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## PRINCIPALS' PERCEPTIONS OF THE IMPORTANCE OF TEACHER CERTIFICATION IN RURAL CHRISTIAN SCHOOLS

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PRINCIPALS' PERCEPTIONS OF THE IMPORTANCE OF TEACHER CERTIFICATION IN  
RURAL CHRISTIAN SCHOOLS

By

RONDA L. DRY

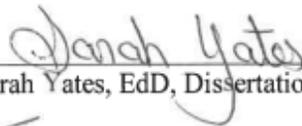
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in partial fulfillment of the requirements  
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in Organizational Leadership

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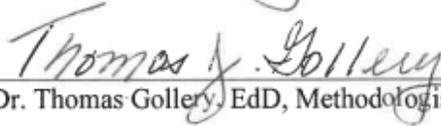
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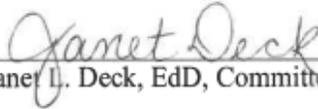
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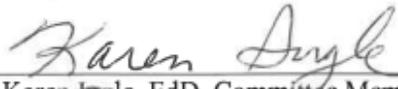
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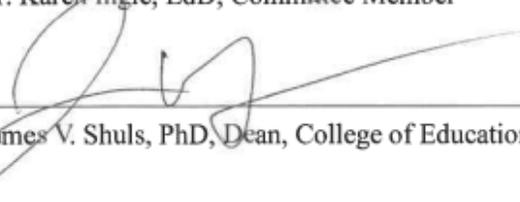
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## DEDICATION

What a journey this has been. My only regret is that my father did not get to be here on Earth to celebrate this accomplishment. I know he is looking down from Heaven and is so proud. Daddy, this is for you. I miss you.

## ACKNOWLEDGMENTS

The journey has been bitter but sweet. At times, it has felt like it would never end, while it feels like I just attended my first class at Southeastern University. Thinking about the hours I have poured into the dissertation process; I realize how grateful I am for my committee. First, I would like to express my gratitude to each member of my committee: Dr. Sarah Yates, who offered words of wisdom, encouragement, and laughter when I needed it most; Dr. Thomas Gollery, who kept me moving forward and always knew I would get it done even when I did not think so; Dr. Deck and Dr. Ingle thank you for your guidance, support, and much appreciated feedback.

Second, I would like to thank my family: Jessie Haas, my amazing mom who never wavered in her support and belief that I could accomplish this dream; Amanda and Marsden Lewis, my daughter and son-in-law, who provided constant encouragement and were two of my biggest cheerleaders; Durwood Dry, my wonderful husband, who never let me quit, provided space and time without guilt to finish writing, and provided words to my heart when there were no words to speak. Without the four of you, I would not have been able to accomplish this goal.

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## **Abstract**

The literature associated with principals' perceptions of certified/uncertified teachers within private Christian schools is limited, specifically in rural communities. Therefore, little is known about principals' perceptions of the importance of teacher certification in rural Christian schools. The purpose of the study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified. Specific to this study, teacher certification was defined as certification earned through the state or certification through a school-accrediting organization. A total of 82 principals were surveyed and asked to identify their perceptions of the importance of teacher certification and its impact on student achievement in their schools, with 41 private Christian school principals responding to the survey. The study was quantitative and non-experimental by research design, and the specific methodology was a survey research approach. Upon analysis of the study participants' responses, the conclusion can be drawn that the professional practice dimension of instructional strategies was most associated with and predictive in educational practices that positively impact student achievement.

**Key Words:** teacher certification; teacher preparation; alternative certification; teacher experience; highly qualified teacher; rural Christian schools; principal perceptions; classroom curriculum design strategies; instructional strategies; classroom management strategies

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## I. INTRODUCTION

The study's research design was non-experimental and quantitative. The primary focus of the study was to elicit the perceptions of building-level administrators regarding the efficacy of certified and uncertified teachers instructing in kindergarten through eighth grade at rural Christian schools. The study's data were collected through survey responses from principals of private schools located in rural areas in the State of Florida. The first chapter of the dissertation contains a presentation of the background of the study, the problem to be researched in the study, the significance of the study, and an overview of the methodology used in addressing the research problem. The chapter concludes with the delimitations of the study and the definition of terms essential to an understanding of the scope of the study.

### **Background of the Study**

The No Child Left Behind Act of 2002 (NCLB; U.S. Department of Education, 2001) became the first federal educational act in four decades that compiled standards, assessment, and accountability. In addition, NCLB increased the level of federal involvement in public education, increased the pressure on states to raise student assessment scores, and to close the learning gap by turning around failing schools (NCLB, 2001). Although the NCLB prompted changes in the public-school system, it did not address private schools. As NCLB increased accountability for public school administration, the pressure on educators increased to close student learning gaps

in content areas. After NCLB was passed, public school teacher performance appraisals, salary increases, and teacher retention were based to some extent upon student outcomes.

Therefore, closing the learning gap became a focus for public school educators at all instructional levels. Researchers have identified the need for continued improvement in teacher education programs, as well as improvement in the skills of teachers already providing instruction in the classroom (Carver-Thomas & Darling-Hammond, 2019). As changes within public schools were communicated to the stakeholders, parents began questioning private school leaders about their programs and how teachers in their schools were closing the learning achievement gap (Laats, 2010).

Marzano (2017) addressed the importance of educators continuing to develop their skills throughout their careers. Marzano acknowledged the idea that teachers must continue to learn new concepts and instructional strategies. Marzano (2017), in the *New Art and Science of Teaching*, used the phrase “art and science” (p. 1). He specifically wanted to convey a message of the importance of teachers continued focus on development of their skills as educators. The art of teaching must be balanced with the science of teaching, specifically measuring students’ academic performance with assessment data.

Teachers do not have a specific script to follow in the classroom. Highly qualified teachers are as varied in their characteristics and behaviors as their current students (Marzano, 2009). A *highly qualified* teacher is defined by the Florida Department of Education (n.d.) as an educator who has earned a bachelor’s degree or higher and has earned a valid Florida temporary or professional certificate. Teaching is a science, because the rate of occurrence of specific strategies can be counted, and the impacts can be measured. As teachers continue to develop their practice, they have an increased impact on student achievement, providing instruction that

closes the learning gap (Cardichon et al., 2020). In addition, teachers who implement instructional strategies with fidelity and frequency have a high impact on student achievement (Marzano, 2009). Marzano (2017) compared teachers to artists developing their skills over years of practice. Similarly, as artists continue to refine their skills throughout their careers, so should teachers. Teachers who continue to develop their instructional skills create more effective lesson plans and optimize student achievement (Marzano, 2017).

Cardichon et al.'s (2020) executive summary cited decades of research supporting the thesis that fully certified and experienced teachers can make a difference in student achievement. The Civil Rights Data Collection (CRDC), 2014 and 2016, addressed one of the largest struggles in the United States, to provide all students with highly qualified teachers and an equitable education (Cardichon et al., 2020). Schools in the highest poverty urban areas often have a larger proportion of inexperienced teachers (Carver-Thomas & Darling-Hammond, 2019). The lack of experienced teachers in high poverty schools prohibits an effective mentorship program for educators just beginning their teaching career. Mentor programs can provide support, instructional skills development, and a peer network for new teachers. A lack of a mentor program can lead to higher teacher turnover rates further fragmenting the overall teacher knowledge base and creating an inconsistency of instructional practices among the school staff.

Although not all teacher qualifications exert the same impact on student achievement, two distinct qualifications appear to consistently influence student achievement; certification and experience (Cardichon et al., 2020). Therefore, retaining certified teachers would be an important factor in establishing a strong, stable, and consistent high-quality instructional staff.

To maintain active certification status, teachers must continue personal development. Therefore, professional learning is an important task for teachers. As teachers gain classroom

experience, implementing professional learning opportunities into the school environment can contribute to stronger returns on experience (Darling-Hammond et al., 2017). Professional learning opportunities for teachers can include unit lesson studies, curriculum planning, or teacher-led professional learning communities (Hargreaves & O'Connor, 2018). According to Donohoo (2017), schools that create a stable, experienced, and certified teacher staff are better positioned to promote a working environment where teachers develop shared goals and beliefs around student achievement. Student achievement is more likely to be improved when teachers believe they can work together, overcome challenges, and achieve shared goals (Donohoo, 2017; Donohoo et al., 2018).

Brown and Militello (2016) noted, professional development (PD) appear to be the answer in the educational system for teacher shortfalls. The findings from Brown and Militello's research support the notion that principals are the gatekeepers of PD within their school setting. Brown and Militello chose 34 school leaders, from four different school districts to participate in the study. Q Methodology was used to examine the subjective views. Q Methodology is used to identify opinions or attitude statements that are similar. Researchers cluster together statistically independent patterns by using the participants ordering of items to identify similar opinions. Researchers chose specific school leaders to participate in the survey to ensure diversity and varied viewpoints. Participants were asked to sort final survey questions to identify the demographic and perceptual data collected. In addition, Q sorts were factor evaluated to disclose statistical correlations among the participants. A sustained concentrated PD must provide teachers with actual instructional models as opposed to descriptions of what instruction should be, while focusing on curriculum and best practice, and provide opportunities for teachers to collaborate.

Teachers' PD is ubiquitous during their career. The principal, as the school leader, is able to advise teachers on PD that they would benefit from the most to sharpen their instructional skills (Brown & Militello, 2016). According to Brown and Militello, school leaders are vital to creating and developing a qualified and stable teaching staff. Successful principals work to create a professional atmosphere at their schools that will attract and retain highly qualified teachers.

### **Conceptual Framework**

*What Works in Schools* (Marzano, 2003b) presents a conceptual framework for understanding the characteristics of effective teachers. Within that framework, Marzano articulated three general characteristics of effective teaching practices; effective classroom curriculum design strategies, use of effective instructional strategies, and use of effective classroom management strategies. Marzano acknowledged that these three components are highly interdependent and are the culmination of the components of effective classroom pedagogy.

Furthermore, Marzano's (2009) characteristics of effective teaching practices align with teacher certification and the teacher evaluation system. The instrument used to evaluate teachers in the state of Florida is based upon Marzano's elements of effective teaching and is used in 44 percent of Florida district schools; although over 90 percent of Florida's teacher evaluation instruments contain elements from the Marzano system. In addition, the Florida Educator Accomplished Practices (FEAPs) implemented in 2012 was aligned to the Marzano system (Weiss et al., 2012). The FEAPs are the core standards for effective educators providing guidance to Florida's public school educators and educator preparation programs throughout the state. The FEAPs identify what teachers are expected to know and be able to implement.

## **Problem Statement**

According to Marzano et al. (2001), an effective teacher is defined as an educator who makes instructional decisions that produce student learning gains. Therefore, principal assessments, teacher observations, student assessment outcomes, and student assessments of teachers are all secondary measurements that provide additional data revealing the overall affect that teachers have on students cognitively and non-cognitively (Goldhaber, 2015). The definition of an effective teacher, however, remains controversial among individuals in education. In addition, the current education policy in the United States is contradictory. Although federal legislation sets standards for teacher qualifications within the public school system, federal legislation allows the individual states to define those standards (Tobin, 2012). The literature associated with the perceptions of principals regarding certified/uncertified teachers within private Christian schools, specifically in a rural community is limited. Therefore, little is known about principals' perceptions of the importance of teacher certification in rural Christian schools.

## **Purpose Statement**

The purpose of the study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified. Specific to this study, teacher certification was defined as certification earned through the state or certification through a school-accrediting organization. The sample was administrators from private, Christian schools in a rural setting.

## **Overview of Methodology**

The research study is quantitative and non-experimental by research design. The specific research methodology utilized to address the study's topic was a survey research approach.

## Research Questions

The following research questions were posed to address the study's topic and research problem:

1. To what degree will study participants perceive formally certified teachers as more proficient in the areas of curriculum design, instructional strategies, and classroom management than teachers not formally certified?
2. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of study participant response effect?
3. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of associative and predictive effect on principals' responses?

## Research Hypotheses

H<sub>0</sub> 1

There will be no statistically significant participant response effect for the notion that formally certified teachers as more proficient in educational practices that positively impact student achievement than teachers not formally certified.

H<sub>a</sub> 2

The conception that formally certified teachers reflect greater degrees of fidelity in adhering to the elements of curriculum design, instructional strategies, and classroom management than teachers not formally certified will reflect the greatest degree of study participant response outcome.

H<sub>a</sub> 3

The element of professional practice of instructional strategies will represent the most robust correlate and predictor of study participant perceptions that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.

The communities in this study are located in counties whose populations range from 8,000 to 112,000. The participants for this study were identified as school administrators currently working in a private Christian school located in a rural community. The Florida Department of Economic Opportunity labels rural counties by population. Rural counties have a population of 75,000 or less, or a county with a population of 125,000 or less, which is connected to a county with a population of 75,000 or less. Within the guidelines provided, 32 counties were considered rural counties in the state of Florida. Within those counties were 102 private schools and 82 Christian schools. The principals or school leaders from the identified private Christian schools were asked to participate in this research by completing the survey.

Principals participated in the study by responding to an electronic survey. The study's research instrument, a Likert scale-type, researcher-created instrument was constructed based upon Marzano's (2017) framework for substantive change on student outcomes. Survey responses reflected the participants' perceptions related to the differences between certified and not certified teachers in the areas of curriculum design, instructional strategies, and classroom management, and the impact certification had on the efficacy of teacher's skills. Data from survey responses were analyzed.

Descriptive, inferential, and associative/predictive statistical techniques were employed for analytic purposes. In instances of statistical significance testing purposes, the probability level of  $p \leq .05$  was adopted as the threshold value for statistical significance of study findings.

Study data was collected and recorded in an Excel spreadsheet format and then imported into a statistical analysis software. The analysis of study data was conducted using the 27<sup>th</sup> version of IBM's Statistical Package for the Social Sciences (SPSS).

## **Overview of Analyses**

### **Preliminary Analysis**

Foundational analyses were conducted prior to the formal analysis of finding associated with the study's proposed research questions. Assessments of missing data, internal reliability of study participant response to survey items on the research instrument, and demographic information were conducted using descriptive and inferential statistical techniques.

### **Data Analysis by Research Questions**

Research questions one and two utilized the descriptive statistical techniques of frequency. The one- sample *t*-test was used for statistical significance testing purposes. The Cohen's *d* statistical technique was used to report the magnitude of effect of response associated with the notion that certified teachers are more proficient in the areas of curriculum design, instructional strategies, and classroom management than teachers not formally certified teachers. Sawilowsky's (2009) conventions of interpretation were used in assigning qualitative descriptors (small, medium, large, very large, and huge) to effect size.

Research question three was associative in nature. The mathematical relationship between the independent variables and dependent variable represented in research question three was assessed using the Pearson product-moment correlation coefficient *r*. The Coefficient of Determination ( $r^2$ ) represented the means by which the magnitude of effect in respective mathematical relationships was assessed. Sawilowsky's (2009) conventions of interpretation was

used in assigning qualitative descriptors (small, medium, large, very large, and huge) of effect size.

### **Limitations**

Limitations are possible weaknesses or challenges in the research that are recognized by the researcher (Creswell, 2013). One limitation foreseen at the outset of the study included that it was limited to private Christian schools in rural areas in the state of Florida. Additional limitations foreseen revolved around the principals concerning their experience as a school leader, personal bias, and the number of teachers they have led during their time as a principal in a rural Christian school.

### **Significance**

The significance of this study is reflected in identification of the importance that rural private Christian school principals place on hiring certified teachers. A major role of the principal as the school leader is to oversee student outcomes and ensure students are college and career ready upon graduation. According to the Civil Rights Data Collection (CRDC), teachers spend the greatest degree of professional time with students (Cardichon et al., 2020). Although not all teacher characteristics have the same impact, a growing body of research has shown that teacher qualifications matter for quality teaching and student achievement (Cardichon et al., 2020).

## II. REVIEW OF LITERATURE

Although not all teacher characteristics exert the same impact on student achievement, two distinct features appear to consistently impact student achievement: certification and experience (Cardichon et al., 2020). Therefore, retaining certified teachers would appear to represent an essential factor in establishing a strong, stable, consistent, and high-quality instructional staff. Principals who create a stable, experienced, and certified teacher staff are positioned to promote a working environment in which teachers develop shared goals and beliefs around student achievement over time. Student achievement is more likely to be improved when teachers believe they can work together, overcome challenges, and achieve shared goals (Donohoo, 2017; Donohoo et al., 2018).

Certification is one of the two teacher characteristics that continue to impact student learning (Cardichon et al., 2020). To maintain active certification status, teachers must continue their professional development. Therefore, professional learning is an essential task for teachers. Implementing professional learning opportunities with fidelity into the school environment can contribute to a robust return on experience (Darling-Hammond et al., 2017). Professional learning opportunities can include teachers working together in curriculum design, instructional strategies, classroom management strategies, or teacher-led professional learning communities (Hargreaves & O'Connor, 2018). Individual teachers may not possess all the content and pedagogical knowledge required for every topic in their class. Professional learning communities

constitute one of the best practices for continued professional learning. High-quality teacher collaboration leads to improved student achievement (Ronfeldt et al., 2015). School leaders are vital in creating and developing a qualified and stable teaching staff. Successful principals create a professional atmosphere at their schools that will attract and retain effective, certified teachers.

Despite the expanding body of literature on the importance of teacher certification, little consideration has been paid to rural Christian school principals' perception of the importance of certified teachers concerning effective classroom curriculum design strategies, effective instructional strategies, and effective classroom management strategies. Most research has focused on principals' managing certified teachers in a public-school setting. However, the existing research regarding principals' perceptions in public-school settings provides some understanding and direction for empirical research on rural Christian private school principals' perceptions of the importance of hiring and maintaining certified teachers.

The present study explored the research topic through the lens of Robert Marzano's (2013b) conceptual framework for understanding the characteristics of effective teachers. The foundation for the intended research is discussed in the conceptual framework. Related literature is organized into sections addressing teacher certification, effective classroom curriculum design strategies, effective instructional strategies, and effective classroom management strategies.

### **Conceptual Framework**

Marzano (2003b) presented a conceptual framework for understanding the characteristics of effective teachers. Within that framework, Marzano articulated three general characteristics of effective teaching practices: effective classroom curriculum design strategies, effective instructional strategies, and effective classroom management strategies. Marzano acknowledged

that these three components are highly interdependent and culminate in the components of effective classroom pedagogy.

According to Adam Laats (2010), the Christian day school began its sudden growth in the 1960s. Although the numbers are approximate, schools that were opened during the 1960s remained open for only a short time, and Laats estimated that as many as three new evangelical schools opened every day in the US during the late 1970s and early 1980s (Laats, 2010; Parsons, 1987). Often, the personnel hired for the academic staff had little or no training as teachers. Instead, these individuals were thought to be high-standing members of the church (Laats, 2010).

The extensive attention to curricular innovations, such as “new math” and sex education classes in public schools, inspired a growth surge in private schooling. The unprecedented expansion of private religious schools brought outside attention from journalists and sociologists to study the educational phenomenon. Many outsiders thought the schools were uniform in curriculum and educational philosophy, similar to how the Catholic church operated Catholic schools. However, many of these private Christian schools were opened and managed by protestant, non-denominational, or Pentecostal churches, which opened schools as a ministry of the church. Most schools had one campus and were run individually, and all decisions were made by the pastor that oversaw the church (Laats, 2010).

Contemporary private Christian school principals possess a distinct level of autonomy to lead the school in the way they believe will best impact their students’ achievement. Many times, these principals are the only school leader on their campuses with graduate-level education degrees. Rural school principals have limited access to network with their peers to discuss educational advances or changes. Therefore, private school principals may feel isolated in rural areas, as their school may be one of the only private schools in the area (Laats, 2010).

As private Christian schools evolved, school leaders have sought out accreditation for their schools. Often principals pursued an accreditation organization that aligns with the denomination of the church and school. Accreditation provides validation that a school uses an approved curriculum, and courses offered are taught in sequential order. Also, accreditation requires school leaders to focus on the continual improvement of teacher quality programs and services through regular evaluation, data analysis of student achievement, professional development, and long-range strategic planning. Accreditation agencies also provide opportunities for teachers to obtain certification in the areas in which they teach. Teachers can attend workshops and conferences that encourage professional development and identify outdated and ineffective learning strategies. By identifying outdated and ineffective learning strategies, teachers can improve their practice and positively impact student achievement (*Accreditation*, n.d.).

In the field of education, studies have been conducted on the importance of academic achievement and closing the learning gap. Teachers who have earned a bachelor's degree and acquired state certification, either traditionally or through an alternative route, would be more effective in closing the learning gap (Whitford et al., 2017). The U.S. Department of Education (2001) encouraged a change in teaching requirements with the No Child Left Behind Act (NCLB) passing during George W. Bush's presidency. Federal involvement applied additional pressure on states to ensure that public schools raised student achievement scores and closed the learning gap for students attending public schools.

## **Related Literature**

### **Teacher Certification Process and History**

The teaching profession has experienced many changes from the time of its inception. Educational shifts were influenced by local, state, and national events. Researchers, such as Anderson (2020), Cowan and Goldhaber (2016), Curry et al. (2018), and Whitford et al. (2017) have examined the impact of teacher credentials on the teaching profession, including the importance of teacher certification and the impact certified teachers have on student achievement. Cardichon et al. (2020) described the one idea that continues to remain clear: teacher certification continues to be essential in the profession of education. Although student achievement is the focus of school leaders in the education system, student proficiency is also a primary focus. However, teachers can improve their skills and practice through professional learning; teacher certification provides the most professional recognition. Writers and researchers often assert that teacher certification determines whether a teacher is identified as highly qualified. The lack of highly qualified teachers represents a fundamental cause of low student proficiency in reading and mathematics (Whitford et al., 2017). According to Cardichon et al. (2020), research spanning the United States has shown that fully certified and experienced teachers matter when assessing student achievement.

However, public school superintendents and principals struggle to provide all students with a qualified teacher in their classrooms (Cardichon et al., 2020; Cowan & Goldhaber, 2016; Goldhaber, 2015; Whitford et al., 2017). In recent years, teacher shortages have impacted students' access to highly qualified teachers, especially in low-income areas (Cardichon et al., 2020; Carver-Thomas & Darling-Hammond, 2019; Sutchter et al., 2016). Shortages have occurred from the number of teachers leaving the profession due to low teacher salaries, lack of

administrative support, and lack of respect for the teaching profession (Carver-Thomas & Darling-Hammond, 2019; Podolsky et al., 2019; Whitford et al., 2017). In addition, teachers certified through alternative routes leaving the profession caused additional teacher shortages. Certified teachers certified through alternative routes may be underprepared, compared to their traditionally certified peers who attended education classes focusing on curriculum design, instructional strategies, and classroom management.

When teacher shortages occur, rural areas may have even fewer qualified candidates to fill open positions. During teacher shortages, school leaders often respond by hiring inexperienced or uncertified teachers who negatively impact student achievement to fill open positions (Kini & Podolsky, 2016; Sutchter et al., 2016). Teachers can obtain certifications through different paths, including a traditional teacher preparation (TTP) program and an alternative teacher preparation (ATP) route. The TTP program includes educational programs offered in colleges and universities that offer exam preparation at the end of the program (Brown, 2018; Cowan & Goldhaber, 2016; Whitford et al., 2017).

Some teachers enter the teaching profession by completing a traditional teacher program and preparing to take the teacher examination. Also, individuals who have earned at least a bachelor's degree can take the teacher certification examination and earn certification upon passing the assessment (Curry et al., 2018; Whitford et al., 2017). In many instances, teachers who have earned certification through ATP can take educational courses through a college or university, or attend professional development training sessions to develop their instructional skills further. Curry et al. (2018) reviewed whether teacher credentials impacted reading achievement for fourth-grade students attending public and private schools. The study reviewed the fourth-grade reading achievement data as scored on the National Assessment of Educational

Progress (NAEP), comparing the outcomes to the teacher participants' level of education completed, college major/minor, teacher preparation route, and the teachers' National Board Professional Teaching Standards (NBCTS) status.

Participants for the study represented fourth-grade students and teachers from public and private schools from across the nation. The NAEP assessment instrument measures reading and comprehension skills. Approximately 30 to 150 student samples were collected from 100 participating schools for analysis (Curry et al., 2018). Sample size from each school depended upon the school size and the content areas assessed. The data set represented 100 classrooms in the United States, including approximately 2,000 students in first through fifth grade. Data were organized into three categories associated with the teachers' NBCTS status: earned NBCTS, working on NBCTS, and NBCTS not earned. Evidence indicated a significant difference in fourth grade reading achievement depending upon the teachers' NBCTS status [ $F(2,365) = 25.546, p < .001, \eta_p^2 = .122$ ] with a medium effect size. Utilizing Tukey's honest significant difference (HSD) test, a post-hoc analysis was calculated to determine a significant difference was observed between any two means.

Post-hoc comparison indicated students' results on the reading assessment was lower ( $p < .001$ ) when teachers pursued NBCTS ( $M = 212.9857, SD = 9.18488$ ) than when teachers who did not have NBCTS ( $M = 220.7584, SD = 7.4095$ ). In addition, student results on the reading assessment were lower ( $p < .001$ ) when teachers pursued NBCTS ( $M = 212.9857, SD = 9.18488$ ) than those teachers who had earned NBCTS ( $M = 220.2282, SD = 7.81035$ ). Moreover, no significant difference ( $p > .05$ ) was observed in fourth grade reading results between students whose teacher had earned NBCTS and teachers who did not have NBCTS (Curry et al., 2018). Curry et al. concluded fourth-grade student reading achievement reflected significant positive

learning gains ( $p < .001$ ) when teachers were prepared through a traditional route. Curry et al.'s findings supported the value of teacher preparation courses in preparing highly qualified teachers. Teacher preparation courses and activities with the most impact included teacher methods courses and student teaching. Teacher methods courses develop a teacher's knowledge of curriculum design and instructional strategies. At the same time, student teaching provides opportunities for a teacher to develop their classroom management skills.

Cowan and Goldhaber (2016) evaluated the National Board Certification program and the relationship between certification and teacher effectiveness. The study was conducted in Washington State, which had the largest Nationally Board-Certified Teacher (NBCT) populations in the nation. In 2010 the number of NBCTs in Washington state was over 100,000, representing approximately 3% of the nation's teachers (National Board of Professional Teaching Standards, 2010). Cowan and Goldhaber (2016) focused on four of the most common NBCTS certificates offered at the elementary and middle school grades, which accounted for 43% of certificates awarded in Washington State. Certificates included in the study were Middle Childhood: Generalist (MC/Gen), Early/ Middle Childhood: Literacy, Reading and Language Arts (EMC/LRLA), Early Adolescence: English Language Arts (EA/ELA), and Early Adolescence: Math (EA/Math) certificates.

Washington State required students to be assessed annually in reading and math in Grades 3 – 8. The Office of the Superintendent of Public Instruction (OSPI) maintained longitudinal assessment data for Washington State students. Data obtained from the OSPI included the student assessment data from 2006 to 2009 and included information on the student registration and program participation, but it did not link students specifically to their teachers. Therefore, Cowan and Goldhaber (2016) matched students to the year-end assessment proctors. To narrow

the results and align students and teachers more closely, Cowan and Goldhaber limited the sample to grades 4 – 6 in the elementary category, where students are usually in a self-contained classroom. Cowan and Goldhaber further narrowed the data, including certified elementary education teachers teaching students in only one grade.

However, between 2009-2010 and 2012-2013, the students and teachers were linked within the student longitudinal data during the school years. Therefore, the sample data collected included grades 6 – 8 for those school years. Cowan and Goldhaber (2016) concluded that teachers with the National Board certificate in Washington were generally more effective than teachers not nationally board certified. Findings from Cowan and Goldhaber’s study were consistent with previously conducted studies in North Carolina and Florida concerning NBCTs. In middle school reading teachers and elementary math teachers, a difference in effectiveness was discovered with a standard deviation of about 0.01 – 0.02. In addition, in middle school math, NBCTs were more effective than non-NBCTs by about a 0.05 standard deviation.

Furthermore, a teacher’s performance on the math National Board assessment may predict student achievement in math. Results vary depending upon the NBCTs certificate earned. Moreover, teachers' performance correlated to student achievement in the classroom. Teachers performing one standard deviation higher on the National Board assessment appeared to parallel student achievement across all grade levels and subjects by a difference of 0.04 – 0.05 standard deviations resulting in a 3-5 week increase in student learning gains (Cowan & Goldhaber, 2016).

### **Curriculum Design Strategies**

Huizinga et al. (2014) identified that teachers have a long tradition of being involved in curriculum design. Although teachers are involved in the design process, few teachers have the

expertise to design a curriculum. Therefore, teachers need professional learning opportunities that improve their design proficiency. Huizinga et al. identified three areas in which teachers experienced gaps in curriculum design strategies. First, teachers lack curriculum design expertise. Second, teachers had gaps in their pedagogical content knowledge. Third, teachers had a deficit in curricular consistency proficiency.

The purpose of Huizinga et al.'s (2014) study was to classify the requirements of teacher design teams (TDTs), providing a structure of support to develop curriculum design proficiency. Explicit attention would enable teachers to create related lessons focusing on one topic or theme for interdisciplinary courses. Huizinga (2009) divided curriculum design expertise into five activities: design, development, application, examination, and assessment. The purpose of Huizinga et al.'s (2014) study was to identify TDT's skill development needs, and the support strategies needed to increase their curriculum design expertise.

Six teachers experienced designing course materials for interdisciplinary courses and working in schools that offered interdisciplinary courses were approached to participate (Huizinga et al., 2014). In addition, six facilitators were selected for the study. The selection procedure included a similar process. Facilitators working at organizations that offered support to TDTs and had experience supporting TDTs who designed interdisciplinary courses were approached to participate in the study. However, the six teachers and the six facilitators were not partnered for the study. For facilitators to get a comprehensive view of the level of support needed by TDTs, facilitators were assigned equivalent projects. The six facilitators observed experienced teachers during the curriculum design process, identifying the level of support needed to enable teachers to have greater involvement in the process.

Huizinga et al. (2014) provided the six teacher participants with interview guides adapted from Huizinga's (2009) study. The interview study guides addressed the design process and the support provided to the TDTs. During the interview process, teachers and facilitators were asked to respond to the interview questions that reflected their perception of the design process. Additionally, participants were asked follow-up questions to give researchers awareness of the teachers' and facilitators' project topics (Huizinga et al., 2014). Lastly, participants were asked to identify the challenges that were presented during the study. Teachers and facilitators discussed the challenges and the processes they used to overcome and resolve those issues.

Huizinga et al. (2014) revealed three gaps in teachers' design expertise: curriculum design expertise, pedagogical content knowledge, and curricular consistency expertise. Four of the teachers' responses supported templates for designing lessons to meet the determined goals. The other two teachers reported they developed a template after reviewing the lesson goals. Two facilitators working with TDTs designed templates and provided teachers a framework to build lessons to meet the goal. The findings by Huizinga et al. proposed that teachers required further knowledge and skills to increase their curriculum design expertise.

However, the teachers' and facilitators' responses supported the notion that TDTs had the necessary pedagogical content knowledge to design a lesson series unless a new pedagogical approach was introduced (Huizinga et al., 2014). Finally, the teachers and facilitators reported the challenges of completing internally and externally quality lesson series without a shared vision. Providing the TDTs with the desired outcome enables the TDTs to work toward the vision, including the main concepts, skills, and how teachers will use the lesson materials in the future. Huizinga et al. concluded that the case study was conducted on a scale and could have a limited application. Additional limitations expressed by Huizinga et al. provided further insight

that teachers and facilitators supplied their personal opinions on the design process, reflecting on their failure or success based upon the application of the lesson series.

Abudu and Mensah (2016) conducted a study in Ghana focused on teachers' perceptions concerning curriculum design and challenges that prevent teachers from actively participating in the process of designing curriculum. The study used a survey questionnaire presented to 130 participants, including 108 trained teachers and 22 untrained teachers. Teachers responded to prompts addressing three domains: teacher experience and background, problems with curriculum design and the importance of teacher involvement in curriculum design, and challenges that prevent teachers from actively participating in curriculum design and improving teacher participation in curriculum development. Abudu and Mensah included qualitative and quantitative analyses in the data analysis of the survey questionnaire responses.

The researchers used the Statistical Package for Social Sciences to analyze the quantitative data. Abudu and Mensah's (2016) analysis reviewed frequencies and percentages. Quantitative data topics included teachers' level of participation in curriculum design, accessibility of the school curriculum leader, integration of teachers' involvement into the curriculum, and the importance of teachers' active participation in the curriculum design process. The qualitative analysis involved inductive coding, identifying patterns and descriptions, and reinforcing the quantitative data. Qualitative data identified why curriculum leaders were absent, reasons teachers were not included in developing curriculum, the importance of having teachers contributing in developing curriculum, what prevents teachers from participating in curriculum design, and ways to develop the teacher's participation in the curriculum design process.

Abudu and Mensah's (2016) results focused on three vital areas: curriculum design situation, perceptions of teachers about challenges that limit participation in curriculum design, and alternative ways to develop teachers' participation in the curriculum design process. The professional teachers' responses reflected that 40.7% of surveyed teachers perceived their involvement in curriculum design as high or very high. Although 46.3% of professional teachers' responses reflected that their participation in the curriculum design process was low to very low. Furthermore, 31.8% of non-professional teachers reflected that their involvement in the curriculum design process was high or very high compared to 50% who shared that their involvement was low or very low. Although the professional teachers and the non-professional teachers both reported they viewed their involvement in curriculum design as low to very low, professional teachers still had a higher level of participation in curriculum design than their non-professional counterparts. However, 90.8% of the professional teachers indicated that their contributions were usually not incorporated into the final design when participating in the curriculum design process.

The second important area Abudu and Mensah (2016) discussed was the role and availability of the curriculum leader on school campuses. Respondents were asked if a curriculum leader was on their school campus; 82.6% replied no, whereas 13.8% indicated a curriculum leader worked on the school campus. While 13.8% reported a curriculum leader on campus, only a few could describe the position's primary role. The researchers inferred from the survey results that the importance of the curriculum leader working at individual schools eludes the school leadership.

Teachers indicated that their participation in curriculum design was appropriate and desired, because they were the implementers of the curriculum. In linking with teacher

participation, 94.4% of professional teachers and 72.7% of non-professional teachers reported their participation in curriculum design was warranted (Abudu & Mensah, 2016). Teachers conveyed many reasons for involvement in the curriculum design process. A few of those reasons focused on the delivery of the curriculum. Teachers believed there was a learning opportunity during the design process. Teachers involved in the curriculum design process were more familiar with the curriculum, allowing them to deliver instruction more smoothly. Additionally, teachers involved in the curriculum design process learn new instructional skills to use in the classroom. Furthermore, teachers were already in the classroom, and they could bring everyday practical teaching skills to the curriculum design process.

Finally, participants provided their perceptions about the challenges that kept them from participating in the curriculum design process—the first challenge identified by most teachers in the study concerned workload. Teachers conveyed the responsibilities of a teacher; grading, lesson planning, teaching, and minimum time to plan, were barriers that kept teachers from participating in the curriculum design process. At the same time, additional challenges included a lack of training, which increased the deficit of knowledge in curriculum development; also, many teachers were not invited to participate in the curriculum design process (Abudu & Mensah, 2016).

Abudu and Mensah (2016) identified that teachers in Ghana perceived their participation in curriculum design was low. However, the teachers surveyed believed their participation in the curriculum design process was essential for building their instructional skills, increasing their content knowledge, and developing their professional skills. Abudu and Mensah summarized that the role of the school curriculum leader was critical to improving the curriculum design process.

Curriculum leaders would provide support and consistent professional learning opportunities for teachers to develop their curriculum design skills.

### **Instructional Strategies**

Marzano (2017) discussed the process and importance of actively participating in a professional learning community (PLC) to develop teachers' instructional practices. PLCs provide teachers time to work collaboratively and learn from one another. However, principals can create collaborative teams to reinforce instructional practices. Originally collaborative teams' main purpose was to design formative assessments to be administered and assess student outcomes. The collaborative team would use the assessment data to identify students' academic strengths and weaknesses.

Researchers have studied and analyzed teaching practices to define effective teaching. Studies have focused on both teacher-centered perspectives and student-centered perspectives. Tavakoli and Baniasad-Azad's (2016) mixed-methods study was conducted with Iranian high school teachers, evaluating the teachers' concept of effective teaching and its impact on their teaching practice. The study was completed in two phases, which began with the quantitative phase that included two questionnaires completed by participants. The qualitative phase included teacher observations and interviews. The study participants were randomly selected from high school science, social science, and English language teachers. The high school science and social science teachers were selected to complete the survey questionnaires. In contrast, the English language teachers were selected to be observed in the classroom and participate in the interview process. The total number of teachers participating in the study was 45, 19 males and 26 females.

The researchers used two published questionnaires created and published by Chen (2010). The first questionnaire had 55 statements assessing the teachers' conception of effective

teaching. The second questionnaire had 35 statements assessing the teacher's conception of teaching practice (Tavakoli & Baniasad-Azad, 2016). Interviews were conducted with six of the eight English teachers and focused on the teachers' perception of effective teaching, as well as the teaching practice. The English teachers were interviewed twice during the interview process. Additionally, two English teachers were observed in the classroom for two classes. The observations were focused on detecting the actual teaching practices of the teachers versus their perceptions of their practice.

The participants' questionnaire responses reflected strongly that effective teaching is student centered. According to the participants' responses for effective teaching, the second item of importance focused on examination oriented. However, the lowest indicator of an effective teacher presented as engaging students (Tavakoli & Baniasad-Azad, 2016). The self-reported teaching practices results showed that encouraging student involvement had the highest response rate while extramural connections had the lowest response rate. Tavakoli and Baniasad-Azad analyzed the association between effective teaching and self-reported teaching practices; a multivariate analysis reflected a significant relationship between the perceptions of effectiveness and teaching practices ( $F = 2.27, p < .001$ ).

The interviews conducted with the six English teachers reflected three major themes during the thematic analysis. Being student focused; then being a professional learner; and, finally, strict, examination-oriented were themes identified in the study. Additionally, keeping connections with students after class was another theme (Tavakoli & Baniasad-Azad, 2016). All six of the teachers interviewed related effective teaching to being student focused. Teachers identified the importance of creating a positive atmosphere, a friendly environment, building a

student-teacher relationship, and motivating students through various teaching strategies reflected effective teaching.

Five teachers believed that being a professional learner was the most crucial aspect of effective teaching. Furthermore, the participants' responses reflected that effective teachers were subject experts, were prepared before class, stayed current on the latest research and teaching strategies, and had a depth of knowledge (Tavakoli & Baniasad-Azad, 2016). Four of the five teachers reported that being strict was a characteristic of being an effective teacher. The teachers defined being strict as creating rules, having appropriate discipline strategies, and practicing for assessments. Three teachers reported that connections beyond the classroom were a characteristic of an effective teacher. Connections beyond the classroom referred to engaging students personally, listening to students' problems, mentoring, and attending extracurricular events where students were involved.

Farrell and Guz (2019) conducted a qualitative, exploratory, and descriptive case study of one teacher to examine the correlation between teachers' beliefs and observed teaching practices. The study participant had 19 years of teaching experience and taught English as a Second Language (ESL) English for Academic Purposes (EAP). Data were collected through interviews and observations. Teacher interviews were conducted one hour before the planned observation lesson, immediately following the observed lesson, and a final interview one day after all planned observations were completed.

Pre-observation interview questions focused on general teaching beliefs, and the lesson plans to be instructed during the class. Researchers compared the lesson plans to the actual instruction that occurred during the class. Post-observation interviews focused on the teacher's perception of how the lesson went, if it adhered to the lesson plan, and if the teacher would have

changed the lesson plan or instructed it differently. During the case study, three key themes developed from the participant's stated beliefs about teaching language, teaching reading, and learning a language. Overall, the participant's beliefs aligned with their classroom practices. However, in some circumstances, the participant's beliefs and practices did not align (Farrell & Guz, 2019).

Farrell and Guz (2019) conveyed in the study that the teacher's beliefs and practices did not align all the time. The teacher's practices that did not align with the teacher's beliefs were times the syllabus guided the teacher, because it was the expectation. Additionally, the teacher required her students to speak the foreign language only in the classroom. The teacher's personal experience of learning a second language influenced their belief on the most effective manner to learn a foreign language. Having students speak the foreign language in the class only was a practice that reflected the teacher's beliefs but did not align with the syllabus or course expectations.

Although Farrell and Guz's (2019) study focused on the teacher beliefs and actual practices of an ESL teacher teaching second language reading to students, the researchers were unsure if the study changed the teachers' beliefs or classroom practices. Moreover, some of the teaching beliefs and teaching practices were not aligned to current teacher education programs. Farrell and Guz conveyed that, teachers reflected that their experience in the classroom formed their beliefs on teaching. Additionally, Farrell and Guz hoped that educators in all areas and levels of language education would spend more time in the reflecting process, analyzing their personal beliefs and teaching practices in the classroom.

Welsh and Schaffer's (2017) study assessed the advancement of effective teaching skills in teacher candidates enrolled in a pedagogical course while completing their field experiences.

The study's theoretical framework was developed using Frances Fuller's (1969) and Robert Marzano's (2003) previous work. Fuller (1969) researched teacher candidates' stages of development throughout their educational program. Marzano's (2003) meta-analysis study was a framework based on the factors that influenced student achievement of P-12 students (Welsh & Schaffer, 2017). Welsh and Schaffer focused primarily on Marzano's (2003) teacher factors, including curriculum design, instructional strategies, and classroom management, which aligned with the coursework teacher candidates completed in their teacher preparation program.

Welsh and Schaffer's (2017) study participants consisted of 28 undergraduate teacher candidates pursuing secondary teaching certification. Participants were enrolled in either a language arts or social science methods course. In addition, students were required to complete 50 hours of field experience. Participants were assigned to specific schools to complete the field experience and were matched with mentor teachers. Mentor teachers were assigned to guide participants in creating and implementing lesson plans using the provided curriculum.

At the onset of the field experience, participants were provided with an evaluation instrument that would be used to assess their progress after their field experience. Included in the assessment process were the mentor teachers, faculty instructors, and the participants. Participants were required to complete four assignments during the methods course. Assignments consisted of a submitted lesson plan, a 10–15-minute video of their classroom instruction, and a two to three-page written reflection. Reflections included Marzano's (2003) three areas of effective teaching pedagogy: curriculum design, instructional strategies, and classroom management. Assignments were assessed using a rubric that evaluated the stages of proficiency, developing, beginning, and not demonstrated. The highest performance rating on the evaluation tool was a 4, while the lowest performance rating was a 1. The four assignments completed

during the course and the field experience assessment represented 60% of the students' overall assignment rubric score (Welsh & Schaffer, 2017).

Written reflections were the second source of data collected. A qualitative analysis of the written reflections was then used to identify common themes (Welsh & Schaffer, 2017). The candidate, as the student, was the first theme identified within the first two assignments. The candidates' reflections focused on their performance and expectations while not reflecting on the achievements of the students they were teaching. Although, during the reflections of the final two assignments, a second theme emerged. The candidates evolved from the perspective of being a student to being a teacher. Candidates focused less on their performance and focused on student outcomes from their actions in the classroom.

For this research study, 10 of the 15 items related to Marzano's (2003) effective teaching pedagogy. Three items reflected curriculum design strategies, three reflected instructional strategies, and four reflected classroom management. The third data source comprised ratings from the field experience evaluations completed at the end of the field experience (Welsh & Schaffer, 2017). According to the data collected, the mean scores for all three groups, including the participants, mentor teachers, and faculty instructors, ranged from 3.24 to 3.90 for all three item groups. Welsh and Schaffer's research supported the importance of early field experience for teacher candidates. Providing instruction and practice time to develop curriculum design strategies, instructional practices, and classroom management strategies in teacher candidates prepares them for the student teaching experience.

### **Classroom Management Strategies**

König and Kramer's (2015) study applied a video-based measurement to evaluate the classroom management expertise of novice teachers, advanced beginner teachers, and expert

teachers. Additionally, König and Kramer wanted to research the correlation between classroom management expertise and pedagogical knowledge. König and Kramer believed that beginner teachers, having completed more classes than novice teachers, would outperform their peers on the classroom management expertise assessment. König and Kramer hypothesized they would discover a difference between novice and advanced beginner teachers in their classroom management skills.

The study participants were from the area of Cologne, Germany. Novice teachers were enrolled in the University of Cologne at the beginning of their education seminar. Novice teachers represented 114 participants in the study. Novice teachers' classroom management expertise and general pedagogical knowledge were assessed online. The average age of the novice teachers was 23 years old, and 90 out of the 114 (79%) were female ( $M = 23.21$ ,  $SD = 3.85$ ; König & Kramer, 2015). Advanced beginner teachers had entered their second phase of initial teacher education courses during the 2013-2014 academic school year. The advanced beginner group included 40 respondents. Advanced beginners' classroom management expertise, as well as their pedagogical knowledge, were assessed online. An additional assessment was conducted by students rating the advanced beginner teacher's instructional quality.

Four hundred forty-nine students rated the instructional quality of 21 novice teachers (König & Kramer, 2015). Out of the 40 advanced beginner teachers, 30 (75%) were female, and their average age was 28 years old ( $M = 27.45$ ,  $SD = 3.46$ ). Experts represented 34 teachers from two schools in the greater area of Cologne. Thirty-one of the 34 expert teachers (91%) were female, and their average age was approximately 43 years old ( $M = 43.0$ ,  $SD = 10.4$ ), and had taught at a school for 18 years.

König and Kramer (2015) provided participants with a questionnaire to complete that provided the researchers with general information about the teacher participants' age, sex, and teaching experience. Next, participants' classroom management expertise was assessed using prerecorded video clips and a brief assessment tool to be completed after watching each video. The last data collection stage included a written assessment measuring the participants' pedagogical knowledge. König and Kramer used a frequency analysis and an exploratory scaling analysis with coding rubrics to analyze open-response items. Open-response items consisted of one criterion, two criteria, or more than two criteria. Additionally, Rasch-scaling analyses were completed using the ConQuest scaling software.

Analysis from König and Kramer's (2015) data collection exhibited that teachers' classroom expertise and pedagogical knowledge were positively inter-correlated, although they are two different paradigms. König and Kramer analyzed that pedagogical knowledge can be acquired through the beginning of teacher education courses at the college level. Whereas classroom management expertise is more dependent on teacher experience and acquired through continual professional development. The researchers affirmed that classroom management was procedural; therefore, classroom management was more aligned with teaching than general pedagogical knowledge.

König and Kramer's (2015) data analysis concluded that classroom management expertise was acquired through experience and professional development. Classroom management skills were developed throughout the stages of the teacher education program. However, teachers began acquiring general pedagogical knowledge from the very beginning of a teacher education program. Classroom management tends to be a foundational practice for

teachers to competently, proactively, and successfully ensure class-wide student engagement and long-term academic aptitude (Collier-Meek et al., 2020).

Classroom management components and best practices include the physical design of the classroom, classroom routines, and positively stated expectations (Simonsen et al., 2015). The physical classroom layout can prevent congestion and aids in smooth transitions through daily routines. Additionally, ensuring curriculum and supplemental materials are easily accessible for student usage. Classroom routines and clearly stated expectations provide structure and certainty for students.

Additionally, active supervision can prevent problem behavior. Active supervision comprised regular interaction with students, as the teacher moves throughout the room, monitoring student behavior (Collier-Meek et al., 2018). Teachers can reinforce appropriate student behavior while discouraging inappropriate behavior by implementing responsive classroom management elements (Simonsen et al., 2015). Providing praise and direct feedback to students about appropriate behaviors reinforces teacher expectations and provides continued support for students.

The purpose of Collier-Meek et al.'s (2020) study was to evaluate the connection between elementary school teachers' application of specific classroom management elements and student engagement. Participants for the study included ten classroom teachers and their students. Teachers were from elementary schools located in a northeastern state, with three schools located in a suburban area, while one was in a rural area. Teacher observations were conducted to collect data for the study, and teachers were observed 17 times. Teacher experience ranged from 0 to 23 years, and most teachers were certified in general education, while one teacher had a general education certification and a special education certification.

Classrooms included elementary level students; 40% were Kindergarten, 20% second grade, 20% third grade, and 20% fourth grade. The mean number of students per teacher reflected 17.7, with a mean of 3.3 students per class receiving additional special education services. While all teachers participated in classroom management instructions during their graduate training, five teachers reported participating in field experience focused on classroom management. Seven teachers reported professional learning in-service opportunities focused on classroom management (Collier-Meek et al., 2020).

Doctoral students who served as raters for the study evaluated teachers' implementation of classroom management best practices and student engagement. Observations were conducted in 30-minute intervals. Teacher behavior was assessed for 1 minute, then student behavior was assessed for 1 minute. The 1-minute intervals were repeated in an alternating sequence and repeated for a total of 30 minutes. Raters summarized the observations at the end of each observation (Collier-Meek et al., 2020). Observations were scheduled two to three times per week when teachers reported problem behavior might be more likely. Teachers participated in problem-solving consultation meetings and received application support through direct training and role-play opportunities between classroom observations.

Total teacher observations submitted for analysis were 170; academic engagement presented at 78% across all observations, while teacher classroom management behaviors ranged from zero to almost three times per minute (Collier-Meek et al., 2020). Teachers in this study rarely implemented increased proximity, planned ignoring, harsh, or emotional reprimands. Teachers most often used error corrections to respond to inappropriate behavior. Moreover, teacher's regular use of behavior-specific praise led to increased student engagement. Teachers provided general praise (0.51 times per minute) at a higher frequency than behavior-specific

praise (0.32 times per minute); although general praise was given more often, behavior-specific praise may have had a greater influence on student engagement.

Collier-Meek et al. (2020) concluded that classroom management was an essential part of effective teaching. Identifying the elements of classroom management that have the most considerable impact on student engagement may help teachers streamline implementation. Teachers referencing schedules and consistently providing routines and behavior-specific praise have a higher level of student engagement. The findings from Collier-Meek et al.'s study provide early evidence that specific classroom management strategies may be more effective than others and have a more considerable impact on student engagement.

### **Summary**

Marzano (2017) acknowledges that the three components, effective classroom curriculum design, effective instructional strategies, and effective classroom management are highly interdependent and culminate in the components of effective classroom pedagogy. Teacher qualifications are the greatest predictor of student achievement in a school setting (Darling-Hammond et al., 2017; Cardichon et al., 2020). Despite the expanding body of literature on the importance of teacher certification, little consideration has been paid to the rural Christian school principals' perception of the importance of certified teachers concerning effective classroom curriculum design strategies, effective instructional strategies, and effective classroom management strategies. Most research has focused on principals managing certified teachers in a public-school setting. However, the existing research regarding principals' perceptions in public-school settings provides some understanding and direction for empirical research on rural Christian private schools' principals' perceptions of the importance of hiring and maintaining certified teachers.

### III. METHODOLOGY

The purpose of the study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified in rural Christian schools. Specific to this study, teacher certification was defined as certification earned through the state or through a school-accrediting organization. Additionally, respondents represent private, Christian schools in a rural setting.

#### **Description of Methodology**

The study was quantitative and non-experimental by research design. The specific research methodology that was utilized to address the study's topic was a survey research approach. The study's research instrument, a Likert scale type researcher-created instrument, was adapted from the work of Marzano (2017) using a three-phase instrument validation process. The study's sampling process was non-probability and convenient/purposive in form and scope.

Descriptive, inferential, and associative/predictive statistical techniques were employed for analytic purposes. In instances of statistical significance testing purposes, the probability level of  $p \leq .05$  was adopted as the threshold value for the statistical significance of study findings. Study data were collected and initially recorded in an Excel spreadsheet format. The analysis and reporting of study data were conducted using the 27<sup>th</sup> version of IBM's Statistical Package for the Social Sciences (SPSS).

#### **Response Rate**

The customary response rate for external surveying has been noted at 10% to 15%, and as high as 25% for surveying conducted electronically (Fryrear, 2015). In the study, a response rate of at least 50% to 80% was sought at the study's outset. A response rate of 52.4% was achieved,

exceeding the thresholds established for external and electronic surveying approaches. The potential pool of study participants was 82 private Christian school principals that work within the 32 Florida counties identified to be rural areas.

### **Statistical Power Analysis**

A Statistical power analysis was completed before the study to determine the sample size parameters necessary to detect a statistically significant finding concerning statistical procedures and anticipated study participant response within the three research questions. Statistical power analyses were conducted in advance of the study using G\*Power software (3.1.9.2, Universität Düsseldorf, Germany). Statistical power analyses were delimited to anticipated medium and large effects, a  $1 - \beta$  of .80 and  $\alpha = .05$ .

A one sample *t*-test was used to analyze data for research questions 1 and 2. A sample size range of 12 (anticipated large effect  $d = .80$ ) to 27 (anticipated medium effect  $d = .50$ ) was determined to be sufficient in detecting a statistically significant finding. Research question three used the Pearson product moment correlation coefficient (*r*). A sample size range of 23 (anticipated large effect  $d = .80$ ) to 67 (anticipated medium effect  $d = .50$ ) was determined to be sufficient in detecting a statistically significant finding.

### **Sample/Sample Selection**

The sample of participants consisted of school principals identified to be currently working in a Christian private school located within a rural community. Counties were determined eligible for participation in the study under the Florida Department of Economic Opportunity Council's parameters. Counties are defined by their population, with rural counties having a population of 75,000 or less or a population of 125,000 or less, which is adjoining to a county with a population of 75,000 or less.

Within the guidelines provided, 32 counties were considered rural counties in the state of Florida. Within those counties, approximately 101 private schools fulfilled the parameters of study eligibility. In addition, Christian schools were categorized as such when they identify as religious schools through the Florida Department of Education (FLDOE). Therefore, the number of Christian schools eligible for participation in the study was 82. Study participants were specifically identified as the school leaders (principals) of the 82 schools deemed eligible for participation in the study.

### **Research Instrumentation**

The study employed a researcher-created instrumentation in the absence of a readily identifiable standardized research instrument specifically designed to address the study's construct. The study's research instrument was based upon and created to reflect the essential themes identified by Marzano's (2017) work on essential, contemporary instructional practices. A closed structure Likert scale type survey, employing a five-point scale, was developed and used to elicit study participant perceptions of the essential instructional practices through the categorial lens of teachers formally certified and those not formally certified. The study's proposed Likert scale aligned with the guidelines proposed by Dillman et al. (2014). "The most common format used today employs the five categories of strongly agree, agree, undecided (or neither agree nor disagree), disagree, and strongly disagree. The use of such named categories is user-friendly and has been found to provide acceptable levels of reliability" (p. 159).

Instrument validation was conducted at the *a priori* content validity judgment phase through piloting of the instrument and upon final collection of data achieved using the instrument. The Cronbach's alpha (*a*) statistical technique represented the statistical means by which internal reliability of study participants responded to the research instrument at the pilot

phase and final data collection phase of the proposed study. Although alpha levels of  $a = .80$  are considered “very good” and  $a = .90$  “excellent” (Field, 2018), an alpha threshold of at least  $a = .70$  was desired at the outset of the study and was viewed as “adequate” (Salkind, 2017). The internal reliability value achieved at the pilot testing phase of the study was considered excellent at  $a = .97$  (George & Mallery, 2018).

### **Study Procedures**

Study participants were asked to complete an electronic survey as part of the study. The survey was conducted in 82 Christian schools located within rural counties in the state. Study participants were emailed an invitation to participate in the survey, as well as a cover letter outlining the purpose of the study. They were then notified of the confidentiality practice within the framework of the survey.

Study participants were asked to confirm their consent to participate in the study by clicking on the consent box within the invitation and notification electronic email. Once consent was secured, they were directed to the survey. Detailed instructions were provided within the survey packet to direct participants in addressing the survey at the outset of the administration process.

The survey consisted of 12 items, with participants being requested to rate each item based upon a Likert scale of 1-5 (1 representing a response of *strongly disagree* and 5 representing *strongly agree*). Study participants were provided with a 2-week window of opportunity to complete the survey and submit their responses to the survey. A follow-up reminder was planned at the end of the 2-week participation timeframe in the event the response rate fell below the desired rate established at the outset of the study.

## **Research Questions**

Three research questions and hypotheses were formally stated in the study. The threshold for statistical significance was established at  $p \leq .05$ . The following represents the research questions and hypotheses that were stated to address the study's topic and research problem.

1. To what degree will study participants perceive formally certified teachers as more proficient in the areas of curriculum design, instructional strategies, and classroom management than teachers not formally certified?
2. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of study participant response effect?
3. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of associative and predictive effect on principals' responses?

## **Research Hypotheses**

1.  $H_0 1$

There will be no statistically significant participant response effect for the notion that formally certified teachers as more proficient in educational practices that positively impact student achievement than teachers not formally certified.

2.  $H_a 2$

The dimension of instructional strategies will manifest the greatest degree of response effect for perceptions that formally certified teachers are more proficient than those who are not formally certified.

3.  $H_a 3$

The element of professional practice of instructional strategies will represent the most robust correlate and predictor of study participant perceptions that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.

### **Data Analysis**

Preliminary analyses of a foundational nature were conducted prior to the formal analysis of findings associated with the study's three research questions. Assessments of missing data, internal reliability of study participant response to survey items, and demographic information were specifically conducted in advance of the analysis and reporting of finding for the study's three research questions.

Research questions one and two utilized the descriptive statistical techniques of frequency counts ( $n$ ), percentages (%), mean scores ( $M$ ), and standard deviations ( $SD$ ). The one-sample  $t$  test was used for statistical significance testing purposes. The Cohen's  $d$  statistical technique was used to assess the magnitude of effect (effect size) of response associated with both research questions. Sawilowsky's (2009) conventions of interpretation were used in assigning qualitative descriptors to effect size numerical values.

Research question three was associative in nature. The mathematical relationship between the independent variables and dependent variable represented in research question three was assessed using the Pearson product-moment correlation coefficient  $r$ . The coefficient of determination ( $r^2$ ) represented the means by which the magnitude of effect in respective mathematical relationships were assessed. Sawilowsky's (2009) conventions of interpretation were used in assigning qualitative descriptors to achieved effect size numerical values.

## **Summary**

The methodology used in the study was presented in Chapter III. The study was quantitative and non-experimental by research design. The specific research methodology that was utilized to address the study's topic was a survey research approach. The study's research instrument, a Likert scale type researcher-created instrument, was adapted from the work of Marzano (2017) using a three-phase instrument validation process. Study participants were asked to complete an electronic survey as part of the study. The study was conducted in 82 Christian schools located in rural counties in the state. The survey consisted of 12 items, focused on three elements of educational practices concerning effective classroom curriculum design, effective instructional strategies, and effective classroom management. Chapter IV contains a thorough discussion of the findings reported in Chapter III.

## IV. RESULTS

The purpose of the study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified in private, Christian schools in a rural setting. The study's topic was addressed through a quantitative, non-experimental research design, featuring a survey research methodological approach. The study's sample was accessed in a non-probability, convenient/purposive fashion. The instrument was researcher-created and validated through a three-phase process. The study's research instrument was a Likert scale type instrument utilizing a five-point scale using themes adapted from the work of Marzano (2017) as the basis for survey item creation. Three research questions and hypotheses were formally posed to address the research problem. The analysis and reporting of data were conducted using IBM's 27<sup>th</sup> version of the Statistical Package for the Social Sciences (SPSS).

### **Foundational Findings**

Foundational analyses of a preliminary nature were conducted in advance of the analyses of the study's research questions. Descriptive and inferential statistical techniques were used to evaluate missing data, internal reliability, and demographic identifiers. The study's response set data arrays were 100% intact. Person-level missing data was minimal at 0.81% ( $n = 1$ ). The person-level missingness of data was well below the acceptable threshold established by Newman (2014).

Approximately six in 10 (63.41%;  $n = 26$ ) study participants were identified as female by gender, with the remaining 36.6% ( $n = 41$ ) identifying as male by gender. Nearly seven in 10 (67.50%;  $n = 27$ ) study participants indicated that they possessed a graduate degree, with the

remaining 32.50% ( $n = 13$ ) of study participants indicating that they possessed an undergraduate degree. Study participant “years of professional experience” was evenly distributed across five categories.

Table 1 contains a summary of finding for the descriptive statistical analysis of the study’s three demographic identifier variables:

**Table 1**  
*Descriptive Statistics: Demographic Identifiers*

Variable	<i>n</i>	%	Cumulative %
Gender			
Female	26	63.41	63.41
Male	15	36.59	100.00
Missing	0	0.00	100.00
Degree			
Undergraduate	13	31.71	31.71
Graduate	27	65.85	97.56
Missing	1	2.44	100.00
Years of Experience			
5 Years or Less	10	24.39	24.39
6 to 10 Years	9	21.95	46.34
11 to 15 Years	9	21.95	68.29
16 to 20 Years	5	12.20	80.49
More than 20 Years	8	19.51	100.00
Missing	0	0.00	100.00

Summary descriptive statistics were conducted for study participant response to survey items associated with the three dimensions identified for study purposes. The focus of the summary descriptive statistical analyses was upon measures of typicality (mean scores), variability (minimum/maximum; standard deviations), standard errors of the mean ( $SE_M$ ), and data normality (skew; kurtosis).

Table 2 contains a presentation of the finding summary descriptive statistics associated with the study’s three dimension of educational practice:

**Table 2***Summary Descriptive Statistics*

Dimension	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE<sub>M</sub></i>	Min	Max	Skewness	Kurtosis
Classroom Management	2.65	1.14	41	0.18	1.00	5.00	0.17	-1.13
Curriculum Design	2.98	1.12	41	0.17	1.00	5.00	-0.08	-1.07
Instructional Strategies	2.89	1.03	41	0.16	1.00	4.83	-0.00	-0.95

**Internal Reliability**

The study's internal reliability of participant response to survey items on the research instrument was evaluated using the Cronbach's alpha ( $\alpha$ ) statistical technique (Field, 2018). The conventions of interpretation of alpha espoused by George and Mallery (2018) guided the qualitative interpretation of numeric alpha values. As a result, the internal reliability level achieved in the study was considered excellent ( $\alpha = .96$ ).

Table 3 contains a summary of finding for the internal reliability achieved for study participant response to all survey items on the research instrument:

**Table 3***Internal Reliability: Study Participant Response to all Items on the Research Instrument*

Scale	No. of Items	$\alpha$	Lower Bound	Upper Bound
Survey	11	0.96	0.94	0.97

*Note.* The lower and upper bounds of Cronbach's  $\alpha$  were calculated using a 95% confidence interval.

**Findings by Research Question**

Three research questions and hypotheses were formally posed in the study. Descriptive, inferential, and associative/predictive statistical techniques were used to address the analytics process. The probability level of  $p \leq .05$  was adopted for statistical significance testing purposes. The conventions of effect size interpretation proposed by Sawilowsky (2009) were used to

convert numeric values to qualitative statements of degree of magnitude of effect (small, medium, large, very large, and huge).

**Research question #1. To what degree will study participants perceive formally certified teachers as more proficient in the areas of curriculum design, instructional strategies, and classroom management than teachers not formally certified?**

The one sample *t* test was used to assess the statistical significance of mean score response of study participants to perceptions of formally certified teachers as more proficient in educational practices that positively impact student achievement than teachers not formally certified. Slightly over three in 10 (31.7%; *n* = 13) expressed agreement (strongly agree, agree) with the notion that formally certified teachers were more proficient in educational practices that positively impact student achievement than teachers not formally certified. Study participant mean score response of 2.63 (*SD* = 1.26) was manifested at a non-statistically significant level ( $t_{(40)} = -1.86; p = .07$ ). The magnitude of effect for study participant response in research question one was considered inverse and small ( $d = -.29$ ).

Table 4 contains a summary of finding for study participants perceptions that formally certified teachers as more proficient in educational practices that positively impact student achievement than teachers not formally certified:

**Table 4**

*Overall Perceptions: One Sample t test Finding*

Variable	<i>M</i>	<i>SD</i>	$\mu$	<i>t</i>	<i>P</i>	<i>D</i>
Item16	2.63	1.26	3	-1.86	.07	-0.29

*Note.* Degrees of Freedom for the *t*-statistic = 40. *d* represents Cohen's *d*.

**H<sub>0</sub> 1. There will be no statistically significant participant response effect for the notion that formally certified teachers as more proficient in educational practices that positively impact student achievement than teachers not formally certified.**

Considering the non-statistically significant finding in research question one, and the direction of the finding favoring disagreement rather than agreement with the hypothesis statement, the null hypothesis (H<sub>0</sub> 1) was retained.

**Research question #2. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of study participant response effect?**

Study participant response effect within the identified dimensions of professional practice was assessed using the Cohen’s *d* statistical technique. As a result, the greatest degree of study participant response effect was manifested in the professional practice dimension of “classroom management strategies.” The response effect for “classroom management strategies” was inverse and considered small/medium ( $d = -.31$ ).

Table 5 contains a summary of finding for the comparative effect of response for study participant perceptions that certified teachers are more proficient than non-certified teachers for the dimensions of professional practice:

**Table 5**

*Response Effect Comparison: Dimensions of Professional Practice*

Dimension	N	Mean	SD	$\mu$	<i>t</i>	<i>P</i>	<i>D</i>
Classroom Management	41	2.65	1.14	3	-1.98	.05*	-.31
Curriculum Design	41	2.98	1.12	3	-0.09	.93	-.02
Instructional Strategies	41	2.89	1.03	3	-0.66	.51	-.10

\* $p \leq .05$

**H<sub>a</sub> 2. The notion that formally certified teachers reflect greater degrees of effect for instructional strategies than teachers not formally certified will reflect the greatest degree of study participant response effect.**

Considering the finding for the dimension of “classroom management” in research question two, the alternative hypothesis (H<sub>a</sub> 2) was rejected.

**Research question #3. Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of associative and predictive effect on principals’ responses?**

The Pearson product-moment correlation coefficient (*r*) was used to assess the mathematical relationship or association for dimensions of professional practice and study participant perceptions that formally certified teachers are proficient in educational practices that positively impact student achievement than teachers not formally certified. The dimension of professional practice reflecting the greatest degree of mathematical relationship in research question three was “instructional strategies” at  $r = .88$  ( $p < .001$ ).

Table 6 contains a summary of finding for the mathematical relationships (correlations) between the three dimensions of professional practice and study participant overall perceptions that certified teachers are more proficient than non-certified teachers in professional practices:

**Table 6**

*Correlation Analysis Summary: Classroom Management, Curriculum Design, and Instructional Strategies with Overall Perceptions*

Dimension	<i>r<sub>p</sub></i>	95% CI	<i>P</i>
Classroom Management	0.81	[0.67, 0.90]	< .001
Curriculum Design	0.83	[0.70, 0.91]	< .001
Instructional Strategies	0.88	[0.79, 0.94]	< .001

### Follow-up Multiple Linear Regression (MLR)

A follow-up MLR analysis was conducted to determine which of the three dimensions of professional practice was most predictive of study participants' overall perceptions that certified teachers are more proficient than non-certified teachers in professional practices. The predictive model was statistically significant ( $F(3,37) = 46.32, p < .001, R^2 = 0.79$ ), indicating that approximately 79% of the variance in overall perceptions was explainable by the inclusion of the professional practice dimensions of curriculum design, instructional strategies, and classroom management.

The dimension of instructional strategies statistically significantly predicted overall perceptions that certified teachers were more proficient than non-certified teachers in professional practices ( $B = 0.69, t_{(37)} = 2.35, p = .02$ ), indicating that, on average, a one-unit increase of the professional practice of instructional strategies increased the value of overall perceptions that certified teachers were more proficient than non-certified teachers in professional practices by 0.69 units.

Table 7 contains a summary of finding for the predictive model used in the follow-up analysis in research question three:

**Table 7**

*Predicting Overall Perceptions by Dimensions of Professional Practice*

Model	<i>B</i>	<i>SE</i>	95% CI	$\beta$	<i>t</i>	<i>P</i>
(Intercept)	-0.49	0.29	[-1.07, 0.09]	0.00	-1.71	.10
Classroom Management	0.20	0.18	[-0.16, 0.55]	0.18	1.12	.27
Curriculum Design	0.20	0.20	[-0.21, 0.61]	0.18	1.01	.32
Instructional Strategies	0.69	0.29	[0.10, 1.28]	0.56	2.35	.02*

\* $p < .02$

**H<sub>a</sub> 3. The dimension of professional practice of “instructional strategies” will represent the most robust correlate of study participant perceptions that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.**

Considering the finding favoring the mathematical relationship between study participant perceptions with the professional practice of “instructional practices,” the alternative hypothesis in research question three (H<sub>a</sub> 3) was retained.

### **Summary**

The findings achieved in the study were presented in Chapter IV. Exceptional levels of survey response rate and internal reliability of study participant response to survey items on the research instrument were manifested. Study participant responses in research question one reflected a general sense of disagreement regarding the statement that formally certified teachers were more proficient in educational practices that positively impact student achievement than teachers not formally certified. The greatest degree of disagreement was manifested within the professional practice dimension of classroom management. The professional practice dimension of instructional strategies was most associated with and predictive of study participant perceptions that formally certified teachers were more proficient in educational practices that positively impact student achievement than teachers not formally certified. Chapter V contains a thorough discussion of the findings reported in Chapter IV of the study.

## V. DISCUSSION

The purpose of the study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified in private, Christian schools in a rural setting. Specific to this study, teacher certification was defined as certification earned through the state or certification through a school-accrediting organization.

Although not all teacher characteristics exert the same impact on student achievement, two distinct characteristics appear to consistently impact student achievement: certifications and experience (Cardichon et al., 2020). Principals that create a stable, experienced, and certified teacher staff are better positioned to promote a working environment where teachers tend to develop shared goals and beliefs around student achievement over a period of time. Student achievement is more likely to be improved when teachers believe they can work together, overcome challenges, and achieve shared goals (Donohoo, 2017; Donohoo et al., 2018). Therefore, retaining certified teachers would represent an essential factor in establishing a strong, stable, consistent, high-quality instructional staff.

### **Review of Methodology**

The study was quantitative and non-experimental by research design, and the specific research methodology was a survey research approach. The study's Likert scale researcher-

created instrument was adapted from the work of Marzano (2017). The study's sampling process was non-probability and convenient/purposive in form and scope.

### **Summary of Results**

The findings achieved in the study were presented in Chapter IV. Exceptional levels of survey response rate and internal reliability of study participant response to survey items on the research instrument were manifested. Study participant responses in research question one reflected a general sense of disagreement regarding the statement that formally certified teachers were more proficient in educational practices that positively impact student achievement than teachers not formally certified. The greatest degree of disagreement was manifested within the professional practice dimensions of classroom management. The professional practice dimension of instructional strategies was most associated with and predictive in educational practices that positively impact student achievement than teachers not formally certified. Chapter V contains a thorough discussion of the findings reported in Chapter IV of the study.

### **Discussion by Research Question**

Three research questions and hypotheses were formally posed in the study.

#### **Research Question 1**

To what degree will study participants perceive formally certified teachers as more proficient in the areas of curriculum design, instructional strategies, and classroom management than teachers not formally certified?

Research question one was the determination of study participants' perception that formally certified teachers were more proficient in educational practices that impact student achievement than teachers who were not formally certified. As a result, the findings for research question one reflected at a non-statistically significant level and a magnitude effect considered to

be inverse and small. It appears from the findings that study participants strongly disagree that formally certified teachers are more proficient in educational practices that positively impact student achievement. Slightly over three in 10 (31.7%) expressed agreement with the notion that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.

Based on the study data, 31.7% of respondents expressed agreement that certified teachers were more proficient in educational practices. Although 31.7% of respondents expressed agreement, a disconnect existed between principals' perceptions concerning the value of teacher certification and the past research. Considering the non-statistically significant finding in research question, the null hypothesis was retained.

The participant responses did not align with the research related to teacher certification and student achievement. Research over time has shown that teachers implementing instructional strategies with fidelity and frequency have a high impact on student achievement (Marzano, 2009). As teachers continue to develop their practice, they have a higher impact on student achievement, providing instruction that closes the learning gap (Cardichon et al., 2020). According to Coulson (2004), teacher certification does not make a greater impact on student achievement. School autonomy and parental school choice, when combined, make a greater impact on student achievement. Principals usually choose the best qualified people when they have the autonomy to hire anyone they want.

Teacher certification can be diversified, as not all teachers receive certification through educational programs. Some states provide alternative routes for teacher certification that do not include an approved teacher preparation program. Hess (2003) discussed that certification is most valuable when the result ensures mastery of essential skills or knowledge. Teacher

examination for licensure measures knowledge of content pedagogy, although teacher licensure does not ensure competence or measure soft skills, such as listening, caring, or motivating.

Earning certification does not guarantee that teachers have mastered essential skills or obtained appropriate knowledge. Certification does not identify unfit teacher candidates or build respect for those in the teaching profession (Hess, 2003). Given that the study was administered in Christian schools, it may not be surprising that those principals tend to place a higher value on a teacher's Christian values and moral standards than on certification.

## **Research Question 2**

Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of study participant response effect?

The elements of professional practice were assessed using Cohen's  $d$  statistical technique. The researcher hypothesized the greatest degree of student participant response effect would reflect that formally certified teachers exhibit greater degrees of fidelity in instructional strategies than teachers not formally certified. However, the element identified with the greatest degree of study participant response was classroom management. The findings for research question two identified a response effect that was inverse and considered small/medium ( $d = -.31$ ).

Considering the finding for the dimension of classroom management in research question two, the alternative hypotheses ( $H_{a2}$ ) was rejected. The researchers' hypothetical assumption that formally certified teachers reflected greater degrees of fidelity implementing instructional strategies than teachers not formally certified was intuitive based upon certification assessments and teacher training. Although the hypothesis in research question two was rejected, the respondents appeared to support the element of effective classroom management strategies. The correlation analysis summary determined a mathematical relationship between the three

dimensions of professional practice. Participant responses reflected that certified teachers were more proficient in classroom management strategies than non-certified teachers at a mathematical relationship of  $r = .81$  ( $p < .001$ ). Participant responses reflected that certified teachers were more proficient in effective instructional strategies than non-certified teachers at a mathematical relationship of  $r = .88$  ( $p < .001$ ).

Classroom management components and professional practices included the physical design of the classroom, classroom routines, and positively stated expectations (Simonsen et al., 2015). Respondents revealed the principals' perception that certified teachers were more proficient in classroom management than non-certified teachers. Analysis of the principals' responses regarding effective classroom management strategies aligns with the findings of Collier-Meek et al. (2020). Classroom management tends to be a foundational practice for teachers to ensure class-wide student engagement and long-term academic aptitude competently, proactively, and successfully.

### **Research Question 3**

Considering the elements of curriculum design, instructional strategies, and classroom management, which reflected the greatest degree of associative and predictive effect on principals' responses?

The Pearson product-moment correlation coefficient ( $r$ ) was used to assess the mathematical relationship or association for dimensions of professional practice and study participant perceptions that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified. The dimensions of professional practice reflecting the greatest degree of mathematical relationship in research question three was instructional strategies at  $r = .88$  ( $p < .001$ ).

A follow-up multiple linear regression analysis was conducted to determine which of the three dimensions of professional practice was most predictive of study participants' overall perceptions of whether certified teachers are more proficient than non-certified teachers. The predictive model was statistically significant ( $F(3,37) = 46.32, p < .001, R^2 = 0.79$ ), indicating that approximately 79% of the variance in overall perceptions is explainable by the inclusion of the professional practice dimensions of curriculum design, instructional strategies, and classroom management. In essence, participant perceptions within the three dimensions exerted a huge predictive effect upon overall perceptions that certified teachers were more proficient than non-certified teachers in professional practices.

Although all three dimensions manifested very strong relationships with the notion that certified teachers were more proficient in instructional practices than non-certified teachers, the dimension of instructional strategies represented the most robust, statistically significant predictor of overall perceptions that certified teachers are more proficient than non-certified teachers in professional practices ( $B = 0.69, t_{(37)} = 2.35, p = .02$ ), indicating that, on average, a one-unit increase of perceptions of the professional practice of instructional strategies as being more proficient in certified teachers than non-certified teachers will increase the value of overall perceptions that certified teachers are more proficient than non-certified teachers in professional practices by 0.69 units.

Considering the finding favoring the associative and predictive mathematical relationships between study participant perceptions with the professional practice of instructional practices, the alternative hypothesis in research question three ( $H_{a3}$ ) was retained. Marzano (2003b) acknowledged the three components of effective teaching practices; effective classroom design strategies, effective instructional strategies, and effective classroom management

strategies are highly interdependent. However, Marzano recognized that these components culminated in the components of effective classroom pedagogy. Specifically, the finding in research question three differs from the findings discussed in the literature concerning Welsh and Schaffer's (2017) study. Mentors and faculty instructors included in the Welsh and Schaffer study reflected high scores for classroom management strategies related to classroom awareness. However, mentor teachers and faculty instructors scored instructional strategies as the lowest of the three elements: curriculum design, instructional strategies, and classroom management.

Moreover, teachers are in the classroom with their students daily, and teachers, therefore, are able to ensure that all students at all achievement levels can experience academic success. Instructional strategies are a vital tool for teachers to aid students' academic success. However, instructional strategies alone will not accomplish the goal. Although instructional strategies are essential, teachers need to be attuned to their students' needs to know when and how to implement various strategies in the instructional process (Marzano, 2009).

Additionally, all six teachers interviewed in Tavakoli and Baniasad-Azad's (2017) study related effective teaching to being student-focused. Teachers identified the importance of creating a positive atmosphere, a friendly environment, building a student-teacher relationship, and motivating students through various teaching strategies reflected effective teaching (Tavakoli & Baniasad-Azad, 2016). Five of the six teacher participants' responses reflected a belief that effective teachers are professional learners, subject experts, are prepared before class, stay current on the latest research and teaching strategies, and have a depth of knowledge.

### **Study Limitations**

Limitations are possible weaknesses or challenges in the research that the researcher recognizes (Creswell, 2013). One limitation of the study was that it was non-experimental and

purposive. Data were collected using a non-probability convenience sample. The study was limited to principals in private Christian schools in rural areas of Florida, and, as such, the study was non-random by sampling definition that focused upon a specific, delimited sample of the population. Another limitation of the study was identifying the professional expertise of the participating principals. The data collected included the level of college degree participants had earned but not the degree subject area. Participants were also not asked if they held a leadership certification from the state of Florida, nor was their commitment to ongoing professional learning for themselves obtained.

Although the response rate of 50% was noteworthy and beyond the 25-30% generally received responses through electronic surveying, the impact of the shutdown and school restrictions during the pandemic plausibly contributed to limiting more excellent response rates from potential participants. In addition, the survey research provided and focused upon self-reported perceptual mapped data. Despite the fact that perception is essential in understanding a circumstance or a thesis, it is still perceptual data as opposed to fact-based data.

### **Implications for Future Practice**

Anderson (2020), Cardichon et al. (2020), Cowan and Goldhaber (2016), Curry et al. (2018), and Whitford (2017) explored the importance of teacher certification and the different paths that educators can earn certification. The findings of this study indicated that slightly over three in 10 principals in rural Christian schools expressed agreement with the notion that formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified. The purpose of this study was to evaluate principals' perceptions concerning the pedagogical practices of certified teachers as compared to the pedagogical practices of teachers who are not certified. Specific to this study,

teacher certification was defined as certification earned through the state or through a school-accrediting organization. In the wake of the study's findings, it appears evident that principals in rural Christian schools do not perceive to an overwhelming degree that teacher certification directly impacts student achievement. Although, Darling-Hammond et al. (2017) and Cardichon et al. (2020) identified that teacher qualifications are the greatest predictor of student achievement in a school setting.

Most research has focused on principals' managing certified teachers in a public-school setting. However, gaining input from the principal participants in rural Christian schools is an essential insight into the need for certified teachers in rural communities. Marzano (2017) compared teachers to artists developing their skills over years of practice. Teachers who continue to develop their instructional skills will create more effective lesson plans and optimize student achievement. Although not all teacher characteristics exert the same impact on student achievement, two distinct features appear to consistently impact student achievement: certification and experience (Cardichon et al., 2020).

Certification and experience are the two teacher characteristics that continue to impact student learning. Therefore, professional learning is an essential task for teachers. Implementing professional learning opportunities with fidelity into the school environment can contribute to a robust return on experience (Darling-Hammond et al., 2017). Professional learning can include teachers working together in curriculum design, instructional strategies, classroom management strategies, or teacher-led professional learning communities (Hargreaves & O'Connor, 2018).

High-quality teacher collaboration leads to improved student achievement (Ronfeldt et al., 2015). School leaders are vital in creating and developing a qualified and stable teaching staff. Successful principals create a professional atmosphere at their schools that will attract and

retain effective, certified teachers. School principals' must continually reflect and create professional improvement plans for their teaching staff so that students in these rural Christian schools have access to highly qualified teachers that provide equitable educational experiences.

### **Recommendations for Future Research**

This study was limited to rural Christian schools in the state of Florida. Further research accessing a larger sample of participants would perhaps provide greater insight into the principals' perception regarding the impact of formally certified teachers on student achievement. Valuable information was obtained from the participants through their responses to the electronic survey that shed light on their perceptions that formally certified teachers do not always provide the most meaningful impact on student achievement in rural Christian schools. Expanding the study to include all Christian schools within Florida would provide an opportunity to elicit the perceptions of principals working in the city and urban areas. Private Christian schools in the city or urban areas may have more access to finances and resources that help recruit formally certified teachers. In addition, asking principals to include the area of study in which they obtained their degree would help identify the principals' level of experience in education.

Another recommendation for a future study would be to replicate this study while broadening the participant base to include principals from public and charter schools for comparative purposes. Also, a mixed-methods study design might prove more effective in understanding the specific reasons why principals perceive that formally certified teachers do not have a more considerable impact on student achievement than their uncertified peers. A mixed-methods approach would allow the researcher to gather open-ended responses that could be organized and cataloged into multiple emerging themes.

The addition of a qualitative element, including interviews or a focus group, could further differentiate how particular groups of principals perceive the importance of formally certified teachers on student achievement. This additional feedback would provide deeper, richer, and even thicker information that will help understand principals' perceptions. Additionally, this feedback could help create opportunities to implement strategies to develop highly qualified teaching staffs across all student demographics providing equitable opportunities for every student in Florida.

### **Conclusion**

Student achievement and equitable learning environments continue to be at the forefront of educational goals across the nation. Principals and teachers alike are concerned about closing the learning gap for their students. According to prior research on the matter, highly qualified teachers have a larger impact on student achievement, aiding administrators in accomplishing school improvement goals. Furthermore, students who have continued access to highly qualified teachers throughout their academic careers are more likely to achieve higher growth and be college and career-ready (Carver-Thomas & Darling-Hammond, 2019).

Research was conducted in this study on the principal perceptions of the importance of teacher certification and its impact upon student achievement in rural Christian schools. The data collected in the research demonstrates that principals in rural Christian schools do not perceive that formally certified teachers have a larger impact on student achievement in their schools. Additionally, the study's findings appear to be non-supportive of the notion that certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.

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## Appendix A

### Ronda Dry Dissertation Survey

1. Operational learning goal and objective development are reflected to a greater degree in formally certified teachers rather than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
2. Formally certified teachers are more skilled at creating lesson plans reflecting depth and precision than their counterparts who are not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
3. Formally certified teachers are more effective in applying a variety of curricular practices than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
4. An emphasis upon nurturing a growth mindset in students is more reflective in the teaching practices of formally certified teachers compared to counterparts not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
5. Formally certified teachers are more effective in applying differentiated instructional practices than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
6. Formally certified teachers are more effective in monitoring student academic progress than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
7. The grading practices of formally certified teachers are more reflective of contemporary standards of practice on grading than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree
  
8. The assessment practices of formally certified teachers are more reflective of contemporary standards of practice on assessment than teachers not formally certified.  
5- Strongly Agree   4- Agree   3- Uncertain   2- Disagree   1- Strongly Disagree

9. Formally certified teachers reflect greater levels of achievement data literacy than teachers not formally certified.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

10. Formally certified teachers are more effectual than those not formally certified in fostering student academic engagement.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

11. Formally certified teachers are more effective in applying classroom management practices than those not formally certified.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

12. Overall, formally certified teachers are more proficient in educational practices that positively impact student achievement than teachers not formally certified.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree