the survey were

analyzed. Two teachers with high school diplomas and associate's degrees, 24 with bachelor's degrees, 33 with master's or master's plus 18 or 30 degrees, 4 with educational specialist's degrees, and 2 with doctorates made up the districts' participants.

7. There was no significant relationship between teacher perceptions of teacher education level and ACT composite scores. Teacher perceptions of a master's degree or higher were 1.6% strongly agreed, 10.9% agreed, 43.8% were neutral, 35.9% disagreed, and 7.8% strongly disagreed. Teacher perceptions of a bachelor's degree were 1.5% strongly agreed, 7.6% agreed, 54.5% were neutral, 31.8% disagreed, and 4.5% strongly disagreed. Teacher perceptions of education level were 6.1% strongly agreed, 9.1% agreed, 43.9% were neutral, 31.8% disagreed, and 9.1% strongly disagreed. In order to measure a relationship between the perceptions of teacher education level and ACT composite scores, items 17, 18, and 19 from the survey were analyzed.

The results obtained in this study indicated that the number of years of experience, professional development hours, and education level and the perceptions of those factors did not play a significant role in the ACT composite scores. This is consistent with many of the findings of past research. According to Rice (2010), "Experience matters, but more is not always better" (p. 1). Rice goes on to state that teachers' first years are the most productive, and research shows that high school teachers' effectiveness declines after a certain point. Even though Shaha and Ellsworth (2013) state that some studies show that professional development can result in a positive effect on student achievement, Hightower et al. (2011) find that this is not always the case and knowledge gained in professional development might not make an improvement to student learning. Finally, Rice (2010) places the significance on the teacher's education level and subject area. However, some scholars do not accept that master's level or additional degrees

gained by teachers influence student achievement. Miller and Rosa (2012) insist that teachers with a master's level degree are "no more effective, on average, than their counterparts without master's degrees," (p. 1) with exception to master's degrees earned in math or science. Darling-Hammond and Post (2000) assert that a major factor in the success of students is effective teachers.

Recommendations for Practice

Based on the findings and conclusions of this research, the following recommendations for practice regarding years of experience, professional development hours, and education level and teachers' perceptions of these factors are for use in future practice:

1. School districts should consider designing professional development opportunities that are based on what teachers recommend allowing teachers to have a voice in professional development.
2. School leaders should reassess the current professional development design and implementation in order to add more time for application in the classroom, administrator and teacher feedback, and professional reflection.
3. School districts should consider creating professional development teams for the district who would survey and collect data determining what teachers need for professional development opportunities. The district could use this data in creating quality professional development opportunities for teachers in all content areas.
4. District level administration should develop future professional development targeting specific needs and utilizing the most seasoned educators who have the highest-level degrees in mentoring new teachers and struggling veterans. Seasoned educators may be

able to transfer their knowledge, skills, methods, and proven practices to others within the school district.

5. Administrators should consider teacher factors outside of years of experience and education level when conducting interviews or deciding teacher roles for the upcoming year.

Recommendations for Future Research

A quantitative understanding of school performance as it relates to educator factors may enhance greater understanding of what educators need to help students be successful.

Suggestions for future research would include:

1. Linking individual student ACT scores to teachers, especially subject specific teachers.
2. Determining a database within the district that provided teacher credentials. Due to a small number of participants for the survey, each school only had a small representation of participants from each faculty.
3. Examining the areas in which teachers have earned degrees. Also, exploring post baccalaureate degrees to probe whether these degrees are in education or if they are subject-specific.
4. Studying the school demographics such as: climate, culture, school size, socioeconomic status, high-minority, and other subgroups in order to investigate the relationship to student assessment scores.
5. Surveying administrators' perceptions of teacher preparedness based on evaluative measures such as TEAM Rubric compared to student test scores.

Chapter Summary

In this chapter, a summary of the findings, conclusions, and recommendations for practice and future research was presented. The purpose of this study was to investigate educator factors that have an impact on overall school performance as indicated in students' ACT scores from the individual schools and to explore teacher perceptions of those factors. Specifically, this research was an analysis of teachers' number of years of experience, amount of professional development, and education level obtained as well as teachers' perceptions of these particular factors in relation to overall school performance on the ACT. Findings from this study could help leaders in education with decisions based in instructional practices, planning professional development, leadership in professional development activities, teacher placement, teacher pay, teacher experience, and student success on assessments.

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APPENDICES

APPENDIX A

Instrument

Teacher Factors and Teacher Perceptions of Those Factors in relation to the ACT Assessment

Teacher Demographic Section- The following section asks specific questions about you.

1. What is the current school in which you work?
 - School 1
 - School 2
 - School 3
 - School 4
 - School 5
 - School 6
 - School 7
 - Other: _____

2. How many years of teaching experience do you have? _____

3. What is your educational level?
 - High School Diploma
 - Associate's Degree
 - Bachelor's Degree
 - Master's Degree
 - Master's Degree +18 hours
 - Master's Degree+ 30 hours
 - Educational Specialist Degree (Ed.S.)
 - Educational Doctorate or Doctor of Philosophy (Ed.D. or Ph.D.)

Teacher Perceptions – The following section asks teacher perceptions on teacher factors as they relate to student achievement on the ACT assessment.

4. High school teachers are more successful with ACT scores if the teachers are veteran teachers (>10 years).
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

5. High school teachers are more successful with ACT scores if the teachers are novice teachers (<10 years).
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

6. Professional development plays a major role in the success of students on the ACT assessment.
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

7. The district mandated or school mandated professional development you have attended is quality professional development as related to the ACT assessment.
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

8. District mandated or school mandated professional development plays a major role in the success of students on the ACT assessment.
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

9. Self-chosen professional development plays a major role in the success of students on the ACT assessment.
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

10. The quality of professional development plays a major role in the success of students on the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

11. The district mandated or school mandated professional development you have attended is quality professional development as related to the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

12. The self-chosen professional development you have attended is quality professional development as related to the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

13. District or school mandated professional development aids in student success on the ACT assessment more than self-chosen professional development.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

14. How would you rate your overall experience of the professional development offered by your district?

- Highly Satisfactory
- Satisfactory
- Neutral
- Unsatisfactory
- Highly Unsatisfactory

15. How would you rate your overall experience of the professional development you have self-chosen to attend?

- Highly Satisfactory
- Satisfactory
- Neutral
- Unsatisfactory
- Highly Unsatisfactory

16. What could your district do to make your professional development experience better?

17. School teachers with a master's degree or higher are more successful with student achievement on the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

18. School teachers with a bachelor's degree are more successful with student achievement on the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

19. The educational degree level of a teacher impacts student learning and success on the ACT assessment.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

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