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ELECTING OR APPOINTING SCHOOL DISTRICT SUPERINTENDENTS
IN THE STATE OF FLORIDA: A COMPARISON OF CHARACTERISTICS
AND PERFORMANCE OF DISTRICTS LED BY ELECTED SUPERINTENDENTS
VERSUS DISTRICTS LED BY APPOINTED SUPERINTENDENTS

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
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ABSTRACT

Florida and Alabama are the only two states in the United States of America with school districts led by either elected superintendents or appointed superintendents. The other 48 states only have appointed superintendent-led school districts.

The current study was conducted to examine the impact of the superintendent governance structure on student learning by analyzing differences in student achievement between Florida school districts led by elected superintendents and Florida school districts led by appointed superintendents. The conceptual framework of the study was the tension between democratic localism and professionalism. Dynamics associated with the conceptual framework are relevant to the current debate.

This quantitative study included cross-tabulations of the superintendent governance structure by regions and by locale codes. Descriptive statistics were used to define differences between school districts with elected or appointed superintendents in the areas of enrollment, free/reduced lunch, ELL populations, test scores, and graduation rates. An independent samples t-test was used to further analyze the demographic variables. A one-way ANCOVA was employed to determine if the superintendent governance structure or the demographic variables were associated with variances in student achievement.

Research findings indicated that appointed superintendent-led school districts performed slightly higher than elected superintendent-led school districts. However, the superintendent governance structure did not have a statistically significant relationship with student achievement. Instead, poverty, as measured by free/reduced lunch rates, had a statistically significant relationship with student achievement.
This dissertation is dedicated to God and family. I enrolled in the educational leadership program at UCF because I felt called by God. This doctoral program has been incredibly rewarding and one of my greatest challenges. My faith in Jesus Christ led me and sustained me. During the first two years of the doctoral program, I was a high school principal of a school with over 3,000 students. I have never been busier in my life. God gave me endurance. He also blessed me by giving me an amazing wife, Kim. She has been a source of steadfast support for me and has sacrificed much for me as I pursued this degree. Her encouragement has been unwavering. I look forward to our future years and the adventures to come, and I thank her for all she has done. I am blessed to be the dad of my son, Luke and my daughter, Quin. They are exponentially special to me. Luke and Quin are both fantastic individuals, and they have futures where they will bring much good to many people. My parents have taught, nurtured, supported, and encouraged me my entire life. They continually teach me by how they live their lives each day. Mom and Dad truly are great, and I am blessed to have fantastic parents. I also am blessed to have two brothers, Dan and Ken. As the youngest, I always wanted to be like my brothers. They are outstanding role models for me, and I am grateful for them both.

God called me to earn this degree. Now, God calls me to use what I have learned to benefit others. My hope and my goal is to follow the call.
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Dr. Scott Fritz discussed with me the idea of applying to the University of Central Florida’s (UCF) educational leadership program. He brought up the idea more than once, and he conveyed his confidence in me and urged me to consider the idea. I am grateful for Dr. Fritz’s encouragement, and I appreciate his having been a member of my dissertation committee.

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CHAPTER 1
INTRODUCTION

Background of the Study

As determined by national rankings, the State of Florida’s k-12 public education system lags in comparison to many other states. According to *U.S. News & World Report* (2017), Florida ranked 40th among the 50 states for pre-k-12 public education. Frohlick, Stebbins, Sauter, & Comen (2017) of 24/7 Wall Street ranked Florida 29th of the 50 states, and *Education Week* (2018) ranked Florida 30th among the 50 states. These rankings raise concerns about Florida’s public education system. The Florida legislature has made a valiant attempt to improve education throughout the state but must continue to identify problematic factors and act accordingly. Although Florida ranks in the lower half of the nation, the state’s school system has many strong elements to build upon, and the potential for higher levels of performance exists. Miami-Dade County Public Schools, the fourth largest school district in the nation, exemplifies the capacity for higher student achievement, having earned a district grade of A for the first time in 2018 (CBS Miami, 2018).

In the United States, 48 of 50 states have public school districts with an executive leadership structure headed by a superintendent appointed/hired by the school board. The superintendent leads and manages the district, and the school board makes policy and evaluates the superintendent. Members of the school board are elected by the citizens who reside within the boundaries of the school district. Two anomalies exist: Florida and Alabama are the only states which permit the superintendent to be elected (Code of Alabama 1975, 2018; Florida State Statutes, 2018). Both states have a combination of school districts led by elected superintendents and others led by appointed superintendents. In Alabama, a majority of the school districts are
led by appointed superintendents. In contrast, the majority of Florida’s school districts are led by
elected superintendents, specifically 41 of the 67 school districts or 61%. This percentage
changed in November, 2018. Residents of Escambia County (Stafford, 2018), Marion County
(Wilcox, 2018), and Martin County (Davis, 2018) voted for referendums to change to an
appointed superintendent governance structure. Therefore, at the time of the present study, 29 of
the 67 school districts (43%) had voted for an appointed superintendent governance structure
since being given the choice to decide on the matter. The data and analysis in this research were
based on 26 of the 67 school districts having an appointed superintendent during the 2017-2018
school year.

The superintendent governance structure is relevant to Floridians. In 2017, a state
constitutional amendment, purposed to eliminate the process of electing superintendents, was
presented to the Constitution Revision Commission (Constitution Revision Commission, 2017;
Solocheck, 2018). The proposal progressed through the state’s Constitutional Revision
Commission process, and it was supported by commission committees (Treasure Coast, 2018)
before being removed by the original sponsor (Solocheck, 2018). Had the proposal been formally
approved by the Constitutional Revision Commission, the item would have proceeded to the
2018 ballot for Florida voters to make the final determination. Although the Constitutional
Revision Commission did not move the topic to voters, the group, through their preliminary
actions, endorsed the concept of appointing superintendents, thus highlighting the importance of
the topic of superintendent governance structure (Solocheck, 2018).

The Florida Constitution has required school superintendents to be elected (Florida State
Statutes, 2018), and any statewide change requires a constitutional amendment. Additionally, a
school district is permitted to move from an elected to an appointed superintendent structure if the majority of district citizens vote their approval of the governance change (Florida State Statutes, 2018). To initiate the voting process for district citizens to change the governance structure from an elected superintendent to an appointed superintendent, the local school board must request the county government to place a referendum on the ballot of a general, state primary, or special election (Florida State Statutes, 2018).

Between 2014 and 2018, at least seven counties have voted on the superintendent governance structure. Residents of Clay County, Franklin County, Putnam County, and Walton County vetoed transitioning from an elected to an appointed superintendent in 2014. The voting margins were substantial. In Clay County, 61.6% of the voters opposed the change (Chambless, 2018). Opposition in Franklin County made up 59.18% of the vote (Riley, 2018). Putnam County residents turned down the referendum with 72.22% of the vote (Overturf, 2018). Walton County residents voted no at a measure of 73.62% (Beasley, 2018). Residents of Escambia County, Marion County, and Martin County approved transitioning from an elected to an appointed superintendent in 2018. Voters in Escambia County approved the change by a slim margin with 50.37% (Stafford, 2018) of the vote. Voters in Marion County approved the change by a larger amount of 62.41% (Wilcox, 2018). Voters in Martin County approved the change with 59.49% (Davis, 2018) of the vote.

Attentive to this policy context and historical background, the goal of the researcher in the present study was to disclose and describe differences in student achievement between districts led by elected superintendents and those led by appointed superintendents. To provide a context for comparison and for understanding the impact of the governance structure on student
learning, key district characteristics were compared. Following this discussion of background and context, the problem statement, purpose statement, and three research questions are presented in Chapter 1. The research design, participants, instrumentation, and data collection processes are also described. The methodology description includes articulation of the variables and how the data were analyzed. Delimitations and limitations are followed by a summary of the chapter.

Problem Statement

Research contributing to the debate in Florida over appointed or elected superintendents is limited. Extant literature offers neither clarity nor understanding on the issue in terms of differences in outcomes resulting from the different governance structures; thus, policy makers and the public have struggled to understand which governance structure is better.

At the time of the present study, Florida was one of two states that permitted the election of school superintendents. Floridians have disagreed on whether all school superintendents should be appointed or if the current system should remain (Solocheck, 2017a). Evidence of a growing consensus favoring appointed superintendents exists based on the State of Mississippi’s elimination of elected superintendents (Mississippi Code of 1972, 2016), the State of Alabama’s recent failed legislative bill designed to end the election of numerous superintendents (Moseley, 2018), and a proposal for a Florida constitutional amendment presented in 2017 (Constitution Revision Commission, 2017). However, strong advocates for elected superintendents have surfaced in each state. Despite the recent initiatives in the Alabama legislature and the Florida Constitution Revision Commission, changes were not made to the superintendent governance
structure in either state. It is readily evident that a considerable number of citizens in Florida oppose the idea of losing the ability to elect their school superintendents.

Purpose Statement

The purpose of this study was to disclose and describe any differences in district characteristics and student achievement between school districts with elected superintendents and those with appointed superintendents in the State of Florida.

Research Questions

The investigation was guided by the following research questions:

Research Question 1

In what ways, if any, does the geographic distribution of Florida school districts led by elected superintendents differ from the distribution of Florida school districts led by appointed superintendents?

Locale codes (city, suburb, town, and rural, as designated by the U.S. Department of Education) were identified for each of the 67 school districts. The locale codes helped identify population density information. Additionally, geographic locations of elected superintendent-led districts and appointed superintendent-led districts were examined for any existing patterns.

Research Question 2

In what ways and to what extent, if any, do demographic and policy characteristics differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?
Key differences in demographic and policy characteristics between districts with an elected or appointed governance structure, were investigated. The characteristics measured were student enrollment, low socio-economic status (SES), and English language learners (ELL) students. These characteristics were compared to gain an understanding as to whether they were associated with the decision to have an elected or an appointed superintendent and to help contextualize results regarding the relationship between governance structure and student performance.

Research Question 3

In what ways and to what extent, if any, does student academic performance differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?

Focusing on the differences in student learning opportunities and academic performance between districts led by an elected superintendent compared to districts led by an appointed superintendent was the purpose of the third research question. Academic performance, as measured by absolute levels of student learning displayed through the following state accountability tests (English Language Arts: Grades 3-10; Mathematics: Grades 3-8, Algebra I, and Geometry; Science: Grade 5, Grade 8, and Biology; and Civics: Grade 7) and high school graduation rates, were measured. This research question was the focal point of the investigation of differences in student learning opportunities between districts led by elected superintendents and those led by appointed superintendents.
**Operational Definitions**

The following terms and definitions are relevant to this study.

**Appointed superintendent:** Citizens living within the boundaries of a school district elect school board members to make policy for the school district. School board members also collectively hire an individual to manage and lead the school district. The individual hired is referred to as the superintendent and is the top executive in the school district (Florida State Statutes, 2018).

**Elected superintendent:** Citizens living within the boundaries of a school district elect school board members to make policy for the school district. Citizens also elect an individual to manage and lead the school district. The individual elected is referred to as the superintendent and is the top executive in the school district. In Florida, superintendents are elected to four-year terms (Florida State Statutes, 2018).

**English language learners (ELL):** This term is used to describe a student who communicates with a primary language other than English. As a result of English not being the student’s native language, the student must learn English as a second language while simultaneously learning standards in other content courses (Wang, 2014).

**End-of-Course assessments (EOC):** In 2011, the Algebra End-of-Course (EOC) Assessment was administered based on the Next Generation Sunshine Standards. EOCs were subsequently added in Geometry, Biology, Civics, and U.S. History. In 2014, both Geometry and Algebra were switched to be measured by the Florida Standards Assessment (FSA), based on the more recent Florida Standards, but Biology, Civics, and U.S. History continued to be based on the Next Generation Sunshine State Standards (Florida Department of Education [FDOE], 2018).
Florida Standards Assessment (FSA): State examinations administered to students in Grades 3-10 in English Language Arts as well as mathematics examinations administered to students in Grades 3-8. These assessments measure student proficiency in learning the Florida Standards (FDOE, 2018).

Socio-economic status (SES): This term refers to the economic class of a student and is often used when comparing students’ equitable schooling experiences based on accessible resources (American Psychological Association, 2018). In schools, this is measured by students who receive free or reduced lunch. Rubin et al. (2014) referred to both the financial and social standing of a person or family and included aspects such as culture, career, and the education of family members.

Statewide science assessment: The state examination, administered to students in fifth and eighth grades, was based on the Next Generation Sunshine State Standards (FDOE, 2018).

Student enrollment: The FDOE (2018) calculates the number of students in a school district from the official counting process referred to as Full-Time Equivalent (FTE). School surveys are conducted four times a year, and data are collected by the Department of Education. FTE is also used to allocate funds to school districts and involves weighting certain groups of students who need extra services and funding.

Superintendent governance: An elected superintendent is voted into the position of being the top executive of the school district whereas an appointed superintendent is employed by the school board members.
Review of Literature

The literature review contains three sections. The first section consists of a review of research relevant to the conceptual framework. The second section addresses the history and current standing of superintendents. Included in this section is research about the impact superintendents have on learning and Mississippi’s legislative changes requiring appointed superintendents. The third section contains a review of existing research on the differences of student achievement between school districts with elected superintendents and school districts with appointed superintendents.

Conceptual Framework

The conceptual framework for the present study relies on two elements: democratic localism and the professionalization of education in Florida. The depth of the tension between democratic localism and the professionalization of education in Florida and its impact in deciding upon an elected or appointed superintendent constituted the framework of this study.

Democratic localism describes the conceptual idea of citizens’ desires to make decisions impacting their community. This construct advocates for the people of a community to determine their own fate. Bryk, Sebring, Kerbow, Rollow, and Easton (1998) theorized that decentralizing schools in Chicago would empower local stakeholders to become more involved and push school improvement forward. Approximately one-third of the schools Bryk et al. studied, experienced increased stakeholder action and subsequent improvement. This research indicated democratic localism has potential to be an influential factor in schools’ success. The State of Wisconsin, with a history of strong local control, navigated the struggle between local control of schools and
standardization, and the concept of localism survived despite the struggles with early education programs (Graue, Wilinski, & Nocera, 2016).

Professionalism defines the theoretical idea of meeting rigorous criteria in preparation for a particular job. A school superintendent is the leader of a school district; the top executive and decision maker of the organization. The construct of professionalism promotes hiring an individual to a superintendent position who meets rigorous criteria (e.g., a formal graduate education, relevant experience, and appropriate professional development experiences). The concept of the “professional superintendent” (Flores, 2017, p. 3) implies the need for a well-trained executive. Flores also presented the complexity of the superintendent position with school board member relationships, politics, and all that is entailed in managing and leading the various facets of the district. Ellis (2016) provided support for professionalism through his research, reporting on the influence a superintendent has on student learning and citing various researchers with validating research. Ellis’ research staked a strong claim of the positive influence on learning which can occur when the superintendent is an instructional leader and the school district support team works effectively to promote and support high quality instruction. The State of Indiana embraces professionalism as indicated by the state’s requirements for district level administrators including the superintendent. Requirements include: five years of teaching experience, positive evaluations, a master’s degree, state license, and completion of a district administrative training program (Indiana Department of Education, 2012, p. 16).

The History and Current Standing of Superintendents

Chingos, Whitehurst, and Lindquest (2014) partnered to conduct research at the Brown Center on Education Policy at Brookings to examine and analyze the impact superintendents
have on student learning. Their report, School Superintendents: Vital or Irrelevant? used data from school districts in North Carolina and Florida.

Chingos et al. (2014) used a multilevel analysis approach and found superintendents had a statistically significant relationship to student achievement, but they had a very low impact in comparison to other factors (students, teachers, schools, and the district). The superintendents’ impact was measured at 0.3%; teachers were measured at 4%, and students were measured at 52%. A difference of one standard deviation associated with a superintendent’s characteristics translates to a difference in student achievement of 0.06 of a standard deviation. This research might support conclusions that the usefulness of a superintendent is negligible. Because learning occurs between a student and a teacher in the classroom, a lower impact on learning from the work of a superintendent can be expected. However, the chief executive does have a significant impact on the overall organization. Caution must be exercised so as to avoid misinterpreting these findings and dismissing the importance of the superintendent.

The effective superintendent can transform a district by providing leadership in emphasizing a few focused priorities and simultaneously providing principals and schools with the autonomy to figure out the best way to implement those priorities (Dufour, 2003; Waters & Marzano, 2006). Through his research on professional learning communities, DuFour supported the use of a dichotomous leadership approach and provided an example of a superintendent who artfully and professionally led a school district to focus on student achievement. Waters and Marzano (2006, p. 10) found the correlation between the leadership of the school district and student learning achievement to be 0.24 with 0.05 significance.
Strycker (2012) conducted a study on the effect of superintendents who successfully completed a training series specifically designed for superintendents. The researcher found students from the school districts led by superintendents trained in the program, performed better on state tests than students from districts led by superintendents who were not trained in the program.

The topic of a superintendent being elected or appointed has been debated in other states. Most recently, the State of Mississippi eliminated the election of superintendents from all school districts by enacting legislation in 2016 (Mississippi Code of 1972) requiring the appointment of all superintendents. The push to improve the education system motivated Mississippi to enact the new legislation. Mississippi’s debate is valuable for the State of Florida in its ongoing discussions regarding the same topic.

Regarding Mississippi’s structural change, two noteworthy arguments favored the appointment of superintendents. First, advocates for superintendent appointments believed that recruiting and selecting a superintendent would allow for the pool of candidates to be greatly expanded in contrast to the smaller pool formed in the process of electing a local citizen. As a result, the possibility of having an experienced, highly qualified educational leader would be greatly enhanced (Lett, 2015). Second, it was argued that appointed superintendents were more likely to have the ability to be creative and to attempt beneficial and needed changes than elected superintendents who need to be concerned about maintaining votes from constituents (Ablaza, 2016). The primary argument typically expressed against appointed superintendents was that citizens, by relinquishing their right to vote, would no longer be able to decide who becomes superintendent (Taylor, 2016).
Existing Research of the Topic

Habersham’s (2012) dissertation on appointed and elected superintendents in Florida focused on whether significant differences existed in student achievement between districts led by elected superintendents and those led by appointed superintendents. Habersham used graduation rates and school district letter grades as outcome measures and found the difference between the two governance systems and student achievement to not be statistically significant.

Although Habersham set out to determine if a difference in student achievement existed, her dissertation was guided by research questions only loosely related to student achievement. Questions were related to superintendents being hired with a recruiting agency, strategic program planning, and the methods used in the selection of superintendents. Though her findings provided insight about superintendents and hiring practices, they did not provide further insight into the impact the governance structure had on student achievement.

Habersham analyzed student achievement with a sample of 27 school districts (nine appointed and 18 elected) and used an independent samples t-test for graduation rates and school grades. Though not exact, the sampling was close to being in line with the proportion of elected and appointed superintendents. Differences existed for both outcome measures in favor of appointed superintendent led districts, however, the differences were not statistically significant. The t-test result for school district grades was .30 with 25 degrees of freedom and a significance level greater than .05; and the t-test for graduation rates was 0.75 with 25 degrees of freedom and a significance level greater than .05 (Habersham, 2012).

Although scant research has been conducted on the differences of student achievement between school districts led by elected superintendents and those led by appointed
superintendents, studies have been conducted on different elements of the superintendent governance structure. Landry (2009) studied differences in leadership approaches between elected and appointed superintendents. Few differences were revealed other than elected superintendents more frequently engaged in humanistic approaches. In a study of elected and appointed superintendents’ personal and professional backgrounds, Sears (1990) found differences in professional background elements. Specifically, appointed superintendents had higher levels of education and more professional work experience.

McGriff (1997) conducted another study comparing elected and appointed superintendents in Alabama. He found 23 demonstrated leadership practices to be more frequently performed by appointed superintendents than elected superintendents. He also found appointed superintendents had higher levels of graduate education (McGriff, 1997).

In the present study, the researcher employed a thorough analysis to further build and extend Habersham’s and other prior research. In order to have a deeper and more divergent analysis of student achievement for this study, additional measures were analyzed beyond the assigned school district grade and graduation rate. Specifically, key state-wide measures of student achievement were included in the investigation, and a one-way ANCOVA was used to control for other factors impacting student achievement.

**Methodology**

**Research Design**

The structure of the present study utilized a causal-comparative design. Fraenkel, Wallen, and Hyun (2016) described a causal-comparative study as research of an existing variation or difference attempting to find the cause of the difference. One application of a causal-comparative
design allows for the study of how one or more independent variables impacts the dependent variable (Fraenkel et al., 2016). This study used the following key variables: superintendent governance structure, contextual characteristics, and student achievement. The causal-comparative design was applicable to the study, as differences in student achievement measures were examined based on school districts being led by an elected or appointed superintendent. Processes employed in the study were a one-way ANCOVA, independent samples t-tests, and cross-tabulations.

Participants

The participants in the present study were the 67 school districts in the State of Florida. The state’s school districts varied considerably in terms of contextual characteristics. School districts’ enrollment sizes ranged from the smallest, Jefferson County with 726 students, to the largest, Miami-Dade with 354,840 students (FDOE, 2018). School district poverty rates, determined by the percentage of students receiving free or reduced lunch from the federal government, ranged from 27% in St. Johns County to 100% in both Desoto County and Jefferson County (FDOE, 2018). ELL populations ranged from 0% in Union County to 20% in Miami-Dade County. Based on locale code designations, 10% of the 67 school districts were classified as a city, 39% were classified as suburban, 21% were classified as a town, and 30% were classified as rural (National Center for Education Statistics [NCES], 2017).

Instrumentation and Data Collection

The FDOE provides a public source of data for all 67 school districts’ annual state test scores and graduation rates, as well as enrollment and student demographic data. Additional data
(locale codes) were downloaded from the NCES at the U.S. Department of Education. Data for all 67 school districts were downloaded from these sites into an Excel file, then uploaded to SPSS statistical software for merging and analysis.

Variables

The first research question had two dependent variables used to examine variances in the population density and geographic location of the counties in Florida. The first variable was the locale code(s) of each school district, and the second variable was the geographic region of elected superintendent-led school districts and appointed superintendent-led school districts. The independent variable for Research Question 1 was the superintendent governance structure of an elected superintendent or an appointed superintendent.

Research Question 2 had three dependent variables: (a) student enrollment, (b) the percentage of students in poverty (low SES defined by free and reduced lunch), and (c) the percentage of ELL students. These variables were utilized to look at differences in the demographic and policy characteristics of the 67 school districts. The single independent variable was the superintendent governance structure of an elected superintendent or an appointed superintendent.

The third research question required a comparison of student achievement measures across the two categories of school districts and had four independent variables (one factor variable and three covariates) along with five dependent variables. The first independent variable, the factor variable, was the superintendent governance structure of an elected superintendent or an appointed superintendent. The three covariates were student enrollment, the percentage of students in poverty, and the percentage of ELL students. The five dependent
variables consisted of different measures of student achievement which included: state test scores from English Language Arts: Grades 3-10; Mathematics: Grades 3-8, Algebra I, and Geometry; Science: Grade 5, Grade 8, and Biology; Civics: Grade 7; and high school graduation rates. The variables utilized in this study are summarized in Table 1.
Table 1

Research Questions, Variables, and Methods of Analysis

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<th>Research Questions</th>
<th>Variables</th>
<th>Methods of Analysis</th>
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| 1. In what ways, if any, does the geographic distribution of Florida school districts led by elected superintendents differ from the distribution of Florida school districts led by appointed superintendents? | Dependent Variables: Locale codes, Region designations  
Independent Variable: Superintendent governance structure (elected or appointed) | Cross-tabulation, Visual analysis |
| 2. In what ways and to what extent, if any, do demographic and policy characteristics differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents? | Dependent Variables: Student enrollment, Percentage of students in poverty, Percentage of ELL students  
Independent Variable: Superintendent governance structure (elected or appointed) | Independent samples t-test |
| 3. In what ways and to what extent, if any, does student academic performance differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents? | Dependent Variables: Student achievement (ELA, Math, Science, Social Studies, High school graduation rate)  
Independent Variables: Superintendent governance structure (elected or appointed), Student enrollment, Percentage of students in poverty, Percentage of ELL students | One-way ANCOVA |
Measurement of Variables

Data were retrieved from the FDOE. The FDOE publicly provides the appointed or elected status of the 67 superintendents as well as student enrollment, poverty statistics, and the percentage of ELL students (FDOE, 2018). School districts collect demographic data and report the information to the FDOE, and state accountability systems collect student achievement data. Both are subject to review. FSA assessments are subjected to rigorous internal and external review and demonstrate strong psychometric properties. Validity and reliability were established through research explained in the FSA 2014-2015 Technical Report: Volume 4 (FDOE, 2015).

NCES has established geographical population designations for all areas in the country. Areas are categorized into one of four categories: city, suburb, town, or rural. The four categories are sub-divided into three additional size groupings which creates 12 distinct population categories. Locales are updated using census data, and these measures provide helpful insight about population density levels in school districts (NCES, 2015).

Data Analysis

Research Question 1 was measured using locale designations and a visual display of the geographical locations of the counties with elected superintendents and those with appointed superintendents. The locale designation for each county was used to generate a cross-tabulation table which displayed population density measures.

The second research question was analyzed using frequencies and descriptors (mean, median, and standard deviation) of the three dependent variables. Additionally, an independent samples t-test was used to investigate variances in the two categories of superintendent
governance structures for the dependent variables: student enrollment, the percentage of students in poverty, and the percentage of ELL students.

For Research Question 3, a one-way ANCOVA was used to determine whether there were differences in achievement levels between the two kinds of school districts while controlling for the influence of other variables (i.e., school district size, SES, and ELL status) linked to the extant literature (Murphy, 2010). The one-way ANCOVA provided an appropriate approach to examining the covariate means while accounting for the relationship with the dependent variables (Frankel et al., 2016). The categorical variable of superintendent governance structure was analyzed as the factor variable, and the covariate variables were accounted for and controlled. Results indicated whether differences in achievement scores were statistically significant. The following dependent variables were investigated: English Language Arts: Grades 3-10; Mathematics: Grades 3-8, Algebra I, and Geometry; Science: Grade 5, Grade 8, and Biology; Civics: Grade 7; and high school graduation rates.

**Delimitations**

This study was delimited to traditional school districts in Florida. Thus, the Florida Virtual School, university laboratory schools, specialized schools such as the Florida School for the Deaf and the Blind, charter schools, and private schools were not included in the study. Alabama was not included even though it, too, has elected superintendents. Administering state tests unique to each state and having differing extant data, precluded the ability to compare student achievement between the two states. Data were collected from a single year; thus, trends and patterns were not able to be observed and considered in this study. The study was also
delimited to Florida’s student achievement measures. Graduation rates and state test score data were collected and analyzed.

**Limitations**

This study had three limitations. First, because the results were delimited to Florida, they were not immediately generalizable to other states. The use of outcome measures from state-developed tests was most certainly limited in generalizability. Other measures available had limitations as well largely due to variation in the extent and nature of implementation. For example, some Florida school districts may have had a high percentage of students take the SAT in contrast to other Florida school districts. This variation in the administering of the SAT would have negatively impacted the comparability of performance results between school districts. Thus, SAT scores were not used in the current study. Cautious generalizations are available to be made as warranted by results, however. Second, there were additional extraneous variables which were not accounted for in the research design. It is possible that observed differences were associated with these variables and therefore were not associated with the variables of interest in this study. Third, the use of an ex post facto causal comparative design prevented the researcher from identifying cause and effect relationships with statistical certainty. The model did, however, allow for identifying likely relationships between causes and effects.

**Summary**

In this study, the researcher found and interpreted differences in contextual characteristics and student achievement between school districts with elected superintendents and those with appointed superintendents in the State of Florida. The study was relevant due to the recent
history of a significant number of Floridians voting both for and against transitioning from an elected superintendent to an appointed superintendent. Furthermore, in 2018, the Constitution Revision Commission supported a proposed Florida constitutional amendment to require the 67 school districts to have an appointed superintendent. The proposed amendment was pulled by the original sponsor prior to reaching the 2018 ballot.

At the time of the study, a debate existed in Florida between two theoretical ideas: democratic localism and professionalism. The struggle of whether a local community of citizens should be able to vote for a leader of the school district or if the existing school board should hire a superintendent, remains a point of contention. With the latter construct, the school board can establish professional requirements which a candidate must possess to apply for the position. In contrast, democratic localism preserves the citizenry’s ability to vote for the school district superintendent. The struggle between democratic localism and professionalism provided the theoretical framework of this study.

Literature provides insight into these concepts and into research about superintendents’ work as well as their leadership impact. The literature review, reported in Chapter 2 has been structured in three phases: the theoretical framework, the history and current status of superintendents, and existing research on the difference in student achievement between school districts led by elected superintendents and those led by appointed superintendents.

Three research questions provided the cornerstone of the study. The first two questions were designed to find differences of characteristics between school districts with elected superintendents and those with appointed superintendents. For Research Question 1, a visualization was provided, and cross-tabulation generated a chart of school districts’ locale
ratings to explore geographical population. Research Question 2 was analyzed using descriptive statistics to examine and compare contextual characteristics. A t-test was used to mark statistical significance of the data even though the t-test was not necessary as the population’s data was utilized. The third research question was designed to identify differences in student achievement between the two governance structures while accounting for contextual characteristics. A causal-comparative design with a one-way ANCOVA was engaged.

The remainder of the study is organized as follows: Chapter 2 contains a review of the literature on the theoretical framework of the study, the history and current standing of superintendents, and differences in student achievement as a result of the superintendent governance structure. Chapter 3 presents in detail the methodology used in the study. Chapter 4 is a synthesis of the results, and Chapter 5 provides an interpretation of the findings and recommendations for future studies.
CHAPTER 2
LITERATURE REVIEW

Introduction

Disagreement persists among Florida residents as to which superintendent governance structure is optimal for the state’s 67 school districts, 41 districts have an elected superintendent governance structure and 26 have an appointed superintendent governance structure. Research is scant on the differences in student achievement for school districts led by elected superintendents and those led by appointed superintendents. In the few studies that do exist, researchers have generally found small differences devoid of statistical significance. Without knowing definitive differences of performance, residents and leaders have difficulty positing a substantive claim of one form of superintendent governance being superior to the other.

The present study was conducted to examine student achievement using a wide analysis of academic subject data for school districts led by elected superintendents and school districts led by appointed superintendents. Data analysis included the following state test score subject areas: English Language Arts: Grades 3-10; Mathematics: Grades 3-8, Algebra I, and Geometry; Science: Grade 5, Grade 8, and Biology; and Civics: Grade 7. High school graduation rates for each school district were also included in the study. Because different factors influence student achievement, three key demographic characteristics were controlled while measuring student achievement for the two groupings of school districts. Those three characteristics were (a) student enrollment, (b) the percentage of students in poverty, and (c) the percentage of ELL students.

The review of literature for this study has been organized as follows: The first section presents a conceptual framework for the study and is centered on a fascinating polarization of
two concepts: democratic localism and professionalism (Ellis, 2016; Flores, 2017). Literature on both concepts has been reviewed and is presented in this section. The differences in citizens’ viewpoints as to which aspects of democratic localism and professionalism are most important, form the core of the disagreement as to whether it is best to have an elected or an appointed school superintendent.

The second section of the literature review addresses the history and current insights into the governance structure of superintendents. A number of important topics are presented in this section beginning with an overview of the school superintendent position and the primary roles and responsibilities of superintendents. Additionally, research is presented about the impact school superintendents have at the district and school levels as well as on students’ performance. Effective practices of urban and rural superintendents are discussed along with the process of transitioning from an elected superintendent to an appointed superintendent. With regard to transition, numerous advantages and disadvantages are highlighted from different points of view.

The third section of the literature review addresses existing research about the superintendent governance structure. A segment in this section focuses on the interactions which take place between the school board and the superintendent. Lastly, research on Florida’s superintendent governance structure and the differences in student achievement between school districts with elected superintendents and those with appointed superintendents, is presented.

A summary concludes the literature review where key topics are emphasized. Chapter 3 describes the methodology employed in this study. Being aware of the research presented in this chapter is beneficial for a full understanding of the design of the methodology portion of the study.
The Conceptual Framework

The conceptual framework of this study is the underlying aspect of the debate as to whether school districts should be led by elected or appointed superintendents. The framework is comprised of the tension between (a) democratic localism and (b) professionalism. Schuh and Herrington (1990) captured both concepts in their research on the pros and cons of elected superintendents and appointed superintendents. Relinquishing the ability to vote for an elected official is difficult for many people to accept. Also, losing more local control is a concern for many people. Both thoughts represent the democratic localism paradigm and reflect people’s desire to have a voice in important local decisions. The researchers also found common responses about the demands of a school system necessitating a superintendent who is well prepared and able to lead effectively. This viewpoint represents the professionalism paradigm; a model based on a school district having the most capable leader available to run the school district effectively.

Democratic Localism

Democratic localism refers to citizens’ being involved and participating in their local government by voting for governmental leaders. As a result, citizens collectively determine who is given power and authority. Localism emerges through grassroots activism when citizens are moved to assert their voice and regain an avenue of influence in their local governing affairs (Gold, Henig, & Simon, 2011). Grassroots activism can include collaborative activities beyond the act of voting.

Whether power and authority are expanded or restricted among governmental leaders is an issue requiring balance. Some citizens prefer a state governor to appoint state school board
members, and others prefer to not grant the governor additional power and have citizens vote for state school board members. In the late 1800s, the power of federal courts expanded. One theory as to why this happened is that the federal court system grew in acceptance as a piece of the fabric of the United States. The concept is similar to a political party gaining power and solidification in the minds of citizens as a party to be followed (Gillman, 2002). When power becomes unbalanced, the dynamic of localism is apt to be activated in the form of protesting citizens pushing back the scales of power and control to a more acceptable level.

New York City provides an example of democratic localism in action. Gold et al. (2011) revealed how democratic localism impacted the school system in New York City during Mayor Michael Bloomberg’s tenure in the early 2000s. The struggle pitted a school system under strong mayoral control against parents who drove a grassroots network to push back in a quest for a voice and influence on the school system. In the early days of the 21st century, state governments and the federal government had become active in educational policy, and the idea of school choice was growing. Parents in New York City were organized and experienced victories in battles for localism. One of those wins came in the form of a new policy ensuring the public had a voice in the process of a proposed school closing (Gold et al., 2011).

Looking further back into New York City’s school system history, an active organization emerged to embody localism in 1970. At the time, New York City schools were decentralized into a large number of sub-districts (Fruchter, 2009). The organizational framework largely failed, leading to an increase in poor leadership and poor performing schools. Citizens united and formed a community coalition group which began to pressure the school system to address the myriad of issues. Over the years, the coalition group took on different initiatives and attempted
to influence the system. The group was often met with resistance and defensive responses. In the early 2000s, the City of New York abandoned decentralization and adopted a system that was under control of the mayor with fewer levels of executive management (Fruchter, 2009). The community coalition group is an example of active localism and reveals the influence citizens are able to assert on governmental entities.

The term localism in the United States most likely conjures a favorable association. Freedom, the right to vote, and a government by the people are core American values embedded in the nation’s laws and founding documents. However, even the idyllic and pure version of localism can be abused if power falls out of equilibrium. East Ramapo, New York provides an example where an extreme religious group had its children attend private schools (Justice, 2016). Half of the population in the school district was part of the religious group; and in 2005, the religious group voted in school board members from their group. They took control of the school board, and the school district began funding the religious group’s private schools, including large transportation costs. Numerous programs were cut for the remaining students in the district, and academic performance scores for those children plummeted (Justice, 2016). East Ramapo illustrates how even the core American virtue of democratic localism can be manipulated and must have checks and balances. Otherwise, as experienced in East Ramapo, large groups of children can be adversely impacted and the goal of all children being cared for and educated can be corrupted.

Democratic localism is valued in urban areas and rural areas. Urban’s (2013) account of Ziegler’s text about education in Alabama at the turn of the 20th century included the following conclusion about the mindset of many people living in rural areas today.
The traditions of local control are also strong in rural, conservative Alabama, again because of the commitment of citizens to keep their educational efforts firmly in their own hands, protected from the desires and preferences of professional educators, at the state and especially at the national level. In the nineteenth century, when farmers needed the labour of their children to make a go economically of their land, this localism was understandable. In the twentieth century, with the small farmer near extinction in Alabama as in other states, it is less understandable. Still, the commitment to local control continues almost unabated, revealing both a fear of change and a reluctance to foot the bill for education. (p. 858)

Urban’s work brings to light the active dynamic of localism that continues to thrive in the 21st century. In the spirit of localism, many citizens in rural areas fear losing their voice in deciding who will lead their school district. Furthermore, many rural residents are skeptical of the motives of professional superintendents. In Florida, 30% of the 67 school districts were classified as rural (NCES, 2017).

Schuh and Herrington (1990) provided an additional perspective. They observed, “Because the school system is often the largest employer in many rural communities, greater electoral control over the decision-making process is normally viewed as desirable” (p. 29).

Localism’s relevance in education is often constricted when state legislatures expand their authority. State legislatures have authority over education throughout the state, and a hands-on approach is within those lines of authority. Since the turn of the 21st century, many state legislatures have been active in creating educational law and requirements for school districts.
This engagement in educational policy is evident throughout the nation, and numerous states have put into place accountability systems in an effort to improve public education. Concurrently, the federal government has increasingly pressured and attempted to influence the states’ management of public education. Nevertheless, localism has remained alive in the struggle for control over education. Henig’s 2009 synthesis presented elements of historical grappling over who should be in charge of American education. Federal, state, and local advocates all are in the ring with the upper hand more recently being held by the state and federal governments. Henig presented power swings as related to school choice, private schools, and the governance structure of centralized authority. In the end, Henig found localism to be an important force which he believed would continue to be an irrefutable member at the table of school governance. Florida citizens embody this notion, having cast many votes over the years in favor of electing their school district superintendents.

Professionalism

Professionalism refers to being an expert; an individual who is at a top level of performance in their field. General sociological thought indicates professionalism comes from learned knowledge, training, and experience (Evetts, 2013). The job of a superintendent is highly complex and challenging. The position calls for an elite leader who embraces the responsibility of working for all students to successfully learn and be helpful, productive citizens. In a study where superintendents participated in a two-year training program, the work superintendents must do with board members and the politics of a school district surfaced as being significant areas of challenge (Chase, 2013). Professional superintendents benefit from having assets of experience, training, well-developed leadership skills and knowledge. These assets help equip
superintendents to lead and manage their school districts, including board member dynamics and politics.

School board presidents in Illinois were asked to rate the importance of a number of superintendent skills. Those skills included establishing expectations for teaching and learning, decision making, problem solving, and being a change agent. The average ratings for each of the skills all fell in the very important range (Tripses, Hunt, Kim, & Watkins, 2015). These findings added further credence to the need for superintendents to be sufficiently skilled and prepared for their positions.

According to Tripses et al. (2015) and Young (2012), collaborative work among experts at the national level resulted in the development of leadership standards from two sources, Educational Leadership Constituent Council (ELCC) and The Interstate School Leaders Licensure Consortium (ISLLC). The ELCC standards were revised and presented in 2010. Standards addressed by ELCC were in the areas of vision, district culture, curriculum and instruction, operations, families and community, morals and ethics, politics and culture, and leadership training (National Policy Board for Educational Administration, 2011).

The Council of Chief State School Officers is the national organization that originated the ISLLC standards in 1996, revising them in 2008 and again in 2015. At the time of the present study, the National Policy Board for Educational Administration standards were referred to as the Professional Standards for Educational Leaders (PSEL). The standards addressed vision, ethics, culture, curriculum-instruction-assessment, student support, staff capacity, community, operations, and school improvement (National Policy Board, 2015).
The two sets of standards, ELCC and PSEL, established a national benchmark for the work educational leaders should perform, addressing the complexity of the work and leadership demanded of educational leaders. For a superintendent, additional complexities exist in leading all of the school district’s educational leaders to meet the standards (National Policy Board, 2015). As the standards and job scope illustrate, superintendents need multiple abilities, high levels of education, training, and experience to effectively lead a school district.

Researchers have also revealed the importance of superintendents having a moral purpose embedded in their leadership. Murphy, Louis, and Smylie (2017) theorized PSELs are activated through the engagement of the paradigm of positive school leadership (PSL). The interaction among people, morally purposed to benefit others, is the PSL catalyst for implementing and embracing the PSELs. The six guiding elements of PSL (Murphy et al., 2017) coupled with PSEL helps equip superintendents by providing a valuable compass to lead a district focused on students learning and growing (Murphy et al., 2017).

The importance of education and training for educational leaders has been supported by research (Strycker, 2012). Ellis (2016) posed the following question in his research: “Why not allow school boards to choose alternatives to traditionally trained superintendents?” (p. 26). He concluded:

1. District leadership not only counts but is at the foundation of student success.

2. A highly qualified and professionally trained superintendent is the point person in improving student learning and performance.

3. We can demonstrate both why and how training of district leaders makes a difference in student learning. (p. 36)
Research conducted by Milner and Milner (2018) on the coaching abilities of managers revealed a pattern of overconfidence. These researchers determined that managers frequently have self-inflated viewpoints about their own coaching ability. Delving deeper, the researchers found that managers who received coaching training improved their coaching ability by 40% overall in nine measured coaching elements.

Comparing elected and appointed superintendents in the areas of formal education and experience has revealed differences. Researchers in early studies about the differences between elected and appointed superintendents found varied levels of advanced education: 22% more of the sampled appointed superintendents had doctoral degrees in comparison to elected superintendents. Furthermore, 29% of the appointed superintendents, compared to 5% of the elected superintendents, had experience in another superintendent position or an associate superintendent role (Mertz & McNeely, 1988). Sears (1990) found 25% more of the sampled appointed superintendents, in contrast to the elected superintendents, had district-level experience prior to becoming superintendents. Appointed superintendents also had higher levels of education, with 32% more of the appointed superintendents having doctoral degrees. Habersham (2012) supported these findings. Evidenced by an independent samples t-test, Habersham found that Florida’s appointed superintendents had higher levels of education in comparison to Florida’s elected superintendents. The t-test results revealed “significant differences among appointed (M = 4.75) and elected (M = 3.95) participants; t(25) = 2.946, p<.05” (p. 46).
The Tension

Floridians’ thoughts and belief systems have furthered defined the dynamics of tension between democratic localism and professionalism. Open-mindedness is demanded in an effort to not judge proponents of localism nor advocates of professionalism as being right or wrong. Berry and Herrington (2012) wrote an insightful and thought-provoking article to explore the federal government’s 2008 pilot program referred to as Differentiated Accountability. Florida was one of six pilot states. Berry and Herrington studied the pilot plan, considering students, teachers, parents, administrators, school districts, state government, and the federal government. The researchers explored the topics of educational mandates and the need for students to learn in an environment where a teacher has autonomy to add, adjust, and create lessons tailored to the various needs of students. Berry and Herrington dove into the dynamics and ramifications of federal, state, and local control, noting that the issue becomes complicated quickly when seeking to define which level of government should make decisions for specific facets of education. The struggle with Differentiated Accountability has a significant degree of congruency with the debate of democratic localism versus professionalism. People’s belief systems and priorities inevitably fuel the decision as to whether state and federal government-based decisions are better than local school district decisions. Accordingly, people’s belief systems and priorities also determine who should lead and make decisions for local schools. The struggle is between two different thought processes and priorities. The first viewpoint holds that having a local community member chosen by the community, even at the possible sacrifice of not having a highly qualified school superintendent, is the better choice. The second viewpoint is that empowering current, locally elected officials, the school board members, to search for the
highest qualified professional superintendent available, is the better choice. Floridians have not yet come to consensus on this matter. These viewpoints are further understood through Jean-Jacques Rousseau’s thoughts about citizens having more of a voice with smaller governments in contrast to the need for a representative democracy when the government is large (Slawson, 2018).

Many people value the concept of democratic localism in a way comparable to how Americans cherish the nation’s democracy. Some citizens fear losing local control if they relinquish their ability to select a superintendent, and some citizens are skeptical, lacking confidence in government officials. A core, fundamental American value is the right to vote and the ability to have a voice in determining the nation’s leaders. Many Floridians have a passion and are driven to not relinquish their voices.

During the 1990s, Boston voters were given the opportunity to decide on their school board governance structure. Taylor (2001) studied the vote and the dynamics leading up to and surrounding the election. The vote was to either maintain the mayor’s authority to appoint school board members or have voters elect the board members. Voters decided to maintain the mayor’s authority of appointing school board members. However, there were differences in how Black and White citizens voted. Two voting wards with high Black resident populations, voted to elect school board members. Voting wards with high White resident populations, voted for the mayor to appoint school board members. Taylor found race to be significantly correlated with the votes cast as determined by Pearson r. The results were r(20) = +.82, p<.0001. An additional point of interest in the study was that Black residents strongly supported the mayor (Taylor, 2001) even though they did not want the mayor to have additional authority. Floridians who want to retain
their right to vote for their superintendents most likely would relate well to residents in Boston’s two voting wards who voted to gain the right to elect their school board members.

Many Floridians fear not having the best trained executive possible to lead their schools. This concern, if realized, potentially translates into lower performing districts and lower levels of student learning. Lett (2015) observed that an appointed superintendent governance structure broadens the candidate pool for the superintendent position. School districts who employ appointed superintendents are able to draw upon candidates from a nation-wide search if desired. Furthermore, school districts are able to require applicable candidates to be highly qualified. In contrast, candidates who run for an elected superintendent position in Florida have to be a registered voter in the school district and win the election; no other qualifications are required (Lett, 2015).

Proponents for appointed superintendents are willing to give up their voice in choosing the superintendent in exchange for the possibility of having a wider pool of candidates. The goal is to find the best qualified candidate. Another factor for appointed superintendent advocates may also be the reality of being able to elect the school board members who will, in turn, be involved in hiring and evaluating the appointed superintendent.

Considering aspects of localism and professionalism leads to a better understanding of the diversity in citizens’ thoughts, opinions, and ideas. Indeed, the tension between democratic localism and professionalism is relevant and current.

The History and Current Standing of Superintendents

This section details a history of the school superintendent position by synthesizing a number of studies providing insight into past and present roles and duties held by
superintendents. Further insight is provided as to the impact of a superintendent and characteristics of effective superintendents. The section concludes with a description of the processes used to either elect or appoint superintendents and information about states having transitioned from an elected superintendent governance system to an appointed governance system.

The Roles of the School Superintendent: Past and Present

A historical overview dates back to the 1600s when puritan town councils in the Massachusetts Colony formed a group of people to help with the education of children. The concept grew and established the precepts for the idea of school boards (Moody, 2011). The first superintendent of schools began work in 1837 leading the school district in Buffalo, New York (Houston, 2007; Moody 2011). The position of superintendent was formed as a result of a number of small districts coming together, thereby creating a need for a more united and organized system and its supervision (Cubberley, 1947). By 1890, superintendents were working in 39 U.S. cities (Moody, 2011).

In the State of Vermont, an interesting transition occurred a few years after Buffalo instituted the first superintendent position. During the first half of the 19th century, the number of schools in Vermont had grown significantly. The legislature decided to require the addition of school superintendents in 1845, and citizens were to elect the superintendents. This governance structure later changed in the early 1900s, with superintendents being hired as opposed to elected (Cate, 2006).

A noteworthy point is Berg and Barnett’s (1998) identification of a void in research on superintendents during much of the 20th century. The researchers theorized that the functions of
the superintendent position were not well understood by many people and did not generate substantive curiosity. Nevertheless, historical reflections and accounts do exist providing insight into the role of superintendents.

Björk, Browne-Ferrigno, and Kowalski (2014) provided a timeframe-based historical perspective. The researchers assembled five categories of superintendents’ duties. The needed leadership tasks were additive in nature, and with the progression of time, the complexity of superintendents’ job scope increased. In developing the five categories, Björk et al. cited Callahan’s four job description categories and Kowlaski’s fifth role, “teacher-scholar (1850 to early 1900s), organizational manager (early 1900s to 1930), democratic leader (1930 to mid-1950s), and applied social scientist (mid-1950s to mid-1970s). The fifth role, communicator (mid 1970s to present) ….” (p. 9).

Björk et al. (2014) described the five roles. In the early stages, superintendents were focused heavily on the academic core of schooling. Superintendents were expert teachers and distanced themselves from the political frame. Hence the label of this role was teacher-scholar. The role of the superintendent grew as America continued to grow through the 20th century. This occurred largely as a result of the changing economic culture in which large corporations had emerged and efficient operation became a prioritized management skill. The ideology permeated schools, resulting in the organizational manager role, and superintendents were expected to be proficient managers of their school districts.

The role of democratic leader was added to the roles superintendents played as a result of financial and parental concerns. Schools needed money to run properly, forcing superintendents to network in an effort to seek increased funding and assume the role of lobbyist. Additionally,
they were called on to assume the role of community builder because parents had growing concerns about schools having become too much like corporations. Superintendents needed to work with parent groups and the community. These realities required superintendents to interact more frequently with the political side of public education.

The fourth role added to the duties of superintendents was that of being an applied social scientist. Unrest with the condition of many low-income and minority students not receiving an adequate educational opportunity prompted this role. Simultaneously, this was an era where social science grew and research was available. Ideas of scientific theory, systems thinking, and democracy, forced the issue of addressing social injustices and inequality in schools. As the school system was questioned and new research became available, school leaders, viewed as experts, were expected to institute needed changes.

The fifth role to be added to superintendents’ responsibilities was that of communicator. In this role, superintendents were called upon to interact with the school board by providing pertinent information. They were expected to be immersed in communication with parents and community stakeholders. The communication from a superintendent impacts the culture of a school and is important in leading the district towards its vision and solving problems and challenges. Communication also involves reporting performance and the subsequent adjustments made to reach improvement goals. Looking at the five roles that have evolved since 1850, superintendents’ duties did not diminish over the years but were expanded to meet new demands and expectations of school districts (Björk et al., 2014).

The superintendent position has changed over the years, responding at present to increased demands and complexities in the 21st century educational arena. The original charge
for superintendents was to manage the district (Berg & Barnett, 1998). Houston (2007) asserted superintendents had three main focus areas prior to 1960: finances, facilities, and operations. After the social challenges of the 1960s, 1970s, and early 1980s, superintendents had to concentrate on managing criticism and hostilities. Since the 1990s, superintendents have had to learn to work with relinquished authority and follow robust federal mandates while managing finances, facilities, operations, and public concerns (Houston, 2007). Berg and Barnett added to the job description, focusing on the need for superintendents to lead instruction and to skillfully handle the politics associated with the district. These roles have demanded that superintendents have a wide array of talents and skills in leadership, management, and community building.

The challenging nature and fluidity of the superintendent position requires continual change and fine tuning of leadership functions by superintendents. The many duties held by superintendents fall into one of three groups: (a) establishing a vision and goals to create direction, (b) training and fostering growth in employees, and (c) nimbly adjusting the organization to its most effective position (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004).

Cuban (1976) offered another perspective on the roles of the superintendent position. He listed three key roles as follows: “Teacher-Scholar, Chief Administrator, and Negotiator-Stateman” (p. 15). He also highlighted ethics, numerous complexities, and challenges faced by superintendents. Roles and responsibilities were studied in Illinois for people in joint positions of both superintendent and principal (Curry, 2016). Findings among school board presidents, superintendent/principals, and teacher union presidents revealed the top role for the superintendent/principal was to be a positive role model followed by being effective in
overseeing finances. The top two responsibilities were determined to be managing finances followed by establishing and maintaining a safe and positive school environment.

A rural school superintendent added insight to the roles of superintendents. “Although a school superintendent must be a good manager, he or she must provide leadership, direction, vision and purpose, and must establish an atmosphere conducive to change” (Behrens, 1992, p. 4). Behrens also emphasized the importance of communicating clearly and avoiding the disruptive nature of confusion and misunderstanding. Furthermore, he emphasized efforts to improve schools must be centered on student achievement. Lessons from Behrens and his leadership principles, as they pertained to a rural district in Kansas during the 1990s, have remained applicable for present day superintendents whether leading urban, suburban, or rural districts.

A sample of superintendents in Texas was asked to identify their most important roles. Curriculum, instruction, and assessment topped the list (Garcia, 2012). The superintendents also emphasized the importance of having stakeholders support the work of instruction and student learning. Statements contributing to the findings were measured as statistically significant if at or above Nagelkerke $R^2$ of .32. In his research, Garcia stressed the importance of superintendents being focused on student achievement as their core role and focus. Studies from the 1960s, 1970s, and 1980s revealed the presence of the following five factors in academically high performing schools: “safe and orderly environment, strong instructional leadership, high expectations for student achievement, clear and focused mission, (and) time on task” (Waters & Marzano, 2006, p. 5).
Jackson (2013) identified one of the most important roles of superintendents as establishing and maintaining a positive relationship with the school board president/chair. A positive relationship between the two district leaders potentially improves the ability of the superintendent to lead and increases the capacity of the board and the superintendent to accomplish school district goals. Jackson also identified other important duties of superintendents, including managing facilities, overseeing curriculum and instruction, administering finances, supervising employees, hiring and firing employees, providing student transportation, monitoring student attendance, establishing the organizational structure of the district, spearheading planning for the future, and driving implementation of school board policies.

Positive relationships between the school board and the superintendent are essential. However, those relationships can be challenging given the political nature of constituents and the need to hold board members accountable. Fostering a positive relationship between the superintendent and the board helps the school district to run efficiently, leading to increased student achievement. Thus, superintendents must prioritize their relationship with school board members. Important elements of a healthy relationship between the superintendent and the school board are trust, honesty, credibility, and clear communication (Price, 2014).

The original purpose of superintendents was to manage the policies created by the school board (Hoyle, English, & Steffy, 1998; Moody, 2011). Although job descriptions for the superintendent position and school board members have been clearly delineated in theory, conflict can still easily arise between a school board and a superintendent when there is uncertainty or disregard for each other’s roles (Moody, 2011). Hoyle et al. implored
superintendents to be cognizant of the school board being the original structural component of
the school district’s governance system. The state legislature delegates authority to the school
board, and the board grants authority to the superintendent if appointed. An elected
superintendent is granted authority by voting citizens. Thus, the superintendent should provide
board members with information and recommendations but should not attempt to perform the
school board’s job of setting policy. The school board in turn should allow the superintendent to
be the chief executive officer of the school district.

The Impact of the Superintendent

Waters and Marzano (2006), in association with Mid-continent Research for Education
and Learning (McREL), conducted a meta-analysis study on whether district leadership impacts
student achievement. An analysis of 14 studies resulted in an affirming conclusion. District
leadership was found to have a correlation with student achievement of .24 at a .05 level of
significance (p. 10). Waters and Marzano identified five practices implemented by high
performing superintendents which positively impacted student achievement. Those practices
were (a) key goals are established by involving stakeholders (r = .24, p < .05); (b) required,
unyielding goals are established for student learning and teacher instruction (r = .33, p < .05); (c)
school board members are in sync and supportive of the required goals for student learning and
teacher instruction (r = .29, p < .05); (d) monitoring systems, focused on required learning
performance and teacher instructional goals, are implemented and used to initiate needed
interventions where performance deficiencies exist (r = .27, p < .05); and (e) finances and
resources are effectively prioritized and channeled to best impact the required learning goals and
instructional goals (r = .26, p < .05). As posited in Chapter 1, the superintendent most certainly
has an impact on the school district and on student learning. Waters and Marzano’s research strongly supports this assertion. Kellen (2012) lent further support to the importance of the superintendent position when citing Louis’ work. He expressed the belief that classroom instruction has the most significant impact on student achievement, and effective district leadership has the second most significant impact on student achievement.

Time and stability of leadership provides superintendents the opportunity to establish goals, implement systems, monitor, and adjust practices as needed. The positive impact on student achievement of sustained leadership in the superintendent position has been substantiated by research evidence (Myers, 2011; Plotts & Gutmore, 2014; Simpson, 2013; Waters & Marzano, 2006). During their research of superintendents, Waters and Marzano (2006) found that a superintendent’s longevity had a positive correlation with student achievement ($r = .19$, $p < .05$). Myers (2011) researched superintendents in Kansas, and his findings affirmed those of Waters and Marzano. Myers conducted a multiple regression using a backward method to measure for the impact of tenure. The finding was the Beta weight = .138, $p < .05$. Similar research measured the degree to which the years of experience as a New Jersey superintendent, impacted third grade student achievement. The methodology used was a multiple regression with a backward design and resulted in a coefficient of .315, $p < .05$ (Plotts & Gutmore, 2014). Superintendent longevity and student achievement was also measured using a regression analysis in Kentucky’s Appalachia region. The resulting correlation was $r = .75$, $p < .01$. Also, a t-test indicated superintendents in their positions for more than five years correlated with strong growth in assessment data. The t-test result was $t = 2.01$, $p < .01$ (Simpson, 2013).
Effective Urban Superintendents

Urban superintendents have had significant challenges, and this makes a research review of effective urban leadership characteristics important. Bealer (2010) cited Reeves in explaining effective approaches for urban schools having high levels of economically disadvantaged students. Reeves expressed the belief that results are apt to improve when school districts have an unwavering focus on literacy, writing, collaboration, and achievement. Bealer concurred with the focus on achievement as a cornerstone of an effective system. He noted a number of other effective strategies used to impact student achievement, including the school district establishing the presence of high goals and providing effective support.

Unfortunately, persistent struggles have frustrated many educators as well as an urban schools advocate and philanthropist, Eli Broad. For 13 years the Eli and Edythe Broad Foundation awarded the prestigious Broad Prize to the best performing urban district in the nation. Broad ended the award for urban school districts in 2015 due to a lack of improvement in urban education (Blume, 2015). Urban schools have a litany of challenges which superintendents must lead their school districts through to bring about results. Despite determined initiatives, stubborn performance achievement gaps exist in urban schools. With urban schools having numerous challenges such as high poverty rates and mobility challenges, these gaps breed frustration. A clear, straightforward leadership formula to eliminate achievement gaps has been and continues to be elusive.

Closing the achievement gap poses a tremendous and complex challenge to school districts. In urban schools, the issue conspicuously confronts superintendents. The work of a successful deputy superintendent was captured in Beard’s study (2013). The researcher reported
on important actions and approaches used to successfully close the achievement gap. The deputy superintendent led the school district to utilize varied approaches in working with students to meet standards. The deputy devised a plan to increase teacher training by using the incentive of teachers earning their national board certification. Accountability was matched with the incentive. Teacher turnover had been a significant issue, and the national board incentive helped with teacher growth and teacher retention. An important discovery within the district was that teachers at high needs schools perceived their counterparts at less challenging schools in the district, to have little comprehension of their depth of challenges. The deputy superintendent acknowledged and supported teachers and other school personnel in the intense work required and unique difficulties encountered in the district’s challenging schools. Another course of action taken by the deputy superintendent was to lead the district initiative of training principals in an effort to acquire needed skills and strategies. The deputy superintendent also created a five-level tiered autonomy plan for principals. Clear expectations and non-negotiables were defined and given to principals. Additionally, an instructional focus calendar for all core courses was established and followed. Beard highlighted the deputy superintendent’s work and leadership which provided a combination of effective practices as well as essential affective elements superintendents must address to move learning forward for all students.

Arriaza and Henze (2012) observed that urban leaders who previously thought in a transactional mode will increase leadership capacity by embracing the concept of transformative leadership. These authors expressed fundamental conditions to which urban leaders must be attentive in all their schools:
We argue that, for our emerging multiethnic democracy, a floor condition must be present in all schools: the unequivocal provision of a basic, high-quality education for all youth and children. Specifically, fully adequate education must be put in place for youth and children who—owing to racialized conditions, economic poverty, and gender, linguistic, and cultural discrimination—have been rendered disadvantaged in today’s school systems (p. 119).

Arriaza and Henze (2012) articulated the issue of equity. Students dealing with different challenges should be provided needed learning supports/interventions in contrast to students without those challenges. The researchers also addressed the concept of adequacy which refers to the provision of support needed by a person. Adequacy becomes corrupted when a person lacking in resources and supports is provided minimal support yet is considered to be adequately resourced.

Arriaza and Henze (2012) promoted the framework of transformative leadership and pressed leaders to foster student growth. “Transformative urban leaders understand the concept of social, cultural, and intellectual capital and use this concept to guide their actions. In order to do so, they need to debunk the opposite, which is deficit attribution of school failure” (p. 125).

The concept of transformative leadership for the urban leader helps schools prepare students for both college and the work world (Arriaza & Henze, 2012). Thus, teaching urban students employable job skills through career and technical education (CTE) programs positions students to attend college and/or earn significant money in the work force.

In the last decade, federal pressure for high stakes accountability systems resulted in schools focusing more attention on courses for which there was a standardized test, the results of
which contribute to determining an overall school grade. This created a difficult dilemma for superintendents. If programs such as those in the career and technical education (CTE) were kept as a high priority, would funds and focus be drawn away from core tested courses? Superintendents are responsible for building parents’ and community members’ confidence in the knowledge and skills being taught and how well students are learning. A negative school letter grade or district letter grade shakes stakeholders’ confidence and has other challenging impacts. Thus, the superintendent has to protect students, teachers, and schools by having curriculum and instruction crafted for school grade performance, and this can result in a cost to students becoming career ready. A positive exemplar is the State of Florida and its addition of an acceleration component to the school grade formula in 2015. At the time of the present study, students earning an industry certification associated with a CTE course positively contribute to the school grade (FDOE, 2018). As a result, CTE course offerings have regained positive momentum and students have benefited.

The University Council for Educational Administration (UCEA) has been a leader in the pursuit of continual growth and development of educational leadership. The Urban Leadership Development Project (ULDP) is UCEA’s urban initiative (Young, 2012). UCEA ULDP is a collaborative effort initiated in 2007 and charged to effectively prepare urban educational leaders. The work in UCEA ULDP is important for urban leadership development to operate within a framework where different training is appropriately provided to better meet the different needs of urban educational leaders (Young, 2012). This type of strategic agility helps to enhance training and to stay in the forefront of urban leadership development. Superintendents must be cognizant of culture, environment, surroundings, and trends to ensure valuable leadership
training is provided for district leaders. The continuously evolving world of technology has impacted schools. Technology is an example of where superintendents need to lead district training initiatives in a rapidly changing environment.

Effective Rural Superintendents

Superintendents leading rural school districts often have significantly different communities and cultures when compared to suburban and urban school districts. In a study analyzing seven successful rural school superintendents in Michigan, leadership practices were identified and compared to Waters’ and Marzano’s research on successful leadership practices. Forner, Bierlein-Palmer, and Reeves (2012) found that successful rural superintendents linked three rural leadership priorities with seven effective rural leadership practices. As shown in Figure 1, the seven practices were also with the effective leadership correlates researched by Waters and Marzano in 2006.
Figure 1. Effective rural leadership practices found via case studies [Forner, 2010] as aligned with effective leadership correlates


Significant population variances exist among the 67 Florida public school districts.

School districts in Florida range from rural/remote locales to city/large locales. A superintendent leading a rural district must understand the uniqueness of the culture, economy, and values. Johnson, Shope, and Roush (2009) created a model through which students gain systemic
knowledge by learning both academic and contextual information. Systemic knowledge is impacted by place which, in this context, is an individual’s standing in society. Lastly, people constitute the most important element of the model. The people of rural communities have unique talents and skills, and children of rural families need good schools led by effective educational leaders. The researchers emphasized the importance of rural students gaining knowledge about their communities, including local leaders who have positively impacted the region. Rural areas have higher rates of poverty when compared to urban and suburban areas (Thiede, Greiman, Weiler, Beda, & Conroy, 2017), and many rural students live in poverty. Localized curriculum provides students the opportunity to connect with the idea that they can be successful, and it bolsters their personal viewpoints of where their places are and can be in their adult futures. Johnson et al. (2009) further explained the model’s emphasis on needed leadership practices. A superintendent must take time to understand, with humility and care, the values, culture, and economics of the rural region. Furthermore, the savvy rural superintendent must seek to understand who has power and how that power is manifested. This includes knowing the key resources in the area. Johnson et al. also advocated for the superintendent and other school leaders to be understanding and open-minded to various perspectives and viewpoints while leading rural school districts.

A rural superintendent is more apt to lead effectively having knowledge about the community and the existing power structures. With this knowledge, the superintendent is able to begin crafting a vision and leading the district in a relevant and practical manner. In 2007, the following challenging issues were identified for the 30 most impoverished, rural school districts in North Carolina. Those issues were (a) low income households as evidenced by 69% of the
students eligible for free or reduced lunch, (b) disproportionate racial demographics associated with poverty, (c) graduation rates 12% lower in the 30 lowest income, rural districts in comparison to the overall state graduation rate, and (d) nearly one of every seven teachers in the 30 lowest income, rural districts not being fully certified in contrast to one of every 12 teachers among high-income districts (McCullough & Johnson, 2007). With these indicators confronting numerous rural superintendents, new system designs and interventions are warranted in a relentless quest to provide students the needed resources and supports for successful learning and growth.

Theobald (1997) had a promising view of the future for rural education. In *Teaching the Commons*, he depicted a fascinating historical progression of education and the quiet crisis which existed in the late 20th century. Theobald chronicled a pathway which included Greek philosophers’ ideas of freedom, rationality, and dignity, and further included St. Augustine’s emphasis on a person’s free will to believe and receive God’s salvation through Christ’s redemptive grace. The two thoughts combine to promote the concept of intradependence, which involves both the individual and the community needing and valuing each other. Theobald’s position was that schools should focus on teaching students to be contributing and caring community members as opposed to teaching students to make money for businesses. This mindset has the potential to significantly change students’ learning in schools and eventually make local communities and the nation stronger. Rural schools are generally closer to this target, often having a deeper sense of community than suburban environments. Theobald recommended rural school districts engage community members in gathering input for the district. Specifically, learning what priorities and initiatives should be implemented to boldly embrace the idea of
shaping schools to teach students to turn from narcissism toward become contributing and caring, community members (Theobald, 1997).

Rural school districts have significant challenges as they often battle poverty. Theobald’s thinking can be inspiring to rural superintendents as well as suburban and urban superintendents. Rural superintendents are primed to lead schools into a new era; to make America more united and stronger than ever before. To do so, they must have relationships with community members and they must lead with communicative, managerial, collaborative, and visionary skills. Superintendents have a significant amount of influence and can change the focus of the school district which they lead. The focus of preparing students to be community contributors and to work for the good of others as opposed to becoming money makers, is able to exist in a capitalistic economy. Often culture emanates from urban areas, but the need for community building has the potential to reverse the direction of cultural influence. Strong rural superintendents are the ideal people to spearhead and lead a grassroots effort in establishing intradependence in schools and building unity throughout our nation.

Transitioning from Elected to Appointed Superintendents

The history of superintendents in Florida dates back to the 1800s. As cited by Schuh & Herrington (1990), Cochran reported about a Florida law created in 1849 whereby the county probate judge was established as the school superintendent. A new law in 1869 resulted in the governor appointing district superintendents. Then, in 1885, the Florida Constitution transitioned the position of superintendent to an elected position. Schuh and Herrington (1990) further explained that two amendments were voted on in 1955 and 1962 with a purpose of allowing specific districts to decide, by a majority vote, to have an appointed superintendent or remain
with an elected superintendent. In 1968, the Florida Constitution was revised to allow citizens within the school district to vote for an appointed superintendent or to revert back to an elected superintendent.

The governing document guiding the election or appointment of superintendents in the State of Florida is the Constitution of the State of Florida. Specifically, requirements are provided in Article 9, section 5. The language found in the constitution is as follows:

In each school district there shall be a superintendent of schools who shall be elected at the general election in each year the number of which is a multiple of four for a term of four years; or, when provided by resolution of the district school board, or by special law, approved by vote of the electors, the district school superintendent in any school district shall be employed by the district school board as provided by general law. The resolution or special law may be rescinded or repealed by either procedure after four years (Florida State Statutes, 2018, Article IX-Section 5).

Thus, the default mode for Florida school districts, at the time of the present study, was to elect a school superintendent every four years. However, if the majority of citizens voted to have the school board hire a superintendent, elections are no longer held for the school superintendent in that particular district.

Procedurally, according to Schuh and Herrington (1990), for a district to vote to change the superintendent to an appointed position or repeal to an elected position, the school board must “adopt a formal resolution to be presented to the board of county commissioners” (p. 11).
The commission is then mandated to put the item on the ballot for voters to decide upon the matter.

In 2018, Florida’s Escambia County enacted the process of adding an appointed superintendent election item to the November, 2018 general election ballot. This was activated by the Escambia County School Board voting 4-1 for the referendum to be added to ballot. With this particular process, the current superintendent, Malcolm Thomas, advocated for the vote to be brought to voters because he would not be running for re-election after his third term expired in two years. Thomas articulated this was an ideal timeframe to discuss and vote for this new governance structure because it would provide a two-year transition period. An additional procedural point reported was a concern of the ballot item possibly being pulled by the county Supervisor of Elections. The general ballot had more than 10 proposed state constitutional amendments creating concern of the ballot being too long for voters (Thomson, 2018; Wolfe, 2018). The referendum made it to the ballot and the residents of Escambia County voted to change to an appointed superintendent governance structure. The referendum barely passed with 50.4% (910 vote margin of victory) of the county residents voting for an appointed superintendent (Stafford, 2018). Escambia County was not the only county to make a change during the November, 2018 general election. Marion County and Martin County both approved a referendum to change from an elected to an appointed superintendent governance structure. Marion’s referendum passed with a vote of 62.4% (Wilcox, 2018), and Martin’s referendum passed with a vote of 59.49% (Davis, 2018).

Different viewpoints, both unfavorable and favorable, arise when discussing whether a school district should transition from an elected superintendent to an appointed superintendent
governance structure. The debated points inevitably land on either side of the fulcrum: the tension between democratic localism and professionalism.

A number of concerns had been voiced about transitioning to an appointed superintendent governance structure. The dissenting Escambia County School Board member (i.e., 4-1 vote) sited uneasiness with the possibility of an outsider coming into the superintendent position and having to learn the community. Additionally, the board member expressed a financial concern. The district would be able to attract candidates from a wide geographical range and negotiate a contract. To do so competitively, could require increased compensation (Wolfe, 2018). Concern also existed as to the superintendent’s accountability. An elected superintendent is accountable to all of the district voters, whereas an appointed superintendent is directly accountable to the school board members (Ablaza, 2016). This makes some people leery. Traci Moses, the elected Superintendent of Franklin County School District in Florida, expressed her concern of the governance shift from an elected to an appointed superintendent, saying that if changed, “there will be a shift from macro-level politics in which elected superintendents have to maintain the trust and confidence of the voting public, to micro-level politics in which each superintendent must only maintain support from the locally-elected school board” (Moses, 2018, p. 1). However, the greatest concern about changing to an appointed superintendent governance structure was summed up by a Mississippi legislator during a debate on the issue in 2013 before Mississippi eliminated elected superintendents, with the statement “Quit trying to take the right of the people away in this bill” (Wright, 2013, p.1). Americans are hesitant to give up their right to vote (Taylor, 2016) and lose local control (Solocheck, 2017b).
Proponents of an appointed superintendent list various benefits. The Governor of Mississippi emphasized innovation as a benefit of an appointed superintendent governance structure. The Governor made the claim as the Mississippi legislator worked to convert all superintendent governance structures to being appointed. The thought was grounded on the premise that elected superintendents are shackled to the work of continually appeasing and appealing to voters, thus restricting the elected superintendent’s openness to new initiatives (Ablaza, 2016). In an elected structure, innovation and taking risks may create political controversy with the cost being lost votes. In essence, it may be easier to please a few school board members than all the electorate. A second advantage of an appointed superintendent is not losing the services of the superintendent during elections and the campaigns that precede them (Ablaza, 2016). This can be disruptive and certainly is not ideal for a system where children are being educated. Although opponents of appointed superintendents may have concerns about accountability, Bergosh (2015) viewed the appointed superintendent governance structure as having a superior accountability format. Bergosh, a former school board member in Florida, viewed the appointed superintendent as being held more accountable through direct interaction with school board members. He considered it beneficial that school boards are able to terminate an ineffective appointed superintendent in contrast to enduring an inept elected superintendent’s completion of a four-year term.

A consistently cited advantage of having an appointed superintendent is the ability to expand the pool of candidates for the position of superintendent (Ablaza, 2016; Lett, 2015; Phillips, 2015; Solochek, 2017a; Treasure Coast Newspapers, 2018). Being able to advertise throughout the nation for highly qualified candidates has been considered by many to be a
significant advantage of the appointed superintendent governance structure. The job of a superintendent is demanding and complex, requiring a professional educational leader who is a proven leader, skilled manager, quality communicator, and much more. Superintendents are called upon to be instructional experts who are well trained and highly educated, having advanced degrees. In contrast, the qualification for an elected superintendent in Florida is to not be a felon and to be a resident in the district. Being able to advertise and seek a highly able leader is a driving force in the debate of the superintendent governance structure (Treasure Coast Newspapers, 2018).

Mississippi was the most recent state to switch all school districts to an appointed superintendent governance structure. Legislation was passed and signed by the Governor in 2016 with full implementation completed in 2019 (Mississippi Code of 1972). In 1992, Georgia residents voted for a state constitutional amendment ending the election process of school district superintendents by 1997. The amendment forced 106 of 180 districts to convert school superintendent governance structures from being elected to appointed (Lindsay, 1996). Tennessee also required all school districts to appoint superintendents. Prompted by the legislature adopting the new governance structure in 1992, school districts were given until 2000 to meet the requirement of appointing the superintendent. Unique to Tennessee was the continued introduction of bills to revert the legislation after 1992 (Tennessee Municipal League, 2018). These three states have experienced changing from an elected to an appointed superintendent governance structure. Each state has proven the change is possible. Whether the change in governance structure leads to different levels of student achievement remains a question.
The Governance Structure and Student Achievement

Proponents and opponents of both the appointed superintendent and the elected superintendent governance structures often raise the issue of whether the superintendent should be directly accountable to voting constituents or to the school board. The dynamics between school boards and superintendents, as they relate to student learning, have been explored in this section. The major focus of the research reviewed in this section was centered on whether student achievement differs in school districts led by an elected superintendent and school districts led by an appointed superintendent.

The Dynamics Between the Superintendent and School Board Members

According to Reisenauer (2018), school board members and superintendents view their interaction and working relationship as having an impact on the culture and climate of schools. The relationship between the school board and the superintendent is marked by the process of making decisions, communicative interaction, shared values, and trusting relationships. A school board and superintendent who work well together increase the trajectory of their potentially positive impact on student learning.

Jackson (2013) conducted a study of four superintendents and four school board presidents from the suburban Chicago area. He found that both the superintendents and school board presidents generally understood the specifics and differences in each other’s roles. He also determined that there was a tendency for the school board president to cross the line and micro-manage the superintendent. This natural tendency requires the superintendent to be a skilled manager and relationship builder. The superintendent must navigate challenging interactive dynamics; otherwise the district will suffer. Rickabaugh and Kremer (1997) posited three
essential characteristics of a healthy school board president and superintendent relationship: (a) understanding the expectations of both jobs, (b) communicating well, and (c) trust.

Ament (2013) conducted a study of superintendents, school board chairs, and new board members from three rural school districts in the State of Washington. The major components of the interaction between board members and the superintendent were found to be in the areas of governance (roles), communication, and trust. Carlson (2018) posited the importance of the superintendent working equally with each board member, providing ample time for board members to consider new ideas prior to board meetings, and communicating in a regular and frequent manner with board members. These three practices help foster healthy working relationships between the superintendent and board members. Trust between the superintendent and board members is another key relationship factor which, as noted by Cox (2018), can have a significantly negative or positive impact.

Many healthy dynamics emerge when school board members and the superintendent are aware of each other’s cognitive style and diversity in thinking. Asbjornsen (2017) studied this topic and analyzed diversity in cognitive styles using the Kirton Adaption-Innovation Theory (A-I). The theory centers on people having a preferred style of solving problems and falling somewhere on a continuum between adaptor and innovator. The adaptor prefers operating in a structured style in an effort to improve a situation. Adaptors generate well-thought out, practical solutions and they are proficient collaborators. In contrast, the innovator prefers unbound limitations to develop solutions. Innovators are not concerned or restricted in their thinking. They can generate a number of unique, creative ideas outside of normal operating guidelines. Collaboration and pragmatism are not priorities for innovators. The contrast between the two
styles can be problematic if not managed well. Innovators can view adaptors as risk averse leaders unwilling to embrace innovation. Adaptors might view innovators to be brazen and impractical. The A-I theory uses an inventory style measure to determine where people are on the continuum. The likelihood of conflict increases when significant cognitive style gaps exist among people. Asbjornsen applied the A-I theory to the school board member-superintendent relationship by collecting data from superintendents and board members. He found evidence of cognitive style gaps contributing to conflict among board members and superintendents. Another interesting point which emerged from this research was that 62% of the 44 superintendents participating in the study were innovators.

The school board has an integral impact on the superintendent’s work. According to Shelton (2010), student performance will stagnate if the school board does not provide an environment for a superintendent which is centered on student achievement. Analyzing differences between school boards and superintendents in high performing districts and low performing districts revealed contrasting findings. In high performing districts, school board members and the superintendent viewed students as growing, with potential to soar to higher levels of achievement. In contrast, school board members and superintendents in low performing districts had a tendency to accept existing hardships in a limiting manner (Iowa Association of School Boards, 2000). Looking further at effective interaction between a school board and a superintendent, Hanover Research (2014) conducted a literature review and identified the following five interaction elements that require attention:
• A strong, effective relationship between superintendents and school board members hinges upon clear definitions of each body’s duties and responsibilities.

• Successful board/superintendent collaboration requires frequent, diplomatic communication both in and out of official settings.

• Board members often enter their terms with limited knowledge of the exact nature of the superintendent’s administrative role, leading to role confusion and preconceived notions of a superintendent’s abilities.

• While underperforming urban school district boards and superintendents face many of the same problems that other districts encounter, the extensive nature of reform required in these districts poses several leadership challenges.

• Politics at the board and superintendent level plague all school districts. (pp. 3-4)

The Hanover team further emphasized the importance of student achievement being the driver of policy decisions at the school board table.

The Impact of Elected vs Appointed Superintendents on Student Achievement

In 1990, Georgia, Tennessee, South Carolina, Mississippi, Alabama, and Florida had elected and appointed superintendents. At the time of the present study, Alabama and Florida were the only two states in the nation having elected and appointed superintendents (Habersham, 2012; Mississippi Code of 1972, 2016). Given the importance of strong leadership in a school district, the issue of the superintendent governance structure is important and relevant in Florida. Limited research exists on the Florida appointed and elected superintendent governance
structure, particularly as it relates to student achievement. Specifically, only a few documented studies have been conducted that have had a focus on Florida’s student achievement variances associated with the superintendent governance structure. Ford and Ihrke commented on their research in a 2016 article “…this article is the first known study to explore the structural and governing differences between school boards with elected and appointed superintendents” (p. 2).

A noteworthy point regarding Ford’s and Ihrke’s (2016) research is the field of origin for their study. The researchers were closely aligned in analyzing local and municipal governance systems from a political/public administration point-of-view. They attempted to determine whether student achievement in Florida was higher for districts led by elected superintendents or those led by appointed superintendents. They found some differences in student achievement but determined those differences to be a result of the size and demographics of the school districts as opposed to the superintendent governance structure. Findings revealed an Ordinary Least Squares regression model, $R^2 = .58$ (Ford & Ihrke, 2016). Student achievement was measured using a 0-800 scale for standardized tests, and the study was controlled for district enrollment, socio-economic status, minority population, per pupil funding, and ELL. The accountability measure was higher for appointed superintendent-led districts by a mean score of 16.48. Enrollment averages were larger in appointed superintendent-led districts by a mean of 73,024. For both measures, a t-test for equality of means was conducted, and both had significance levels at $p<.05$ (Ford & Ihrke, 2016).

Partridge and Sass (2011) also analyzed the question of whether student achievement varied among school districts led by elected or appointed superintendents. Similar to Ford and Ihrke (2016), Partridge and Sass originated their research from a comparative viewpoint of
determining whether a mayor and council members structure or a city manager and council members structure was the most effective and efficient local governmental framework. The researchers utilized a value-added model and conducted an extensive statistical analysis utilizing strategies to address various impacting factors, eliminate bias, and account for excluded variables. Population emerged as an impactful element in the study, \( t=0.619, p<.01 \). Income also was determined to be a significant factor, although not as strong as population, \( t=0.054, p<.05 \). Racial diversity was not determined to be significant in the study’s findings. Partridge and Sass discovered negligible differences between Florida’s elected and appointed superintendents’ impact on student achievement.

The State of Florida has changed examinations and standards several times since the 1999 inception of the school grades accountability system. The study conducted by Ford and Ihrke (2016) was based on state test data from the 2013-14 year. The Florida Comprehensive Assessment Test (FCAT) 2.0 was the state test used at that time and measured the Next Generation Sunshine State Standards (NGSSS). The study conducted by Partridge and Sass (2011) was based on state data for mathematics and reading from the FCAT between 2000 and 2010. The test data measured student proficiency of the Sunshine State Standards (SSS).

The current test format used for this study differs from data used by Ford and Ihrke (2016) as well as Partridge and Sass (2011). Currently, mathematics and reading proficiency are measured by the Florida Standards Assessment (FSA). The standards measured by the FSA are the Florida Standards which are different from the previously used SSS and the subsequently used NGSSS. The NGSSS were first used in Algebra during 2011. The current Florida Standards and FSA were first used in the 2014-2015 school year. Today, all mathematics and English state
test scores are based on the Florida Standards and measured by FSA. Science and social studies End of Course examinations still utilize NGSS (FDOE, 2018). Civics, Biology, 5th Grade Science, and 8th Grade Science examinations use the same NGSS standards in this study and the study conducted by Ford and Ihrke. The studies would not be comparable in mathematics and English. Being cognizant of the changes in Florida examinations and standards is important when comparing data.

Habersham’s (2012) research was also relevant to this dissertation study. Habersham referenced Morgan’s 2003 Tennessee study and Hoover’s (2008) Alabama study. Neither Morgan nor Hoover found a significant difference in student achievement as a result of the elected or appointed superintendent governance structure. Hoover reflected upon why the issue matters to citizens. He stated: “We speculate that parents feel a greater sense of input with an elected system, which is partially borne out by the data” (Hoover, 2008, p. 645). Habersham analyzed school grades and graduation rates, among other variables. She sampled 27 school districts in the State of Florida. A t-test for equality of variances as well as Levene’s Test for Equality of Variances, revealed findings similar to those of Morgan and Hoover. Differences in student achievement between school districts led by elected superintendents and those led by appointed superintendents did not reach a level of acceptable significance (p<.05) (Habersham, 2012).

Thus, Ford and Ihrke, Partridge and Sass, as well as Habersham, found that the superintendent governance structure of being elected or appointed did not impact student achievement. In the present study, the researcher sought to utilize the most current available data from a wide perspective. The null hypothesis of this study was established, and additional
research was needed. Casting a wide net with current data, while also accounting for the impact of enrollment, poverty, and ELL, permitted further consideration of this complex governance issue.

Summary

This literature review was comprised of three main sections and provides various perspectives and insight into the research related to Florida’s school superintendent governance structure. American culture and politics influence and drive the future of public schools. Only two states, Alabama and Florida, continue to have elected superintendents. Core focal points of the literature review were providing research-based insight into the superintendent position, the issue of the governance structure, and the impact of the governance structure as determined by student achievement differences between districts with elected superintendents and those with appointed superintendents.

In section one, the conceptual model was articulated and delineated through relevant research. Democratic localism inspires citizens to govern their local school district by having control over who becomes the superintendent. Thus, many Floridians have supported the elected superintendent governance structure. In contrast, professionalism has resonated with the many citizens favoring an appointed superintendent governance structure. Advocates for appointed superintendents support hiring the most qualified, well-trained, and experienced leader to oversee a highly complex public school district. Pros, cons, applications, and varied perspectives were presented to develop the concepts and highlight the tension embedded in the debate as to which governance structure is superior for student learning.
The second section was comprised of numerous literature sources on the history of the superintendent position described through emerging roles and responsibilities. The views of various researchers such as Björk et al. (2014) provided insight as to how the superintendent position has changed and continued to grow in responsibility over time. Research by Waters and Marzano (2006) was presented in this section to examine the impact of the superintendent and district leadership on student learning. In their research, Waters and Marzano found district leadership did impact student learning. The longevity of a superintendent also correlates with higher student performance. The section also focused on research about effective superintendents, and specific attention was given to both urban and rural superintendents. Theobald’s (1997) concept of intradependence was included in the study of rural superintendents. The literature surrounding the transition from an elected superintendent to an appointed superintendent was also addressed in this section. A brief history of Florida’s process used to appoint superintendents was chronicled. Next, numerous advantages and disadvantages to having an elected superintendent or an appointed superintendent were discussed.

The third section was comprised of two major components, the first being the synthesis of research on the working relationships between school board members and their superintendents. These relationships can be challenging and complicated, but they are very important to the impact and effectiveness of the school district on behalf of its students. Various literature sources were reviewed with communication and trust gaining consensus as essential qualities to healthy relationships between board members and a superintendent. Next, the researcher reviewed the existing research on Florida’s superintendent governance structure. The research of Ford and Ihrke (2016), Habersham (2012), and Partridge and Sass (2011) was
reviewed. These researchers focused on whether a difference in student achievement exists as a result of the district superintendents in Florida being elected or appointed. Findings from all three research studies resulted in no significant differences in student achievement between districts led by elected superintendents and districts led by appointed superintendents.

The researcher, in this literature review, has presented important research and background information relative to the superintendence governance structure in Florida. Chapter 3 contains detailed information about the methodology used to further research whether or not the superintendence governance structure impacts student achievement.
CHAPTER 3
METHODOLOGY

Introduction

The purpose of this study was to find and determine existing differences in district characteristics and student achievement between school districts led by elected superintendents and school districts led by appointed superintendents. This chapter presents the methodology used in the study and is organized into six sections: introduction, research questions, instrumentation, data collection, data analysis, and the summary. The research design was quantitative, and participants involved in the study were the 67 Florida school districts. The term participant is used uniquely, as it represents passive participation. Public data were analyzed regarding each school district’s characteristics, graduation rates, and test scores.

The instrumentation section addresses specifics of the statistical elements used in the research. Instruments used with state testing of students and locale calculations are presented. Aspects of design, reliability, and validity are also presented. The data collection section is centered on measures obtained from the Florida Department of Education (FDOE) for test scores and demographics. Locale code data have been shared and were gathered from the National Center for Education Statistics (NCES). The data analysis section presents the steps taken to examine each research question. This includes information about the statistical procedures used, variables measured, and the level of significance to which results were held. The chapter concludes with a summary, leading to the next chapter where the results of the research are revealed. The study was initiated only after it had been reviewed and approved by the Institutional Review Board of the University of Central Florida (Appendix B).
Research Questions

In preparation for a detailed discussion of the methodology used to conduct the study, the following three research questions which guided the study are restated:

1. In what ways, if any, does the geographic distribution of Florida school districts led by elected superintendents differ from the distribution of Florida school districts led by appointed superintendents?
2. In what ways and to what extent, if any, do demographic and policy characteristics differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?
3. In what ways and to what extent, if any, does student academic performance differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?

Instrumentation

This study used test score results from state examinations, graduation rates, and demographic information gathered by the state (FDOE, 2018). Locale code data for school districts were obtained from the NCES (2017), and information about Florida’s educational regions was collected from the Project 10 Transition Education Network Webpage (2018).

Demographics

For the present study, demographics from each school were sent from the school districts to the state. Standard statistics were used to calculate the mean of students receiving free and reduced lunch in each of the school districts as well as the mean of students in each school
district who are English language learners (ELL). Enrollment was determined from an official count of students in each school. Inaccurate counting/reporting was the most significant threat to reliability and validity of the data (Fraenkel et al., 2016). Each school district was responsible for accurate counts of students and other demographics.

State Tests

Assessment data were comprised of test scores processed by the FDOE. The tests were administered annually at each public school site during specified timeframes. The Florida Standard Assessment (FSA) has been the test format used to measure learning of the Florida Standards in ELA and mathematics. Terminology can be confusing for Algebra and Geometry tests because they are called End of Course (EOC) examinations. However, both of those EOC examinations are technically called FSA EOCs and measure the learning of the Florida Standards. The tests designed to measure the Next Generation Sunshine State Standards (NGSSS) are the Statewide Science Assessments for fifth and eighth grade science, the Biology EOC, and the Civics EOC (FDOE, 2018). FDOE conducts rigorous statistical testing to assess state examination validity and reliability and make changes as needed. Research information on the validity and reliability of state examinations was detailed and recorded in the Florida Standards Assessments 2016-2017, Volume 4, Evidence of Reliability and Validity (FDOE, 2017). A synthesis of the measures taken for test validity and reliability research is presented in Appendix C of this dissertation.
Florida Test Question Characteristics

All test items in Florida examinations are written to measure learning of the state standards. Test items are field tested and then statistically analyzed to determine if the item will appear on one of the state examinations. The FDOE Statewide Assessment Program Information Guide (2018) provides the steps taken to generate high quality testing that is both valid and reliable.

Writers, review committees, and the FDOE have the responsibility to ensure test validity. The difficulty of a test question is reviewed by a committee of educators and the FDOE. The p-value is calculated based on the ratio of students answering the question correctly. Also, the b-parameter of a question provides acceptable ranges of values within which a test question must fall. Test questions are designed to be appropriate based on the grade level and the course standard, and they are further scrutinized by bias review committees and community sensitivity committees. Additionally, a Differential Item Functioning analysis is conducted for field test questions based on demographic categories such as gender, race, disabilities, and ELL. Flagged results lead to the deletion of the question being analyzed (FDOE Statewide Assessment Program Information Guide, 2018).

Other checks involve positive item-test correlations which are necessary for each test question. Although rare, negative item-test correlations do occasionally occur and are identified through the calculation of a pointe biserial correlation, poly-serial correlation, or an Item Response Theory (IRT) a-parameter. If students are showing imbalanced patterns of guessing answers, the IRT c-parameter will flag the item and result in the test question being removed. Test item writers are also charged to use universal design principles. Components of these
principles include questions being readable and legible. Writers are to avoid being too wordy and vague, and they are to use appropriate fonts, spacing, visuals, and clear page designs (FDOE Statewide Assessment Program Information Guide, 2018).

The item response function is an IRT measure where the ability of students is matched to their test question responses. This function determines if a good fit exists between students’ responses and the model being used. The FDOE conducts the item response function on questions which have progressed through field testing. The related calculations are the a-parameter which accounts for disabilities, the b-parameter which accounts for difficulty of the test question, and the c-parameter which accounts for students guessing the answer of the question (FDOE Statewide Assessment Program Information Guide, 2018).

Graduation Rate

The graduation rate calculation is directed by the U.S. Department of Education. Thus, the measure is comparable among all 50 states; the driving purpose of the federal government. The rate is based on a cohort framework where students entering ninth grade are expected to graduate in four years. Students who transfer or move out of the area are removed from the school’s cohort. Students who transfer to a school or move into the area are added to the school’s cohort. Additional guidelines determine accounting for more rare and unique situations (Florida Department of Education Florida High School Cohort 2016-17 Graduation Rate, 2018).

Locale Code Data

A locale is a geographic categorization used to identify school(s) or school district areas (Geverdt, 2015). The National Center for Education Statistics website (Glander, 2018; NCES,
2017) provides information about locales, and the compiling of locale code data is conducted by the NCES. The structure of locale codes is comprised of four main categories and three subcategories. The four main categories are: city, suburban, town, and rural. The three subcategories are large, midsize, and small or fringe, distant, and remote. The categories and subcategories combine to form 12 locale code classifications: city-large, city-midsize, city-small, suburban-large, suburban-midsize, suburban-small, town-fringe, town-distant, town-remote, rural-fringe, rural-distant, and rural-remote (Geverdt, 2015).

District locale code data are determined by school populations within the district. If there is one locale representing a majority of students, the district is categorized by that locale. If a majority does not exist, the “plurality of enrollment-weighted schools” becomes the deciding factor (Geverdt, 2015, p. 14).

Calculating population levels for school districts throughout the nation requires accurate counting systems. Each year five surveys are conducted to gather counts, and the resulting data are referred to as the common core of data (CCD) by NCES (2017). The Education Sciences Reform Act of 2002 is the law that originally mandated the gathering and sharing of information about schools.

The CCD comes from schools throughout the nation. The flow of data is from the district to the state to the NCES. Nonsampling errors are addressed to provide reliability. Possible errors are surveying on the incorrect day, a district not reporting numbers, entry errors, or survey confusion impacting responses. Training, reviewing procedures, and quality checks help improve data reliability. NCES also delves into matching local directory information from the previous year to the current year, and alerts and corrections are then directed to the state. Coverage errors
emerge when submitted data have inadvertently been duplicated or data have not been reported. Non-reports tend to happen when rezoning of schools has occurred or other district organizational changes have taken place. The NCES analyzes and compares data reported from districts to the state in the prior year to the current year, and this step improves reliability (Glander, 2017).

Data Collection

The FDOE’s public website was the source of demographic information and assessment results for each school district. Information identifying each district’s superintendent as being elected or appointed was gathered from the FDOE website.

The demographic data used in this study consisted of student enrollment, the percentage of students receiving free or reduced lunch, and the percentage of ELL students. Numbers and percentages were derived from official counts provided by each school district. The demographic data used for the statistical analysis of this study were public information accessed from the FDOE website.

The bulk of the statistical examination for this project utilized Florida school district test scores. The scores were public records provided in report format on the FDOE website. The scores were extracted from the website and then analyzed. The test score format used throughout the study was the percentage of students scoring at or above grade level proficiency in each of the 20 examinations that were accessed.

Graduation rate data were also extracted from public records on the FDOE website. Because Florida has not announced graduation rates until well into the following school year, school grades have been calculated using one-year lagged graduation data. Thus, the 2017-2018
school grade calculations used 2016-2017 graduation rates, but testing information for this research was obtained for the 2017-2018 year.

Locale code data for each Florida school district is public information provided by the NCES. Specific locale code information for each Florida school district was gathered for this project from the NCES locale code listing.

Data Analysis

Prior to conducting an analysis of the research questions, descriptive statistics and frequencies were examined for the variables of the study. The IBM Statistical Package for the Social Sciences (SPSS) software was used to perform the statistical calculations in this study. Frequency tables were generated for three variables: (a) locale codes, (b) regions, and (c) whether a school district was led by an elected or appointed superintendent. Descriptive statistics were calculated for the other variables of the study. The results represent the information used for the analysis and synthesis of the data.

Research Question 1

A cross-tabulation table was created by inputting locale code data and the superintendent governance structure for each Florida school district into SPSS. The results provided another viewpoint for looking at population density patterns in conjunction with the superintendent governance structures of school districts throughout the state. The other source of geographical data came from the distribution of elected or appointed superintendents based on regional information. A state map was used to visually differentiate districts led by elected superintendents and those led by appointed superintendents. Five regions were illustrated to
further identify patterns of the superintendent governance structure throughout the state. For Research Question 1, the dependent variables were locale codes and region designations. The independent variable was the superintendent governance structure of an elected or appointed superintendent. Population information was further analyzed in the second research question by looking at differences in the student enrollment counts of school districts led by elected superintendents and school districts led by appointed superintendents.

Research Question 2

Key demographic characteristics were studied for two purposes. The first purpose was to determine if demographic variances existed between school districts with elected superintendents and those with appointed superintendents. This step was essential to the credibility of the research. Demographic characteristics were tested to find if the superintendent governance structure had an impact on student achievement or if demographic characteristics were the driving influences on student achievement. The second purpose for analyzing demographic information was to better understand why some districts preferred to elect their superintendents and others preferred to have their superintendents appointed by the school board. The dependent variables were student enrollment, the percentage of students in poverty based on free and reduced lunch, and the percentage of ELL students. The independent variable was the superintendent governance structure of an elected or appointed superintendent. Demographic data and superintendent governance structure data were entered into SPSS for each school district, and an independent samples t-test was calculated to determine existing differences. The level of significance demanded for valid and credible results is normally p<.01 or p<.05, because the t-test measures the differences between two sample means and the differences between two
population means (Steinberg, 2011). With this project, data existed for the entire population. Therefore, there was no chance for a sampling error, and the differences found from the t-tests represented actual, reliable differences (i.e., any observed differences are, by definition, real).

Research Question 3

The core of this study was embedded in the third research question. A one-way analysis of covariance (ANCOVA) was used to determine if a district led by an elected superintendent or an appointed superintendent resulted in differences in student achievement. The ANCOVA uses covariates whose relationship with dependent variables impacts the dynamic associated with the outcomes (Fraenkel et al., 2016). To determine if the superintendent governance structure was the influencing factor, other potential influences had to be accounted for in the analysis. Those possible influences were the three dependent variables in Research Question 2. In the one-way ANCOVA, the three variables (i.e., poverty, enrollment, and ELL) became independent variables and covariates. The other independent variable was the superintendent governance structure of an elected or appointed superintendent. The dependent variables were ELA student achievement, mathematics student achievement, science student achievement, social studies student achievement, and the high school graduation rate. The following data were uploaded into SPSS to conduct the ANCOVA: superintendent governance structure, enrollment, poverty, ELL, test score data, and high school graduation data. The research design was a causal-comparative design (Frankel et al., 2016) where the different independent variables can be checked for their influence on the dependent variables.
Summary

The methodology of this study employed a large amount of public data. The bulk of the data was comprised of test score results and was retrieved from the FDOE website. Demographic data and high school graduation information were also gathered from FDOE’s website. Locale code data were collected from NCES. All of this information was public and was found in reports and charts on organization websites.

The State of Florida has put forth a thorough statistical regiment for testing. Reliability and validity have been measured and established. Much of the other information collected was generated by counting various demographic characteristics, and the instrumentation was found within the FDOE’s test structures and data measures. This was the case for locale code data from NCES as well.

The three research questions were analyzed using different methods. The first research question looked at patterns of population geographically matched with school districts’ superintendent governance systems. Locale codes were used to construct a cross-tabulation table where patterns were then examined.

The second research question focused on demographics. An independent samples t-test was conducted to measure differences between each demographic and the superintendent governance structures. The purpose of this statistical calculation was to determine if meaningful differences existed between districts with elected superintendents and those with appointed superintendents based on (a) enrollment size, (b) poverty as measured by free and reduced lunch rates, or (c) ELL population sizes.
The third research question was the culminating statistical test. A one-way ANCOVA was run to determine if differences in student achievement existed between school districts led by elected superintendents and those led by appointed superintendents. Enrollment, poverty, and ELL enrollment were variables with the potential to impact the outcome. Thus, these covariate variables were accounted for in the one-way ANCOVA.

Chapter 4 presents the results of the completed statistical calculations. Descriptive statistics are presented as well as the statistical findings for each research question. The chapter reveals whether or not the elected or appointed superintendent governance structure in Florida has had an impact on student achievement.
CHAPTER 4
RESULTS

Introduction

The primary purpose of this study was to determine if differences in student achievement exist as a result of school districts being led by an elected superintendent or an appointed superintendent. Student enrollment sizes, free/reduced lunch, and English language learners (ELL) populations were the three demographic characteristics researched in this study. The researcher also analyzed whether student achievement differences could be attributed to the superintendent governance structure or any of the three demographic characteristics.

This chapter has been organized to first present descriptive statistics for the 67 Florida school districts included in the study. This section is followed by results of data analyses to respond to each of the three research questions which guided the study, and a final summary.

Descriptive statistics (mean, standard deviation, and range) are presented in tabular form for student enrollment, poverty as measured by free/reduced lunch rates, and the percentage of ELL students. In addition, the mean, standard deviation, and range are exhibited for each of the test score categories (English language arts [ELA], mathematics, science, and civics) and graduation rates. These descriptive statistics have been disaggregated by the district governance structure (i.e., school districts with elected superintendents and school districts with appointed superintendents).

The results of the analysis to respond to Research Question 1 reveal the differences between the geographic distribution of Florida school districts led by elected superintendents and the distribution of Florida school districts led by appointed superintendents. Results from Research Question 2 provide evidence of how demographic and policy characteristics differ in
school districts led by elected superintendents compared to school districts led by appointed superintendents. The results of the analysis to respond to Research Question 3 exhibit the differences in student academic performance between school districts led by elected superintendents and school districts led by appointed superintendents. Tables and supportive narratives are used in presenting the results.

The final section contains a summary of the chapter’s contents. Incorporated is a summary of results of the data analysis and a transition into the final chapter which provides a synthesis of the study and implications for future studies.

**Descriptive Statistics**

The State of Florida’s educational system has been organized into 67 school districts. Additional non-regular school districts exist (e.g., Florida Virtual School, Florida School for the Deaf and the Blind, laboratory schools) but were not included in this study. At the time of this study, elected superintendents led 41 school districts, and appointed superintendents led 26 school districts. Thus, 61% of the state’s superintendents were elected and 39% were appointed. These figures are presented in Table 2.

Table 2

*Florida Appointed Superintendents and Elected Superintendents (N = 67)*

<table>
<thead>
<tr>
<th>Superintendents</th>
<th>Elected Superintendents</th>
<th>Appointed Superintendents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>67</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>
Enrollment

Pupil enrollments of the 67 school districts had wide ranges. The smallest enrollment of the 67 school districts was 726 students in Jefferson Public Schools. The largest enrollment was 354,840 students in Miami/Dade Public Schools. The mean enrollment for the state was 42,076.46 and the standard deviation was 67,683.83.

Differences surfaced when comparing school districts led by elected superintendents to those led by appointed superintendents. The lowest enrollment for school districts led by appointed superintendents was 6,410 students in Okeechobee Public Schools. There were 23 school districts led by elected superintendents having smaller enrollments than Okeechobee Public Schools. Conversely, the largest enrollment among school districts led by elected superintendents was Pasco Public Schools with 73,682 students. Nine school districts led by appointed superintendents had larger enrollments. The range of enrollments for the 41 school districts led by elected superintendents was 726 students to 73,682 students. The mean was 12,221.02, and the standard deviation was 15,507.29. The range of enrollment for the 26 school districts led by appointed superintendents was 6,410 students to 354,840 students. The mean was 89,156.19, and the standard deviation was 89,120. Both the means, 12,221.02 and 89,156.19, and the standard deviations, 15,507.29 and 89,120, revealed large differences between the enrollment figures of school districts led by elected superintendents and the enrollment figures of school districts led by appointed superintendents. These descriptive statistics supported the conclusion that the average enrollment of the 41 school districts led by elected superintendents was sizably smaller than the average enrollment of the 26 school districts led by appointed superintendents. Table 3 provides the descriptive statistics for pupil enrollment.
Table 3

*Demographic Characteristic: Enrollment*

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>School Districts</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td>67</td>
<td>726</td>
<td>354,840</td>
<td>42,076.46</td>
<td>67,683.83</td>
<td></td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td>41</td>
<td>726</td>
<td>73,682</td>
<td>12,221.02</td>
<td>15,507.29</td>
<td></td>
</tr>
<tr>
<td>Appointed</td>
<td>26</td>
<td>6,410</td>
<td>354,840</td>
<td>89,156.19</td>
<td>89,120.00</td>
<td></td>
</tr>
<tr>
<td>Subgroup differences</td>
<td></td>
<td></td>
<td></td>
<td>76,935.17</td>
<td>73,612.71</td>
<td></td>
</tr>
</tbody>
</table>

Poverty Measured by Free/Reduced Lunch

Descriptive statistics for poverty are measured by free/reduced lunch rates for each school district. The lowest free/reduced lunch rate among Florida school districts was 27%, and the highest free/reduced lunch rate was 100%. The mean free/reduced lunch rate for Florida’s 67 school districts was 75.7, and the standard deviation was 17.7. Table 4 contains the descriptive statistics for free/reduced lunch rates.

Table 4

*Demographic Characteristic: Poverty Measured by Free/Reduced Lunch*

<table>
<thead>
<tr>
<th>Free/Reduced Lunch</th>
<th>School Districts</th>
<th>N</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td>67</td>
<td>27.0</td>
<td>100</td>
<td>75.70</td>
<td>17.70</td>
<td></td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td>41</td>
<td>45.5</td>
<td>100</td>
<td>80.12</td>
<td>19.23</td>
<td></td>
</tr>
<tr>
<td>Appointed</td>
<td>26</td>
<td>27.0</td>
<td>87</td>
<td>68.72</td>
<td>12.37</td>
<td></td>
</tr>
<tr>
<td>Subgroup differences</td>
<td></td>
<td></td>
<td></td>
<td>11.40</td>
<td>6.86</td>
<td></td>
</tr>
</tbody>
</table>
Comparing school districts based on their superintendent governance structure revealed significant differences. The lowest free/reduced lunch rate for the 41 school districts led by elected superintendents was 45.5%. The highest rate for school districts led by elected superintendents was 100%. Two elected superintendent-led school districts had 100% of their students receiving free/reduced lunch. Additionally, 12 other school districts led by elected superintendents had a free/reduced lunch percentage greater than 98% but less than 100%. The mean rate for districts led by elected superintendents was 80.12, and the standard deviation was 19.23. The range of free/reduced lunch rates for school districts with an appointed superintendent governance structure spanned from 27% to 87%. The mean rate for school districts led by appointed superintendents was 68.72, and the standard deviation was 12.37. Comparing the means showed that school districts led by elected superintendents had an average free/reduced lunch rate that was more than 11% higher than school districts led by appointed superintendents.

Another noteworthy point was evident in the percentage of school districts having free/reduced lunch rates greater than 80%. Of the 41 school districts led by elected superintendents, 59% (24) had free/reduced lunch rates of 80% or higher. Of the 26 school districts led by appointed superintendents, only 15% (4) had free/reduced lunch rates of 80% or higher.

The mean free/reduced lunch rate of school districts led by elected superintendents was higher than the mean of school districts led by appointed superintendents by 11.4. Also, the standard deviation for school districts led by elected superintendents was larger than that of school districts led by appointed superintendents by 6.85. Florida’s school districts with an elected superintendent governance structure had a substantially higher percentage of students in
English Language Learner (ELL) Students

Among the 67 school districts, ELL student populations ranged from 0 to 20.3%. The mean ELL enrollment was 5.52 with a standard deviation of 5.02.

Comparing school districts based on their superintendent governance structure showed that school districts led by elected superintendents had a range of 0 ELL students to 14.1% ELL students. Furthermore, there were 22 elected superintendent-led school districts with a percentage of ELL students under 2.5%. In contrast, there was only one school district led by an appointed superintendent having a percentage of ELL students under 2.5%. The mean ELL population for school districts led by elected superintendents was 3.5, and the standard deviation was 3.53. School districts led by an appointed superintendent had an ELL range of .8% to 20.3%. Among school districts led by appointed superintendents, ELL students made up 8.71% of total enrollment, with a standard deviation of 5.41. These descriptive statistics revealed that school districts led by appointed superintendents had a higher population of ELL students, by 5 percentage points, than school districts led by elected superintendents. Table 5 provides the descriptive statistics for ELL students.
The mean was higher and the standard deviation was larger for school districts led by appointed superintendents than for school districts led by elected superintendents. The mean was higher by 5.21, and the standard deviation was larger by 1.88. Thus, the descriptive statistics for ELL students indicated that appointed superintendent-led school districts collectively had a higher percentage of ELL students than elected superintendent-led school districts.

**Measures of Student Achievement**

Student achievement was a vital element of the current study. Test scores and graduation rates were used to analyze variances in student achievement. The test score data utilized was the percentage of students who scored at grade level expectations or above on Florida Standards Assessment (FSA) and End-of-Course (EOC) examinations.

**English Language Arts (ELA) Achievement**

The researcher in the present study investigated whether students learn the ELA standards more proficiently in elected superintendent-led school districts or appointed superintendent-led
school districts. ELA test scores for Grades 3-10 were analyzed to determine if, and to what extent, student performance differed between school districts led by elected superintendents and school districts led by appointed superintendents. Among Florida’s 67 school districts, ELA scores ranged from 30.63 to 74. School districts had a mean ELA score of 51.97 and a standard deviation of 8.73.

The 41 Florida school districts led by elected superintendents had ELA proficiency scores ranging from 30.63 to 67. The mean score was 50.33, and the standard deviation was 9.67. The 26 Florida school districts led by appointed superintendents had ELA proficiency scores ranging from 43 to 74, a mean score of 54.55, and a standard deviation of 6.35. The standard deviation was 3.32 larger for school districts led by elected superintendents.

Analyzing the descriptive statistics, a difference was evident between the ELA tests scores of school districts led by elected superintendents and school districts led by appointed superintendents. Specifically, school districts led by appointed superintendents had a 4% higher proficiency level than school districts led by elected superintendents. Thus, students in appointed superintendent-led school districts learned ELA standards at a higher level than students in elected superintendent-led school districts. The descriptive statistics for ELA scores are displayed in Table 6.
Table 6

Descriptive Statistics: English Language Arts (ELA) Test Score Measures of Student Achievement

<table>
<thead>
<tr>
<th>English Language Arts (FSA 3-10)</th>
<th>School Districts</th>
<th>N</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td>67</td>
<td>30.63</td>
<td>74</td>
<td>51.97</td>
<td>8.73</td>
<td></td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td>41</td>
<td>31.00</td>
<td>67</td>
<td>50.33</td>
<td>9.67</td>
<td></td>
</tr>
<tr>
<td>Appointed</td>
<td>26</td>
<td>43.00</td>
<td>74</td>
<td>54.55</td>
<td>6.35</td>
<td></td>
</tr>
<tr>
<td>Subgroup differences</td>
<td></td>
<td></td>
<td></td>
<td>4.22</td>
<td>3.32</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics Test Scores

Research was employed to determine if students in school districts led by elected superintendents learned mathematics at different proficiency rates when compared to students in school districts led by appointed superintendents. Mathematics test scores for students in Grades 3-8, Algebra, and Geometry, were analyzed to determine if levels of learning differed in school districts based on the superintendent governance structure. The range for the 67 Florida school districts was 35.63 to 78.25. The mean was 55.56, and the standard deviation was 9.26.

A difference was evident when comparing school districts based on the superintendent governance structure. School districts led by elected superintendents had a mean score of 54.36 and a standard deviation of 10.42. School districts led by appointed superintendents had a mean score of 57.46 and a standard deviation of 6.81. Appointed superintendent-led school districts had a 3.1 higher mathematics mean score than elected superintendent-led school districts. Additionally, the standard deviation was 3.61 larger for school districts led by elected superintendents.
Results from the descriptive statistics disclosed that school districts led by appointed superintendents performed more than 3% higher than school districts led by elected superintendents. Therefore, students in appointed superintendent-led school districts learned mathematics at higher levels than students in elected superintendent-led school districts. Table 7 contains the descriptive statistics for mathematics.

Table 7

Descriptive Statistics: Mathematics Test Score Measures of Student Achievement

<table>
<thead>
<tr>
<th>Mathematics (FSA 3-8, Algebra &amp; Geometry)</th>
<th>School Districts</th>
<th>N</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td></td>
<td>67</td>
<td>35.63</td>
<td>78.25</td>
<td>55.56</td>
<td>9.26</td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td></td>
<td>41</td>
<td>*</td>
<td>*</td>
<td>54.36</td>
<td>10.42</td>
</tr>
<tr>
<td>Appointed</td>
<td></td>
<td>26</td>
<td>*</td>
<td>*</td>
<td>57.46</td>
<td>6.81</td>
</tr>
<tr>
<td>Subgroup differences</td>
<td></td>
<td></td>
<td>3.10</td>
<td>3.61</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Maximums and minimums were not calculated because three different scores were compiled to create an overall mathematics score (Grades 3-8, Algebra, and Geometry).

Science Test Scores

Science was a third content area examined to determine if students learned at higher levels based on the school district’s superintendent governance structure. Grade 5, Grade 8, and Biology test scores were used to determine if differences in science achievement existed when comparing elected superintendent-led school districts to appointed superintendent-led school districts. The range for the 67 Florida school districts was 24 to 77.67. The mean was 55.38, and the standard deviation was 10.15.
A performance difference existed between school districts led by elected superintendents and those led by appointed superintendents. For school districts led by elected superintendents, the mean science score was 53.54, and the standard deviation was 11.78. The mean for school districts led by appointed superintendents was 58.3, and the standard deviation was 6. The science mean score was 4.76 higher in school districts led by appointed superintendents when compared to school districts led by elected superintendents. The standard deviation for science scores in school districts led by elected superintendents was 5.78 larger.

When considering differences of student achievement in ELA, mathematics, and science, the largest difference was found in science. School districts led by appointed superintendents scored more than 4.5% higher than school districts led by elected superintendents. Thus, the science examination scores showed that students in appointed superintendent-led school districts learned the science standards at higher proficiency rates than students in elected superintendent-led school districts. Science descriptive statistics are displayed in Table 8.
Table 8

Descriptive Statistics: Science Test Score Measures of Student Achievement

<table>
<thead>
<tr>
<th>School Districts</th>
<th>N</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science EOC 5, 8, &amp; Biology</td>
<td>67</td>
<td>24</td>
<td>77.67</td>
<td>55.38</td>
<td>10.15</td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td>41</td>
<td>*</td>
<td>*</td>
<td>53.54</td>
<td>11.78</td>
</tr>
<tr>
<td>Appointed</td>
<td>26</td>
<td>*</td>
<td>*</td>
<td>58.30</td>
<td>6.00</td>
</tr>
<tr>
<td>Subgroup differences</td>
<td>4.76</td>
<td></td>
<td></td>
<td>5.78</td>
<td></td>
</tr>
</tbody>
</table>

* Maximums and minimums were not calculated because three different scores were compiled to create an overall science score (Grades 5, Grade 8, and Biology).

Civics Test Scores

Civics was the final subject investigation of student achievement differences between school districts led by elected superintendents and school districts led by appointed superintendents. Two social studies tests were administered throughout Florida, U. S. History and Civics. However, this study only utilized the seventh grade Civics scores. U.S. History scores were not used in this research because students who took the Advanced Placement (AP) U.S. History course had the option, but were not mandated, to take the U.S. History EOC examination. This dynamic would skew the data analysis of the research. Thus, Civics test scores were used to determine student achievement differences between school districts based on their superintendent governance structure. Florida’s 67 school districts scored in a range from 46 to 89 in Civics. The mean was 67.84, and the standard deviation was 9.51.

The 41 school districts led by elected superintendents had Civics proficiency scores ranging from 46 to 79. The mean score was 65.22 and the standard deviation was 9.76. The 26 school districts led by appointed superintendents had Civics proficiency scores ranging from 51
to 89. The mean score was 71.96 and the standard deviation was 7.56. The mean score in Civics for school districts led by appointed superintendents was 6.74 higher than school districts led by elected superintendents. The standard deviation was 2.2 larger in school districts led by elected superintendents.

Appointed superintendent-led school districts outperformed their counterpart school districts by more than 6.5% on the Civics examination. Therefore, students in appointed superintendent-led school districts experienced higher levels of learning in Civics than students in elected superintendent-led school districts. This statistic follows the pattern of school districts led by appointed superintendents outperforming school districts led by elected superintendent in ELA, mathematics, and science. The Civics statistics are depicted in Table 9.

Table 9

*Descriptive Statistics: Civics Test Score Measures of Student Achievement*

<table>
<thead>
<tr>
<th>Civics (EOC 7)</th>
<th>School Districts</th>
<th>N</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td></td>
<td>67</td>
<td>46</td>
<td>89</td>
<td>67.84</td>
<td>9.51</td>
</tr>
<tr>
<td>Superintendents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected</td>
<td></td>
<td>41</td>
<td>46</td>
<td>79</td>
<td>65.22</td>
<td>9.76</td>
</tr>
<tr>
<td>Appointed</td>
<td></td>
<td>26</td>
<td>51</td>
<td>89</td>
<td>71.96</td>
<td>7.56</td>
</tr>
<tr>
<td>Subgroup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>differences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.74</td>
<td>2.20</td>
</tr>
</tbody>
</table>

Graduation Rate

The graduation rate is calculated using lagged data from the previous year. Florida’s assignment of school grades for each high school in 2017-2018 used graduation rates from 2016-
2017, and the graduation rate data used in this study was from the 2016-2017 school year.

Graduation rates from the 67 Florida school districts spanned from 50% to 93.4%. The mean was 80.3 and the standard deviation was 8.06. Graduation statistics are presented in Table 10.

Table 10

Descriptive Statistics: Graduation Rate as Measure of Student Achievement

<table>
<thead>
<tr>
<th>Graduation Rate</th>
<th>School Districts</th>
<th>Minimum %</th>
<th>Maximum %</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All districts</td>
<td>67</td>
<td>50.0</td>
<td>93.4</td>
<td>80.30</td>
<td>8.06</td>
</tr>
<tr>
<td>Elected</td>
<td>41</td>
<td>50.0</td>
<td>93.4</td>
<td>78.82</td>
<td>9.39</td>
</tr>
<tr>
<td>Appointed</td>
<td>26</td>
<td>71.7</td>
<td>90.9</td>
<td>82.64</td>
<td>4.61</td>
</tr>
<tr>
<td>Subgroup</td>
<td></td>
<td></td>
<td></td>
<td>3.82</td>
<td>4.78</td>
</tr>
</tbody>
</table>

Differences surfaced when comparing graduation rates between school districts led by elected superintendents and school districts led by appointed superintendents. The range of graduation rates for the 41 school districts led by elected superintendents was 50% to 93.4%. The mean was 78.82, and the standard deviation was 9.39. Note the range for the 41 school districts was identical to the range for all 67 school districts. Both the highest and lowest district graduation rates belonged to school districts led by elected superintendents, and this was unique among all measures. The range of graduation rates for the 26 school districts led by appointed superintendents was 71.7% to 90.9%. The mean was 82.64, and the standard deviation was 4.61.

School districts led by appointed superintendents had a higher mean graduation rate and a smaller standard deviation when compared to districts led by elected superintendents. The mean was higher by 3.82, and the standard deviation was smaller by 4.78. Therefore, descriptive
statistics established that a higher percentage of students, 3.8%, graduated from school districts led by appointed superintendents in contrast to school districts led by elected superintendents. Thus, students in districts led by appointed superintendents successfully learned and completed public school at a higher rate than students in districts led by elected superintendents.

The descriptive statistics were generated from population data and revealed important findings. Students in school districts led by appointed superintendents performed higher on all of the measured state examinations and had a higher graduation rate in comparison to students in school districts led by elected superintendents. The findings revealed higher levels of student achievement occurred in school districts led by appointed superintendents. However, the source of the variance in student achievement was not able to be attributed to the school governance structure without considering demographics. ELL populations were larger in school districts led by appointed superintendents, and enrollment sizes were significantly larger in school districts led by appointed superintendents. However, poverty, as measured by free/reduced lunch rates, was more than 10% higher in school districts led by elected superintendents.

Analysis of Data: Research Question 1

In what ways, if any, does the geographic distribution of Florida school districts led by elected superintendents differ from the distribution of Florida school districts led by appointed superintendents?

The geographical distribution of school districts, based on their superintendent governance structure, was examined, and the populations of each of the 67 school districts were analyzed using local code data. The findings about regions and locale codes are presented in this section.
Regions

Project 10 Transition Education Network (2018) divided Florida into five regions as displayed in Figure 2. The numbers and percentages of school districts in each of the five regions are presented in Table 11.

Table 11

*Florida Public School Districts by Regions*

<table>
<thead>
<tr>
<th>Regions</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest (1)</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Northeast (2)</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>East Central (3)</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>West Central (4)</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>South (5)</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100</td>
</tr>
</tbody>
</table>

*Figure 2. Florida Map of School District Regions*

*Source: Maps ETC – Educational Technology Clearinghouse. (2008).*
Region 1 is in northwest Florida and is comprised of the following 18 school districts: Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, and Washington. Region 2 is in northeast Florida and is comprised of the following 18 school districts: Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Lafayette, Levy, Nassau, Putnam, St. Johns, Suwannee, Union, and Volusia.

Region 3 is in east central Florida and is comprised of the following 10 school districts: Brevard, Highlands, Indian River, Martin, Okeechobee, Orange, Osceola, Polk, Seminole, and St. Lucie. Region 4 is in west central Florida and is comprised of the following 12 school districts: Citrus, DeSoto, Hardee, Hernando, Hillsborough, Lake, Manatee, Marion, Pasco, Pinellas, Sarasota, and Sumter. Region 5 is in south Florida and is comprised of the following nine school districts: Broward, Charlotte, Collier, Glades, Hendry, Lee, Miami-Dade, Monroe, and Palm Beach.

A cross-tabulation of school districts compared by regions and superintendent governance structure is displayed in Table 12. At the time of the present study, a stark regional contrast was evidenced by the high percentage of school districts having an elected superintendent governance structure in the northern portion of Florida in contrast to a low percentage in the southern portion of the state. All 18 school districts in Region 1 - Northwest had elected superintendents. In Region 2 – Northeast, of the 18 school districts, 13 (72%) had elected superintendents. Together, the two northern regions had 36 school districts and 31 (86%) were led by elected superintendents.
Table 12

Summary of Results: Crosstabulations for Governance Structure by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Count</th>
<th>Count</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appointed</td>
<td>Elected</td>
<td></td>
</tr>
<tr>
<td>NorthWest</td>
<td>0</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>% within region</td>
<td>0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>% within governance structure</td>
<td>0</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>5</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>% within region</td>
<td>29</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>% within governance structure</td>
<td>19</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>East Central</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>% within region</td>
<td>80</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>% within governance structure</td>
<td>31</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>West Central</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>% within region</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>% within governance structure</td>
<td>23</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>% within region</td>
<td>78</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>% within governance structure</td>
<td>27</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>41</td>
<td>67</td>
</tr>
<tr>
<td>% within governance structure</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

In contrast, Region 5 - South had nine school districts, and two (22%) were led by elected superintendents. Region 3 – East Central was made up of 10 school districts, but only two (20%) of the region’s superintendents were elected. Region 4 - West Central had 12 school districts, and six (50%) of those districts were led by elected superintendents. South of the two northern regions, only 10 of the 31 school districts were led by elected superintendents. Thus, 86% of the northern regions were led by elected superintendents in contrast to 32% of the central and southern regions that were led by elected superintendents.
The five regions of Florida varied considerably with regard to the distribution of districts led by elected superintendents and those led by appointed superintendents. Not one appointed superintendent led a school district in Region 1 - Northwest. Only five (28%) of the school districts in Region 2 - Northeast were led by appointed superintendents. Collectively, only five appointed superintendents led school districts in the two northern regions. Thus, only 14% of the 36 northern Florida school districts were led by appointed superintendents at the time of the present study.

Moving south, the percentage of appointed superintendent-led districts rose significantly. Region 3 - East Central was comprised of 10 school districts, eight (80%) of which were led by appointed superintendents. Region 4 - West Central had 12 school districts and six (50%) were led by appointed superintendents. Region 5 - South was comprised of nine school districts of which seven (78%) were led by appointed superintendents. Together, the east central, west central, and south regions had 31 school districts. Of those 31 districts, 21 (68%) were led by appointed superintendents.

A significant contrast existed in the number of appointed superintendents leading school districts in central and south Florida and those leading school districts in north Florida. Appointed superintendents led 68% of the central and south school districts, but only 14% of the school districts in the northern regions of Florida as evidenced by the cross-tabulation displayed in Table 12.
School District Locales

The conceptual framework of the present study was based on the tension between democratic localism and professionalism. That tension has a connection with cultural characteristics associated with smaller populated regions. As a result, locale codes were employed to measure population density. Researching the locale codes of the 67 school districts provided relevant insight into existing variances. Locale codes are divided into four categories. From the largest population to the smallest, the categories are city, suburb, town, and rural. Locale codes are further divided into three subgroups resulting in 12 locale codes. Utilizing the four main categories provided an effective level of comparison for Florida’s school districts.

Table 13 is a frequency table of the number and percentage of Florida school districts in each of the four locales. Suburb is the locale that had the highest number of Florida school districts. Of the 67 school districts in the state, 26 (39%) were in the suburb locale, 20 (30%) were in the rural locale, 14 (21%) were in the town locale, and 7 (10%) were in the city locale. The frequency table exhibits that 46 (69%) of the state’s 67 school districts were either suburb or rural.

Table 13

*Florida Public School Districts by Locale Codes*

<table>
<thead>
<tr>
<th>Locale</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Suburb</td>
<td>26</td>
<td>39</td>
</tr>
<tr>
<td>Town</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Rural</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100</td>
</tr>
</tbody>
</table>
The superintendent governance structure of the 67 school districts further defined patterns associated with Florida’s locale distribution. Table 14 is a cross-tabulation of elected superintendents and appointed superintendents in the four different locales. The table unveils patterns between locales and school districts’ superintendent governance structure.

Table 14

Summary of Results: Crosstabulations for Governance Structure by Locale Codes

<table>
<thead>
<tr>
<th>Locale</th>
<th>Count</th>
<th>Superintendents</th>
<th>% within region</th>
<th>% within governance structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td></td>
<td>Appointed</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elected</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Suburb</td>
<td></td>
<td>Count</td>
<td>18</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within region</td>
<td>69</td>
<td>20</td>
</tr>
<tr>
<td>Town</td>
<td></td>
<td>Count</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within region</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within governance structure</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td>Count</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within region</td>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within governance structure</td>
<td>4</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>Count</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

Among the seven city school districts, two (29%) were led by elected superintendents.

The two elected superintendents constituted 5% of all elected superintendents in the state.

Appointed superintendents led the other five (71%) city school districts which made up 19% of
Florida’s appointed superintendents. Thus, most city school districts were led by appointed superintendents, and 19% of all appointed superintendents were employed in city locales.

Elected superintendents led eight (31%) of the 26 suburb school districts. Of the 41 elected superintendents in the state, 20% led suburb school districts. More than half of Florida’s 26 suburb school districts, 18 (69%), had an appointed superintendent governance structure. Well over half (69%) of Florida’s appointed superintendents led suburb school districts. The cross-tabulation reveals that more than twice as many appointed superintendents led suburb school districts in contrast to elected superintendents. Additionally, most of Florida’s appointed superintendents were employed in suburb school districts.

Only 14 school districts in the state were in the town locale, and 12 (86%) of those school districts were led by an elected superintendent. In the state, 12 elected superintendents equated to 29% of all elected superintendents. Only two (14%) appointed superintendents were in charge of a town school district. This represented 8% of the 26 appointed superintendents. Town locales comprised 21% of Florida’s school districts. The locale code data displays an important pattern: Smaller populated school districts in Florida were more likely to be led by elected superintendents.

The rural locale code represents the smallest population size. Florida had 20 rural school districts, and 19 (95%) had an elected superintendent governance structure, representing 46% of the state’s elected superintendents. Only one (5%) rural school district was led by an appointed superintendent. This constituted 4% of all appointed superintendents in the state. The trend noted for town locales that smaller populated school districts were more likely to be led by elected superintendents was strongly affirmed in the examination of rural locales.
Research Question 1 inquired about differences in the geographic distribution of Florida school districts based on the superintendent governance structure. Key differences existed in the regions and the superintendent governance structure. School districts in the two northern regions were mostly (86%) led by elected superintendents. School districts in the East Central and South regions were mostly (79%) led by appointed superintendents. Additionally, 91% of the 34 school districts in the town and rural locales were led by elected superintendents. In contrast, 71% of the city school districts were led by appointed superintendents. These findings indicated that lower populated school districts have a high probability of being led by elected superintendents, and appointed superintendent-led school districts are more likely to be found in higher populated areas. The conceptual framework of tension between democratic localism and professionalism, is impacted by population density and the related cultural characteristics shared earlier in the literature review. Rural residents are more likely to retain the right to vote and exercise their voices in selecting a known, trusted community member to be in charge of their local schools.

**Analysis of Data: Research Question 2**

In what ways and to what extent, if any, do demographic and policy characteristics differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?

Research Question 2 led to the examination of demographics to determine existing differences between school districts led by elected superintendents and school districts led by appointed superintendents. Beyond Research Question 2, key demographic characteristics were measured in the one-way ANCOVA to identify any possible impact on the variance of student achievement between school districts based on the superintendent governance structure.
Demographics were measured by an independent samples t-test. The three demographics measured were student enrollment, poverty as determined by free/reduced lunch rates, and ELL student population. In sharp contrast to most empirical research, the dataset included the entire population. Thus, there was no need to make inferences from a sample to the larger population. Relationships which differed from zero were, by definition, “real.” Although statistical significance was then, strictly speaking, immaterial to the study, significance levels have been reported and can be treated as indicators that an observed relationship might be of practical significance (Bickel, 2007). Findings from the independent samples t-test are depicted in Table 15.

Table 15

*Independent Samples t-test for Demographic Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>t</th>
<th>df</th>
<th>Sig</th>
<th>Mean Difference</th>
<th>Standard Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>5.423</td>
<td>65</td>
<td>.000</td>
<td>76,935.17</td>
<td>14,187.96</td>
</tr>
<tr>
<td>Free/reduced lunch</td>
<td>-2.686</td>
<td>65</td>
<td>.009</td>
<td>-11.40</td>
<td>4.24</td>
</tr>
<tr>
<td>English language learners</td>
<td>4.779</td>
<td>65</td>
<td>.000</td>
<td>5.21</td>
<td>1.09</td>
</tr>
</tbody>
</table>

The result from the t-test regarding student enrollment was $t(65) = 5.423$, $p<.001$. The mean difference of 76,935.17 was large as was the standard error difference of 14,187.96. The t-test showed a statistically significant difference in enrollment between school districts led by elected superintendents and school districts led by appointed superintendents.

Free/reduced lunch rates were used to determine the poverty levels of school districts. The t-test measure of free/reduced lunch was $t(65) = -2.686$, $p<.01$. The difference in means was
-11.4 and the standard error difference was 4.24. A statistically significant difference existed between free/reduced lunch rates of school districts with an elected superintendent governance structure and school districts with an appointed superintendent governance structure.

The t-test result analyzing differences in ELL populations between school districts led by elected superintendents and those led by appointed superintendents was t(65) = 4.779, p<.001. The difference between the means was 5.21, and the standard error difference was 1.09. A statistically significant difference existed between ELL populations of school districts led by elected superintendents and school districts led by appointed superintendents.

Research Question 2 focused on determining whether enrollment, free/reduced lunch rates, and ELL populations were significantly different between school districts with an elected superintendent governance structure and school districts with an appointed superintendent governance structure. All three demographic characteristics revealed statistically significant differences.

Analysis of Data: Research Question 3

In what ways and to what extent, if any, does student academic performance differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?

The integral question of this dissertation was focused on determining if student achievement varied as a result of school districts’ superintendent governance structure. A one-way Analysis of Covariance (ANCOVA) was conducted to measure differences while statistically controlling for the influence of key demographics.
Three statistical tables have been presented in this section for each of the five dependent variables of achievement (i.e., ELA, Mathematics, Science, Civics, and graduation rate). The first table is for the estimated marginal means. With an ANCOVA, the inclusion of covariates (i.e., enrollment, free/reduced lunch, and ELL) allowed for the adjusting of the descriptive statistics to more accurately reflect the relationship between variables of interest (Martin, 2019). As a result, estimated marginal means have been calculated and contain the adjusted mean, standard error, and 95% confidence interval. The second table presented for each dependent variable is pairwise comparisons. This statistical table displays the superintendent governance structure’s f test level of significance, the mean difference, standard error, and a 95% confidence interval. The third table is referred to as the tests of between-subjects effects and provides the main results of the ANCOVA. Included is f test data, significance, the degrees of freedom for the independent variable, and the partial eta squared.

**English Language Arts (ELA)**

The analysis of achievement in ELA was conducted to determine if the superintendent governance structure or any of the key demographics had a statistically significant relationship with ELA student achievement. Differences in ELA achievement were found. Students in school districts led by appointed superintendents performed higher than students in school districts led by elected superintendents. ELA test scores were analyzed using statistical information from Tables 16, 17, and 18.

The estimated marginal means for ELA scores (Table 16) in school districts led by elected superintendents was 51.31. In comparison, the mean in descriptive statistics was nearly 1 point lower at 50.33. The estimated marginal mean for ELA scores in school districts led by
appointed superintendents was 53.01. The mean from descriptive statistics was 1.5 points higher at 54.55.

Table 16

_English Language Arts (ELA): Estimated Marginal Means for Appointed and Elected Superintendents_

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected</td>
<td>51.31</td>
<td>1.05</td>
<td>49.21</td>
<td>53.41</td>
</tr>
<tr>
<td>Appointed</td>
<td>53.01</td>
<td>1.40</td>
<td>50.21</td>
<td>55.80</td>
</tr>
</tbody>
</table>

Pairwise comparisons (Table 17) of elected superintendents and appointed superintendents for ELA achievement scores resulted in a mean difference of 1.69 which was within the 95% confidence interval. The school districts led by appointed superintendents had the higher level of performance. In contrast, descriptive statistics indicated appointed superintendent-led school districts performed better by a margin of 4.22 points.

Table 17

_Bonferroni Comparison for English Language Arts Achievement_

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig*</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed (I) vs. Elected (J)</td>
<td>1.69</td>
<td>1.96</td>
<td>.39</td>
<td>-2.22</td>
</tr>
</tbody>
</table>

*Adjustment for multiple comparisons: Bonferroni
Pairwise comparisons also revealed the level of significance by the superintendent governance structure on ELA achievement scores. The significance was .39; thus, the difference in ELA achievement between school districts led by elected superintendents and school districts led by appointed superintendent was statistically non-significant. A large variance, 2847, exists for the sum of squares in the tests of between-subject effects (Table 18). Most of the variance was caused by free/reduced lunch, 1825.71. Variance generated by ELL was 185.27, and variance created by enrollment was 35.96. Smaller than the covariates, the variance attributed to the superintendent governance structure was 26.38. Having analyzed the variance attributed to the covariates, the superintendent governance structure result from the ANCOVA was, F(1, 62) = .749, p = .39. The ANCOVA further illustrated that free/reduced lunch had a statistically significant relationship with ELA achievement, F(1, 62) = 51.843, p<.001, and this result corresponded with the large variance found in the measure of free/reduced lunch. Additionally, the partial eta squared of .46 further defined the significant impact of free/reduced lunch. ELL population also had a statistically significant relationship with ELA achievement, but not nearly as strong as free/reduced lunch, F(1, 62) = 5.261, p<.05.
School districts led by appointed superintendents outperformed school districts led by elected superintendents in ELA. This was displayed in the descriptive statistics. Results from the ANCOVA suggest that the difference in student achievement for ELA was not primarily the result of the superintendent governance structure. The difference was primarily associated with poverty, as measured by free/reduced lunch, and to a lesser extent, with ELL populations.

**Mathematics**

Students in elected superintendent-led school districts performed lower in mathematics than students in appointed superintendent-led school districts. Additional research of achievement in mathematics sought to determine if the superintendent governance structure or any of the three key demographics had a significant correlation with student achievement in mathematics.
Descriptive statistics for achievement in mathematics produced a mean for elected superintendent-led school districts of 54.36. The mean mathematics score for appointed superintendent-led school districts was 57.46. In comparison, appointed superintendent-led school districts performed 3.1 points higher than their counterparts. The ANCOVA-generated estimated marginal means, presented in Table 19, were 55.09 for school districts led by elected superintendents and 56.31 for school districts led by appointed superintendents. Pairwise comparisons in Table 20 indicated the estimated marginal means only differed by 1.22, which was within the 95% confidence interval. Therefore, school districts led by appointed superintendents had mathematic achievement scores 1.22 percentage points higher than school districts led by elected superintendents. However, the pairwise comparisons also showed a significance level of .615 indicating that the superintendent governance structure did not have a statistically significant relationship with mathematics performance.

Table 19

*Mathematics: Estimated Marginal Means for Appointed and Elected Superintendents*

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected</td>
<td>55.09</td>
<td>1.29</td>
<td>52.52</td>
<td>57.67</td>
</tr>
<tr>
<td>Appointed</td>
<td>56.31</td>
<td>1.72</td>
<td>52.87</td>
<td>59.74</td>
</tr>
</tbody>
</table>
Table 20

Bonferroni Comparison for Mathematics Achievement

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig*</th>
<th>95% Confidence Interval Lower Bound</th>
<th>95% Confidence Interval Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed (I) vs. Elected (J)</td>
<td>1.22</td>
<td>2.4</td>
<td>.615</td>
<td>-3.59</td>
<td>6.02</td>
</tr>
</tbody>
</table>

*Adjustment for multiple comparisons: Bonferroni

The ANCOVA (Table 21), resulted in a variance of 2371.11. As was the case with ELA achievement, most of the sum of squares variance for mathematics achievement was attributed to free/reduced lunch, 1726.95. The free/reduced lunch covariate also had a relationship with mathematics achievement which was statistically significant, $F(1, 62) = 32.553, p<.001$; and the partial eta squared was .34. The superintendent governance structure had a variance of only 13.58. The ANCOVA results for the superintendent governance structure was $F(1, 62) = .256, p = .615$, and the partial eta squared was .01. Whereas free/reduced lunch rates had a statistically significant relationship with mathematics scores, the superintendent governance structure, enrollment, and ELL populations had a statistically non-significant relationship with mathematics achievement.

Comparisons of mathematics student achievement for school districts led by appointed superintendents and those led by elected superintendents, exhibited higher performance for appointed superintendent-led school districts. The difference in student achievement was not statistically connected to the superintendent governance structure. Instead, poverty, measured by
free/reduced lunch rates, had a strong association with the difference in mathematics student achievement.

Table 21

*Mathematics: Tests of Between-subject Effects*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>2371.11</td>
<td>4</td>
<td>11.174</td>
<td>.000</td>
<td>.42</td>
</tr>
<tr>
<td>Intercept</td>
<td>19927.47</td>
<td>1</td>
<td>375.629</td>
<td>.000</td>
<td>.86</td>
</tr>
<tr>
<td>Free/reduced lunch</td>
<td>1726.95</td>
<td>1</td>
<td>32.553</td>
<td>.000</td>
<td>.34</td>
</tr>
<tr>
<td>English language arts</td>
<td>81.79</td>
<td>1</td>
<td>1.542</td>
<td>.219</td>
<td>.02</td>
</tr>
<tr>
<td>Enrollment</td>
<td>.96</td>
<td>1</td>
<td>.018</td>
<td>.894</td>
<td>.00</td>
</tr>
<tr>
<td>Appointed/elected superintendent</td>
<td>13.58</td>
<td>1</td>
<td>.256</td>
<td>.615</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>3289.16</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>212507.05</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. R² = .42 (Adjusted R² = .38)*

Science

Students in school districts led by appointed superintendents learned more in science than students in school districts led by elected superintendents. Science was further examined to determine if a statistically significant relationship existed between the superintendent governance structure, enrollment, free/reduced lunch rates, or ELL populations and science student achievement.

Science test scores and demographic data were used to conduct the examination. The mean science scores for elected superintendent-led school districts was 53.54, and the mean science scores for appointed superintendent-led school districts was 58.3. The two means differed by 4.76 percentage points. Table 22 contains the estimated marginal means from the
ANCOVA. The estimated marginal mean for elected superintendent-led school districts was 54.07, and the estimated marginal mean for appointed superintendent-led school districts was 57.46. The difference between the estimated marginal means is presented in the pairwise comparisons (Table 23). The difference was 3.39 and was within the 95% confidence interval. Additionally, the significance of the superintendent governance structure was .197; thus, the superintendent governance structure did not have a statistically significant relationship with science achievement.

Table 22

Science: Estimated Marginal Means for Appointed and Elected Superintendents

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected</td>
<td>54.07</td>
<td>1.40</td>
<td>51.28</td>
<td>56.86</td>
</tr>
<tr>
<td>Appointed</td>
<td>57.46</td>
<td>1.86</td>
<td>53.74</td>
<td>61.18</td>
</tr>
</tbody>
</table>

Table 23

Bonferroni Comparison for Science Achievement

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig*</th>
<th>95% Confidence Interval Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed (I) vs. Elected (J)</td>
<td>3.39</td>
<td>2.6</td>
<td>.197</td>
<td>-1.81</td>
<td>8.59</td>
</tr>
</tbody>
</table>

*Adjustment for multiple comparisons: Bonferroni
Table 24 displays the results of the ANCOVA. The variance was 2941.4, and the covariate, free/reduced lunch, accounted for the largest variance of 1838.44. The superintendent governance structure had a variance of 105.64. The ANCOVA examined the influence of the covariates and revealed that the superintendent governance structure had a statistically non-significant relationship with science achievement as indicated by $F(1, 62) = 1.699, p = .197$. Furthermore, the partial eta squared was .03. As was the case for ELA and Mathematics, free/reduced lunch was the covariate responsible for the majority of variance in the ANCOVA. Poverty, as measured by free/reduced lunch, had a relationship with science achievement that was statistically significant as indicated by $F(1, 62) = 29.565, p<.001$ and a partial eta squared of .32. The two other covariates did not have a statistically significant relationship with science achievement as indicated by the ELL partial eta squared of .04 and the enrollment partial eta squared of .0.

Table 24

Science: Tests of Between-subject Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>2941.40</td>
<td>4</td>
<td>11.826</td>
<td>.000</td>
<td>.43</td>
</tr>
<tr>
<td>Intercept</td>
<td>20696.49</td>
<td>1</td>
<td>332.834</td>
<td>.000</td>
<td>.84</td>
</tr>
<tr>
<td>Free/reduced lunch</td>
<td>1838.44</td>
<td>1</td>
<td>29.565</td>
<td>.000</td>
<td>.32</td>
</tr>
<tr>
<td>English language arts</td>
<td>179.15</td>
<td>1</td>
<td>2.881</td>
<td>.095</td>
<td>.04</td>
</tr>
<tr>
<td>Enrollment</td>
<td>.15</td>
<td>1</td>
<td>.002</td>
<td>.962</td>
<td>.00</td>
</tr>
<tr>
<td>Appointed/elected superintendent</td>
<td>105.64</td>
<td>1</td>
<td>1.699</td>
<td>.197</td>
<td>.03</td>
</tr>
<tr>
<td>Error</td>
<td>3855.32</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>212304.89</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. $R^2 = .43$ (Adjusted $R^2 = .4$)*
In science, school districts led by appointed superintendents outperformed school districts led by elected superintendents. Descriptive statistics revealed a difference in science achievement scores of more than 4 percentage points between the two groups. However, the superintendent governance structure did not have a significant influence on the difference in science achievement. The ANCOVA clearly revealed that poverty (free/reduced lunch) had a strong association with the difference in student achievement.

Civics

Students in school districts led by appointed superintendents out-performed students in school districts led by elected superintendents. The difference in student achievement was further analyzed to determine if a correlation existed between civics student achievement and the superintendent governance structure, enrollment, free/reduced lunch rates, or ELL populations.

Means compiled in descriptive statistics for civics were 65.22 for school districts led by elected superintendents and 71.96 for school districts led by appointed superintendents. The difference between the two means was 6.74 percentage points for the civics examination. The estimated marginal means for civics are presented in Table 25. School districts led by elected superintendents had an estimated marginal mean of 66.11, and school districts led by appointed superintendents had an estimated marginal mean of 70.57. Pairwise comparisons are found in Table 26. The difference of the two estimated marginal means was 4.46, falling within the 95% confidence interval. Additionally, a significance level of .079 was calculated for the effect of the superintendent governance structure on civics achievement. The significance level of .079 was not statistically significant; the school governance structure had a statistically non-significant relationship with civics achievement.
Table 25

*Civics: Estimated Marginal Means for Appointed and Elected Superintendents*

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected</td>
<td>66.11</td>
<td>1.34</td>
<td>63.43</td>
<td>68.79</td>
</tr>
<tr>
<td>Appointed</td>
<td>70.57</td>
<td>1.79</td>
<td>66.99</td>
<td>74.14</td>
</tr>
</tbody>
</table>

Table 26

*Bonferroni Comparison of Civics Achievement*

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig*</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed (I) vs. Elected (J)</td>
<td>4.46</td>
<td>2.5</td>
<td>.079</td>
<td>-.54 - 9.46</td>
</tr>
</tbody>
</table>

*Adjustment for multiple comparisons: Bonferroni

Information from the ANCOVA is displayed in Table 27. The tests of between-subjects effects provided results for the statistical analysis of the superintendent governance structure, and those results were F(1, 62) = 3.184, p = .079 and a partial eta squared of .05. Calculating the significance in the ANCOVA involved attending to the variance caused by covariates.

Free/reduced lunch had a statistically significant relationship with civics achievement, F(1, 62) = 21.376, p<.001. The partial eta squared for free/reduced lunch was .26. In contrast, the other two covariates, enrollment and ELL, both had statistically non-significant relationships with civics achievement.
Table 27

*Civics: Tests of Between-subject Effects*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>2403.72</td>
<td>4</td>
<td>10.467</td>
<td>.000</td>
<td>.40</td>
</tr>
<tr>
<td>Intercept</td>
<td>24253.73</td>
<td>1</td>
<td>422.459</td>
<td>.000</td>
<td>.87</td>
</tr>
<tr>
<td>Free/reduced lunch</td>
<td>1227.23</td>
<td>1</td>
<td>21.376</td>
<td>.000</td>
<td>.26</td>
</tr>
<tr>
<td>English language arts</td>
<td>102.96</td>
<td>1</td>
<td>1.793</td>
<td>.185</td>
<td>.03</td>
</tr>
<tr>
<td>Enrollment</td>
<td>25.95</td>
<td>1</td>
<td>.452</td>
<td>.504</td>
<td>.01</td>
</tr>
<tr>
<td>Appointed/elected superintendent</td>
<td>182.80</td>
<td>1</td>
<td>3.184</td>
<td>.079</td>
<td>.05</td>
</tr>
<tr>
<td>Error</td>
<td>3559.47</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>314277.00</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. R² = .4 (Adjusted R² = .37)

As with the previous test score achievement measures in ELA, mathematics, and science, achievement differences in civics were tightly associated with free/reduced lunch. In contrast, the superintendent governance structure did not generate any statically significant differences in civics achievement. A noteworthy point is that the superintendent governance structure was closer to having a significant impact in civics (p<.1) than the other subjects of ELA, mathematics, and science.

Graduation Rate

Graduation rates were higher for students in school districts led by appointed superintendents in contrast to school districts led by elected superintendents. Further examination was conducted to find any correlations existing between graduation rates and the superintendent governance structure, enrollment, free/reduced lunch rates, or ELL populations.
Mean graduation rates in descriptive statistics, were 78.82 for school districts led by elected superintendents and 82.64 for school districts led by appointed superintendents. The difference between the two means was 3.82 percentage points. Table 28 provides ANCOVA calculations of the estimated marginal means for graduation rates. The estimated marginal means were 79.6 for elected superintendent-led school districts and 81.4 for appointed superintendent-led school districts. Table 29 provides pairwise comparisons for graduation rates. The difference for the estimated marginal means was 1.8 and was within the 95% confidence interval. The pairwise comparisons also included the significance level of the superintendent governance structure. For a school district’s graduation rate, there was no relationship of statistical significance, \( p = .451 \), with the superintendent governance structure.

Table 28

Graduation Rate: Estimated Marginal Means for Appointed and Elected Superintendents

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean</th>
<th>Standard Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected</td>
<td>79.61</td>
<td>1.27</td>
<td>77.06 - 82.14</td>
</tr>
<tr>
<td>Appointed</td>
<td>81.40</td>
<td>1.70</td>
<td>78.01 - 84.79</td>
</tr>
</tbody>
</table>

Table 29

Bonferroni Comparison for Graduation Rate

<table>
<thead>
<tr>
<th>Governance Structure</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed (I) vs. Elected (J)</td>
<td>1.8</td>
<td>2.37</td>
<td>.451</td>
<td>-2.94 - 6.53</td>
</tr>
</tbody>
</table>

*Adjustment for multiple comparisons: Bonferroni
ANCOVA results are displayed in Table 30. The sum of squares variance for graduation rates was 1089.14. The variance of the sum of squares attributed to the superintendent governance structure was 29.72. In contrast, variance for the sum of squares attached to free/reduced lunch was 701.97. Results of the ANCOVA clearly exhibited that the superintendent governance structure had a statistically non-significant relationship with graduation rates, $F(1, 62) = .576$, $p = .451$ and the partial eta squared was .01. Two covariates, ELL and enrollment, had f values lower than the superintendent governance structure. Neither of the two covariates had a statistically significant relationship with graduation rates. However, the covariate of free/reduced lunch did show statistical significance, $F(1, 62) = 13.609$, $p<.001$ and a partial eta squared of .18.

The findings with graduation rates conformed to the pattern found with ELA, mathematics, science, and civics. Graduation rates were higher for school districts with appointed superintendents. However, the superintendent governance structure was not associated with the differences found in graduation rates. Poverty, as measured by free/reduced lunch, had a significant connection with the differences in graduation rates.
Table 30

*Graduation Rate: Tests of Between-subject Effects*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>1089.14</td>
<td>4</td>
<td>5.279</td>
<td>.001</td>
<td>.25</td>
</tr>
<tr>
<td>Intercept</td>
<td>27835.04</td>
<td>1</td>
<td>539.646</td>
<td>.000</td>
<td>.90</td>
</tr>
<tr>
<td>Free/reduced lunch</td>
<td>701.97</td>
<td>1</td>
<td>13.609</td>
<td>.000</td>
<td>.18</td>
</tr>
<tr>
<td>English language arts</td>
<td>17.00</td>
<td>1</td>
<td>.330</td>
<td>.568</td>
<td>.01</td>
</tr>
<tr>
<td>Enrollment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appointed/elected superintendent</td>
<td>29.72</td>
<td>1</td>
<td>.576</td>
<td>.451</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>3197.97</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>436325.20</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $R^2 = .25$ (Adjusted $R^2 = .21$)

**Summary**

In this chapter, statistical comparisons have been used to find patterns and determine if differences existed between specific variables of the study. In the Descriptive Statistics section, a frequency table was presented of the number of elected superintendents and appointed superintendents in Florida. Tables 3-10 provided the mean and standard deviation for enrollment, free/reduced lunch, ELL, ELA, mathematics, science, civics, and graduation rates. Because an ANCOVA was utilized, the means in descriptive statistics were later compared to estimated marginal means.

Data to respond to Research Question 1 were examined by looking at geographical regions and locale codes to discover existing patterns between geography and school districts’ superintendent governance structure. A visual of Florida and a tabular display of school districts and geographic regions (Table 11) were used to illustrate the five regions of school districts.
Table 12 was a cross-tabulation of the superintendent governance structure and the five geographic regions. Key findings included the concentration of elected superintendents in the northern portion of Florida. Elected superintendents led 31 of the 36 northern school districts. The west central region had nearly half of the school districts led by elected superintendents and the other half led by appointed superintendents. In the east central and south regions, 15 of the 19 (79%) school districts were led by appointed superintendents. Of the 41 elected superintendents, 31 (76%) led school districts in the two northern regions of Florida. Of the 26 appointed superintendents, 21 (81%) were employed in school districts south of the two northern regions.

Research Question 1 was further examined by analyzing locale codes which measure population density. A frequency table comprised of school districts and locale codes was presented in Table 13. A cross-tabulation of school districts and locales for elected superintendents and appointed superintendents, was exhibited in Table 14. An important finding from locale code frequencies was that 26 school districts had a suburb locale and 20 school districts had a rural locale. The cross-tabulation also provided important findings. In Florida’s town and rural locales, 31 of the 34 (91%) school districts were led by elected superintendents. In the city and suburb locales, 23 of the 33 (70%) school districts were led by appointed superintendents. Conversely, 10 of the 33 (30%) city and suburb school districts were led by elected superintendents. A further breakdown exhibited five of the seven (71%) city school districts were led by appointed superintendents. Most, 31 of 41 (76%), of the elected superintendents led school districts in the town and rural locales. The vast majority of appointed superintendents, 23 of 26 (89%), led school districts in the suburb and city locales.
Elected superintendents led the lower populated school districts, and they led most of the school districts in the northern part of the state. Appointed superintendents led most of the school districts in the central and southern regions of the state, and they rarely led lower populated school districts.

Research Question 2 was concerned with three demographics: student enrollment, free/reduced lunch rates, and ELL populations. An independent samples t-test was employed to determine if differences existed between school districts led by elected superintendents and those led by appointed superintendents. The t-test revealed that all three demographics had statistically significant differences. Another step was needed to determine if the three demographics impacted student achievement or if the superintendent governance structure caused the difference in student achievement. Thus, Research Question 3 was needed.

Research Question 3 focused on determining if the superintendent governance structure impacted student achievement. A one-way ANCOVA was utilized to answer the research question while accounting for the variances generated by the demographic covariates of enrollment, free/reduced lunch, and ELL populations. Student achievement was determined from state test scores in ELA, mathematics, science, civics, and graduation rates. Two of the covariates, enrollment and ELL, did not show a statistically significant relationship with the test score subjects or graduation rates except for ELL on ELA achievement. ELL had a p value of <.05, indicating a statistically significant influence on ELA achievement.

The key result of the analysis to respond to Research Question 3 was that the superintendent governance structure did not have a statistically significant relationship with student achievement in any of the test score subjects or graduation rates. However, poverty, as
measured by free/reduced lunch, had a consistent, statistically significant relationship with each one of the measured achievement categories. Free/reduced lunch had a p value of <.001 for each achievement variable measured. The poverty covariate was the dominant source of variance in the ANCOVA.

Chapter 5 contains a synthesis of the present study. The findings and relevant connections are considered. Additionally, discussion is provided about potential changes of school districts’ superintendent governance structure as well as possible future studies.
CHAPTER 5
SUMMARY, DISCUSSION, AND CONCLUSIONS

Introduction

Results of the study presented in Chapter 4 provided the needed information to discuss the findings of the study. Five sections in this chapter provide a synthesis of the study. The first and second sections contain a summary of the current study and a discussion of the results and reflections on them presented in Chapter 4. Implications and recommendations are presented in the third and fourth sections of the chapter. The final section contains the conclusions of the study.

The contents of this chapter are focused on critical considerations of Florida’s debate on the superintendent governance structure. This chapter presents essential points of cognizance for Floridians who may have a choice in the future to decide if all school districts should have an appointed superintendent. Specifically, this chapter presents an overview of the findings, the statistical relationship of the superintendent governance structure with student achievement, various perspectives to consider, and the important dynamic of democratic localism for Floridians living in smaller populated regions. The debate as to Florida’s having only appointed superintendents in its 67 school districts has been recent, active, and relevant to many Floridians.

Summary

Problem and Purpose of the Study

The study addressed a problem in Florida regarding the superintendent governance structure in Florida’s 67 traditional school districts. Florida ranks in the lower half of the nation in K-12 education (Education Week, 2018; Frohlick et al., 2017; U.S. News & World Report,
2017), and there has been a debate regarding whether all school districts should have an appointed superintendent (Constitution Revision Commission, 2017; Solocheck, 2017a, 2018). The current study focused on whether there was a difference in student achievement levels between districts with elected superintendents and districts with appointed superintendents. Demographic characteristics were also examined to understand any relevant differences between school districts led by elected superintendents and those led by appointed superintendents. Limited studies have been conducted to compare student achievement between school districts led by appointed vs. elected superintendents (Ford & Ihrke, 2016; Habersham, 2012; Hoover, 2008; Partridge & Sass, 2011). Due to the metrics used and the change of examinations administered in Florida, those limited studies left a need for a current, in-depth study to more definitively determine the relationship between the superintendent governance structure and student achievement.

The purpose of this study was to investigate differences in key demographic characteristics and in student achievement outcomes when comparing school districts led by elected superintendents and school districts led by appointed superintendents. Framing the study was a conceptual framework of democratic localism versus professionalism.

The tension between these two concepts has been a core dynamic of the debate regarding the superintendent governance structure. Democratic localism refers to citizens having a voice and determining who is assigned authority to govern (Schuh & Herrington, 1990), and localism can take the form of grassroots movements (Gold et al., 2011). The impact of democratic localism is real and is influential (Henig, 2009). Professionalism refers to the training, education, and experience (Evetts, 2013) which prepares an individual to move into the complex role of
superintendent. Chase (2013) emphasized the need for well-trained superintendents to effectively interact with elected board members and manage the existing politics. Tripses et al. (2015) found school board presidents valued superintendents being well-trained in key leadership areas, and Ellis (2016) found the properly trained, knowledgeable, and experienced superintendent to be a key leader in improving student achievement.

Research Questions

Three research questions were used in the study. Research Question 1 was as follows: In what ways, if any, does the geographic distribution of Florida school districts led by elected superintendents differ from the distribution of Florida school districts led by appointed superintendents? This research question sought to examine geographic patterns in Florida as to the locations of school districts led by elected superintendents and those led by appointed superintendents.

Research Question 2 asked: In what ways and to what extent, if any, do demographic and policy characteristics differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents? This question directed the study to analyze how key demographics differed between school districts led by elected superintendents and school districts led by appointed superintendents. The reason for needing to know if differences existed was to determine if variances in student achievement were generated by the superintendent governance structure or by key demographic differences.

Research Question 3 was the primary question of the study, asking: In what ways and to what extent, if any, does student academic performance differ in Florida school districts led by elected superintendents compared to Florida school districts led by appointed superintendents?
This question was designed to find if differences in student achievement existed based on the superintendent governance structure of a school district.

**Methods**

Methods used to analyze data to respond to the three research questions involved descriptive statistics to determine if differences existed among the variables of the study. Research Question 1 included a frequency table of the number of elected superintendent-led school districts and appointed superintendent-led school districts in the State of Florida. A visual of the State of Florida was created to identify the five major geographical regions. Additionally, a cross-tabulation was completed to study the superintendent governance structure based on the five regions. A second cross-tabulation was conducted to determine patterns associated with the superintendent governance structure and locale codes. The quest was to better understand population patterns. The dependent variables for Research Question 1 were the five regions and locale codes. The independent variable was the superintendent governance structure.

Research Question 2 measured the three demographic characteristics of student enrollment, free/reduced lunch, and ELL populations. An independent samples t-test was used to determine if differences existed between school districts led by elected superintendents and school districts led by appointed superintendents. The dependent variables for Research Question 2 were student enrollment, free/reduced lunch percentages (poverty), and the percentage of ELL students. The independent variable was the superintendent governance structure.

A one-way ANCOVA was utilized to answer Research Question 3. The three demographic characteristics measured in Research Question 2 were included as covariates in the model to statistically control for their influence on achievement and thus allow the researcher to
isolate the relationship between superintendent governance structure and achievement. The independent variables were the superintendent governance structure and three covariates: enrollment, free/reduced lunch, and ELL populations. Four dependent variables were the following student achievement state test measures: (a) English Language Arts: Grades 3-10; (b) Mathematics: Grades 3-8, Algebra I, and Geometry; (c) Science: Grade 5, Grade 8, and Biology; and (d) Civics: Grade 7. Additionally, a fifth dependent variable was high school graduation rates.

Findings

Results from the analysis of data to respond to Research Question 1 indicated differences in the five regions with regard to school districts’ superintendent governance structure and locale codes. In the two northern regions of the state, 86% of the school districts were led by elected superintendents. In the east central region, 80% of the school districts were led by appointed superintendents, and in the south region, 78% of the school districts were led by appointed superintendents.

Locale codes were used to learn about population patterns with respect to the school governance structure of Florida’s school districts. The rural locale code was the smallest designation, and school districts with a rural locale were mostly likely led by elected superintendents. At the time of the study, Florida had 20 school districts within the rural locale, and 19 (95%) were led by elected superintendents. The next smallest population locale code was town. Florida had 14 school districts within the town locale, and 12 (86%) of those school districts were led by elected superintendents. Appointed superintendents typically led school districts in the two largest population locale code categories of city and suburb. Florida had 26
appointed superintendents and 23 (89%) led city or suburb school districts. In contrast, only 10 (24%) of the 41 elected superintendents in Florida led city or suburb school districts.

Results from the Research Question 2 analysis revealed differences between Florida school districts’ enrollment size, free/reduced lunch rates, and percentages of ELL students when comparing school districts by superintendent governance structure. Those differences were determined to be statistically significant based on the results of an independent samples t-test administered for each of the three demographics. Specifically, school districts led by elected superintendents had smaller enrollments, higher free/reduced lunch rates, and lower percentages of ELL students when compared to school districts led by appointed superintendents.

Research Question 3 findings based on descriptive statistics yielded statistical differences in the five measures of student achievement comparing school districts based on their superintendent governance structures. Graduation rates and ELA, mathematics, science, and Civics examination results, were all higher for school districts led by appointed superintendents. However, results from the one-way ANCOVA indicated the variances were attributed to the poverty variable of free/reduced lunch. A statistically non-significant relationship existed between student achievement and the superintendent governance structure. Thus, the null hypothesis of no significant differences in student achievement associated with the superintendent governance structure of Florida’s school districts was affirmed.

Discussion

Only two of the 50 states in the United States had elected superintendents at the time of the present study. The majority of Alabama’s superintendents have been appointed whereas the majority of Florida’s superintendents have been elected. Straying from the other 48 states has not
proven to be beneficial. The present study was conducted to explore Florida’s superintendent governance structure. The overarching curiosity was centered on whether Florida should maintain its current superintendent governance structure or if it would be advantageous to be aligned with the other 48 states and have appointed superintendents in all 67 school districts. Two primary considerations have been addressed in this study. The first and most important consideration was whether a difference existed in student learning between school districts led by elected superintendents and school districts led by appointed superintendents. The second consideration was the impact of the superintendent’s governance structure on citizens’ rights and the democratic value of local control of the government. The other contextual factor countering local control was professionalism. The literature review captured much of this dynamic in the presentation of the conceptual framework in Chapter 2.

Research Question 1

Student achievement measures for all 67 Florida school districts were analyzed and differences were identified. However, to accurately attribute influences on student achievement, key potential variables had to be considered. Research Question 1 addressed school districts’ population density. Community dynamics in Miami were unique in comparison to community dynamics in Calhoun County located in Florida’s Northwest panhandle region. To provide context, Miami Dade Public Schools had 352,603 more students than Calhoun Public Schools (FDOE, 2018). Five Florida regions were identified (Project 10 Transition Education Network, 2018), and geographical patterns of school districts led by elected superintendents and those led by appointed superintendents were examined. Additionally, locale codes (NCES, 2017) provided geographic patterns based on population sizes (Glander, 2018).
The Northwest region in the panhandle demonstrated a small population when compared to the other four regions. Of the 18 school districts in the Northwest region, 13 (72%) had a rural locale code, and all of the 18 school districts were led by elected superintendents. Additionally, eight of the 13 rural school districts in the Northwest region had a free/reduced lunch rate of 80% or higher.

From the locale codes and region analysis, it was evident that most of the school districts in the northern part of Florida had smaller populations. Those smaller populated school districts often have high poverty rates and have usually been led by elected superintendents. These dynamics appear to create a strong rural-based culture which includes an enduring grasp on democratic localism.

Research Question 2

Statistically significant differences existed between the three measured demographics when comparing school districts led by elected superintendents with school districts led by appointed superintendents. An independent samples t-test identified these differences in enrollment, free/reduced lunch rates, and ELL populations. Enrollments were higher in school districts led by appointed superintendents. Poverty (i.e. free/reduced lunch) rates were higher in school districts led by elected superintendents. ELL populations were larger in school districts led by appointed superintendents.

Densely populated areas having large school district enrollments typically have an appointed superintendent governance structure (Flanagan, 2018). Urban areas with high populations have many businesses and employment opportunities. People in large urban areas are more accustomed to larger, multi-leveled corporate organizations, and the concept of
delegating responsibilities and tasks is commonplace in the corporate economy. Being immersed in such an environment, where multiple levels of authority exist and delegation is a norm, results in residents being more comfortable giving up the ability to vote for the school superintendent. This especially is the case because residents maintain the ability to vote for their school board member who is the superintendent’s boss. Therefore, the corporate culture of delegating the hiring of the superintendent to the school board is an acceptable concept to many urban and suburban residents. The corporate framework aligns with large populations. In large organizations, employees most likely will not know all of their fellow workers especially those in different departments and divisions. Comparatively, urban residents are less likely to know their neighbors than rural residents (Parker et al., 2018). At the time of the present study, most of Florida’s appointed superintendents worked for school districts in urban and suburban school districts.

Poverty is found in a variety of locations. Often poverty is visibly seen in both large cities and rural environments. Thiede et al. (2017) reported rural regions had a poverty level 3.7% higher than urban regions and 5.9% higher than suburban regions. In Florida, 17 school districts had free/reduced lunch rates at 90% or higher. All 17 of those school districts had a locale code of town or rural.

ELL populations varied between school districts based on their superintendent governance structure. School districts led by appointed superintendents had a larger percentage of ELL students. This most likely is due to immigration patterns. Immigration is most likely greater in areas where jobs are available, and more jobs are typically found in urban and suburban environments. Miami-Dade County Public Schools, led by an appointed
superintendent, had the highest student enrollment (354,840) and the highest ELL population (20.3%) in Florida. In contrast, Union County Public Schools, led by an elected superintendent, had an enrollment of 2,328 students. This school district, located in the Northeast Region, had the lowest ELL population (0%) in Florida.

Research Question 3

Schools exist for students to learn and become helpful, productive citizens. If the superintendent governance structure had an association with differences in student learning positively or negatively, decisions would need to be made accordingly throughout the state. The results of the one-way ANCOVA revealed that higher levels of student achievement in school districts led by appointed superintendents were not attributed to the superintendent governance structure. This conclusion was made because the superintendent governance structure of school districts did not have a statistically significant relationship with student achievement indicators.

The covariates measured in the ANCOVA were the key demographic characteristics addressed in Research Question 2. The ANCOVA results provided the level of variance in student achievement. Poverty, measured by free/reduced lunch rates, was the statistically significant variable associated with the variance. ELL populations had a statistically significant relationship with ELA scores but had none with the other student achievement measures. Enrollment did not have a significant relationship with any of the student achievement measures.

In conclusion, poverty was the only variable that had a statistically significant relationship with the variance in student achievement. The differences in student achievement were not associated with the superintendent governance structure. This is important in the debate as to whether all 67 Florida school districts should be led by appointed superintendents. Many
Floridians have opinions and concerns about the superintendent governance structure. Additionally, Floridians should be concerned with combatting poverty to effectively educate all children.

**Implications**

The conceptual framework of this study was the tension between democratic localism and professionalism. Advantages and disadvantages exist for both concepts (Schuh & Herrington, 1990). Citizenship in the United States provides the opportunity for an individual to participate in selecting people to rule over the local community, state, and nation. Losing local control where citizens of the community no longer determine who leads their school district, is a change that many Floridians do not wish to make. Democratic localism is concerned with citizens having a voice in elections and in other formats. Bryk et al. (1998) and Graue et al. (2016) provided examples of democratic localism manifested in grassroots movements to force change at the local school district level. Voting is a vitally important form of citizen engagement in democratic localism.

Advocates of professionalism claim students need the best possible educational leader available. Elections are limiting to potential superintendent candidates who do not reside within the school district or do not desire to run for election. Furthermore, qualifications to run for election are minimal (Lett, 2015). Researchers (Evetts, 2013; Flores, 2017) have connected professionalism to an individual having knowledge, training, and experience. Some advocates for a professional superintendent are perplexed as to why citizens would opt to keep their right to vote instead of finding the very best candidate possible to lead the school district. Those unfamiliar with small town and rural communities are likely to have a different perspective of
democratic localism. Citizens who sacrifice democratic localism for a professional superintendent most likely take solace in the fact that they retain the right to vote for their individual school board member. Elected board members collectively set policies for schools and hire the superintendent.

Furthermore, the lack of opportunities associated with the governance structure may be contributing to a bright flight out of Florida by strong educational leaders who are well-prepared to be high performing superintendents. Only 26 superintendent positions exist in Florida for professional superintendent candidates. As a result, educational leaders ready to move to the top position of a school district may have to relocate outside of Florida to pursue available vacancies.

Suburban culture, rural culture, and urban culture each have unique elements and characteristics pertaining to education (Bealer, 2010; Beard, 2013, Jackson, 2013; Johnson et al., 2009; Theobald, 1997). It is difficult for an urban dweller to know and understand the rural way of life and even the suburban way of life, and vice versa. This is seen in the argument for appointing superintendents in all school districts. Rural school districts pose a unique setting for a superintendent. If a superintendent of a large city school district became the superintendent of a small rural school district, the new rural leader may have difficulty adjusting and earning the trust of the community. The leader of the rural school district must know the community, understand how the community functions, and be aware of the community’s resources (Johnson et al., 2009). Concerns would rise among rural residents if a new leader from the city, unfamiliar with local values and the rural community, were to suddenly move in and begin directing schools. Big city ideas implemented without regard for the culture and customs of the rural community can lead to the erosion of trust and confidence. Skepticism is reasonable, and rural
residents may be willing to sacrifice a level of professionalism in their superintendents for an individual they know and trust from their own community.

Theobald (1997) had an exciting line of thinking about rural schools. He presented the concept of intradependence (i.e., the dynamic of the individual and the community realizing they need and want each other). Theobald’s vision for the future of rural communities was to teach young people to value their communities and to think of others by learning to work for the good of their communities. This thinking contrasted with students learning to be the nation’s future economic engine. Clearly, superintendents of rural school districts would be the key leaders in implementing Theobald’s vision, and those superintendents would have to understand the rural community, value the community, and be viewed as a leader in the community.

Democratic localism is a strong value and a force in local communities (Henig, 2009). The findings in the current study affirmed Henig’s claim. Each Florida school district has the capability of choosing to have an appointed superintendent, yet at the time of this study, only 29 of 67 school districts had exercised the option to move to an appointed superintendent governance structure.

As this researcher has learned through the course of this present study, issues of perspective and the desire for trust have fueled tension between democratic localism and professionalism. Suburban and city residents typically favor appointed superintendents. Their perspective favors finding the most qualified superintendent to lead their children’s school district. Those same people might be inclined to ask: “How could anyone not want the most qualified person available to lead our children’s school district?” Rural residents may have a perspective favoring the superintendent being a known and trusted person to lead their children’s
school district. The rural resident might pose the following counter question: “Why would any parent not want to have a voice in selecting a known, trusted person from the local community to lead our school district in the best manner for our children?”

Another perspective as to why residents in urban areas are comfortable relinquishing their vote of the school district superintendent and rural residents do not wish to give up their right to vote for the superintendent, comes from Slawson’s (2018) interpretation of Rousseau’s ideas about representative democracy. Slawson supported Rousseau’s advocacy for a contingency approach to different forms of democracy. Rousseau claimed smaller governments should maximize people’s freedoms by utilizing the concept of direct democracy. However, Rousseau also claimed that larger governments should employ representative democracy. His reasoning was based on the increased challenges of control and stability existing in larger governments. This perspective supports the idea of largely populated urban and suburban school districts needing a representative democracy format where the school board appoints the superintendent. Urban and suburban school districts employing Rousseau’s paradigm have been embraced by residents who are comfortable with the concept of representative democracy. In contrast, democratic localism and direct democracy are an expectation of school districts in town and rural locales. For their rights and freedoms to be exercised, residents favor electing the superintendent, as they are compelled to support the tenants of direct democracy. Rousseau would applaud residents in rural school districts for not abdicating their elected superintendent governance structure and residents in urban and suburban school districts for embracing professionalism and allowing their elected school board members to hire the best candidate possible.
There are many other aspects of a school district that are most likely impacted by a school district superintendent (e.g., rates of college admissions, acquisitions of industry certifications, student involvement in curricular programs, efficient operations resulting in local tax rates, and school environments). Such additional measures were not part of the study, but would be beneficial to consider in deciding which superintendent governance structure is optimal. In the current study, the researcher measured student achievement, key demographics, and the geographical distribution of superintendents. The results provided insight only into those aspects. Deciding which superintendent governance structure is superior for students of a school district requires a wider look at the various components of school district leadership, as the complexities and dynamics are numerous. Results of the current study revealed that appointed-led superintendent school districts outperformed elected-led superintendent school districts. However, the difference was statistically discovered to have been driven by poverty as opposed to the superintendent governance structure. Requiring 38 school districts to change from an elected to an appointed superintendent would involve a forced sacrifice, that is to relinquish the ability to vote for the school district superintendent. If a change is being contemplated, this cost should be weighed against the possible benefits of having an appointed superintendent. Mandating a change from an elected superintendent governance structure to one that is appointed solely based on student achievement, would lack merit based on the current study’s statistical findings. The current study contributes research to the superintendent governance topic; however, the findings in the study should not be the only points of consideration in future decisions about the superintendent governance structure for Florida’s school districts.
Future Research

The present study was designed to take a deeper look at student achievement in the context of the superintendent governance structure for Florida’s school districts. The clear outcome of this research was that poverty had a significant relationship with student achievement differences. Research is needed to identify effective strategies and system structures that have been used to overcome performance challenges associated with poverty. Future study should focus on schools, school districts in the nation, and school systems outside of the nation where performance gaps related to poverty are non-existent.

Another recommended area of study is the further analysis of the differences in student achievement among the elected superintendent-led school districts in Florida. This recommended study should include a comparison and contrast of the elected superintendents’ training, knowledge, and experience. The possibility exists for large fluctuations in student performance among the elected superintendent-led school districts. When looking at the school districts collectively, as was the case in the present study, it is possible for means to balance out wide fluctuations. Poverty would need to be accounted for in the study. Problematic, wide-range fluctuations with elected superintendent-led school districts may correlate with rates of poverty.

A possible extension to a study analyzing the differences in student achievement among the elected superintendent-led school districts in Florida, would be to repeat the same study for appointed superintendent-led school districts. Important differences could surface in studying variations among school districts led by appointed superintendents, especially looking at differences in poverty rates and correlations with student achievement.
Chingos et al. (2014) found students had a large impact on student achievement. Teachers also influenced student achievement, but at a much lower level than students. Superintendents had an impact on student achievement, but at a very low level. A recommended study is to replicate the work Chingos et al. conducted with the school districts in Florida that have an elected superintendent, free/reduced lunch rates at 80% or higher, and a town or rural locale code. The goal of the study would be to identify the level of impact superintendents have on student achievement. Additionally, the goal would include analyzing the superintendents’ most effective strategies that positively impact student achievement in smaller populated Florida school districts with high poverty levels.

Conducting a study to compare differences between effective elected superintendents and effective appointed superintendents is recommended. Analysis of the similarities and differences between the two groups of superintendents could provide helpful insights for citizens, school boards, and educational leaders.

Research replicating the current study to analyze the differences of student achievement for Florida school districts led by elected superintendents and those led by appointed superintendents using national assessments and other non-Florida measures of student achievement, would potentially add further insight into the topic of the superintendent governance structure.

Value would be added to the body of research by replicating the current study where interaction terms were employed to disclose and describe the possibility of the superintendent governance structure mediating the poverty influence. The approach recommended would be to categorize Florida’s school districts into those led by elected superintendents and those led by
appointed superintendents. Then, a bivariate correlation analyses would need to be conducted between the outcome measures and the demographic variables. The analysis would include a comparison of the correlations to determine the difference, if any, in the equity of outcomes. This would lead to an evaluation of the fairness of the distribution of student achievement in school districts led by elected superintendents compared to school districts led by appointed superintendents.

Another recommendation for further study is to analyze changes in three Florida school districts currently in the process of changing from an elected superintendent to an appointed superintendent. Escambia County, Marion County, and Martin County voted in November, 2018 to switch to an appointed superintendent governance structure. Analyzing differences in student achievement and other measurable items before and after the transition would generate valuable information for the three districts and the entire state.

The final recommendation for future study is to examine the culture of rural school districts with high poverty levels. A qualitative study should be conducted by questioning residents about reasons for wanting to elect the superintendent as opposed to seeking the most qualified person to be the superintendent (e.g., concerns about appointed superintendents, insights as to why impoverished students struggle in school, strategies to help impoverished students, the value of education in the community, and the importance of the community). Answers to these questions would have the potential to provide valuable insight towards understanding and helping students who reside in low population areas and are struggling with poverty.
Conclusions

Florida is one of the more unique states in the nation due to having the majority of its 67 school districts led by elected superintendents. Discussion has surfaced about having all 67 Florida school districts appoint the superintendent. The most important question of the debate (the core question of this present study) centers on how student learning would differ as a result of a change made to the superintendent governance structure. In the present study, the researcher found that appointed superintendent-led school districts performed higher than elected superintendent-led school districts in every measured category of the study. However, the superintendent governance structure had a statistically non-significant relationship with student achievement whereas poverty, as measured by free/reduced lunch, had a statistically significant relationship with student achievement. Thus, the idea of forcing all 67 Florida school districts to have an appointed superintendent based on student achievement, lacks justification.

Democratic localism and professionalism are active and real characteristics embedded in the issue of whether all 67 school districts should be led by appointed superintendents. The decision-making process should include respectful consideration of the thoughts, values, and perspectives of Floridians residing in rural and town locales as well as Floridians who reside in urban and suburb locales. Americans have been gritty and sacrificial in fighting for freedom, and the government is designed to have citizens decide who is to govern. Yielding any opportunity to vote is a serious matter and a significant request. Although student achievement was a critical element of the present study and of the current debate, other relevant characteristics which might impact school districts if a change to the superintendent governance structure would be mandated, should be considered prior to making a state-wide decision.
Another point of discussion in the superintendent governance structure debate is that a mechanism exists for citizens to change from having an elected superintendent to an appointed superintendent if a majority of the citizens desire such a change (Florida State Statutes, 2018). This mechanism has been exercised by 29 school districts in Florida, and it is important for Floridians to be cognizant of this process and to evaluate if the current system is effective or ineffective.

The statistically significant relationship poverty has had on student learning is an extremely concerning finding. All students should have the opportunity to learn and be successful, but poverty has been and continues to be an enormous hurdle (Arriaza & Henze, 2012). Equity is a concept Arriaza and Henze presented while promoting the idea of the transformative leader. Equity refers to the action taken to provide equality in education. The interpretation of equity initially was the provision of the same educational services for all. However, the concept now encompasses the provision of services needed for students to have equality in learning, and students who are behind may receive more services in a quest to close the achievement gap and reach equity (Arriaza & Henze, 2012). The achievement gap continues to be one of the greatest challenges for educators. Poverty significantly contributes to widening the gap as this study has further proven. Relentless determination is needed to correct the ill effect poverty continues to have on student learning. The call is for educational leaders, teachers, university professors, state legislators, governors, and citizens to unite and aggressively tackle this challenging and complex problem.
APPENDIX A
PERMISSION TO REPRODUCE FIGURE 1
From: Eppley, Karen <keh118@psu.edu>
Sent: Saturday, December 15, 2018 5:51:31 PM
To: Jerry Johnson
Cc: Timothy Smith
Subject: Re: permission to reproduce figure from a JRRE article

Tim and Jerry,

Permission granted. Tim, best of luck with your study.

Karen

From: Jerry Johnson <Jerry.Johnson@ucf.edu>
Sent: Saturday, December 15, 2018 4:13 PM
To: Eppley, Karen
Cc: Timothy Smith
Subject: permission to reproduce figure from a JRRE article

Hi Karen,

Meet Tim Smith, a dissertation student of mine at UCF. Tim would like to reproduce a
figure from a JRRE article in his manuscript. While APA allows using up to 3 figures with just a
citation, the UCF thesis and dissertation manual specifies that written permission must be
obtained for even one. Here's the language

*the use of any table or figure (including photographs, charts, etc.) or of quoted material
that exceeds 200 words must be authorized, in writing, by the copyright holder.*
APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL OF STUDY
NOT HUMAN RESEARCH DETERMINATION

From:  UCF Institutional Review Board #1
        FWA0000351, IRB00001138

To:    Timothy Smith

Date:  September 21, 2018

Dear Researcher:

On 09/21/2018, the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review:  Not Human Research Determination
Investigator:  Timothy Smith
IRB ID:  SBE-18-14386
Funding Agency:  N/A
Grant Title:  N/A
Research ID:  N/A

University of Central Florida IRB review and approval is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are to be made and there are questions about whether these activities are research involving human subjects, please contact the IRB office to discuss the proposed changes.

This letter is signed by:

Signature applied by Renee C Carver on 09/21/2018 01:17:45 PM EDT

Designated Reviewer
APPENDIX C
RELIABILITY AND VALIDITY
OF FLORIDA DEPARTMENT OF EDUCATION’S STATISTICAL TESTING
OF STATE EXAMINATIONS
A Synthesis of the Florida Department of Education’s Statistical Testing of State Examinations for Reliability and Validity

Test Reliability
The State of Florida examined test reliability using the Cronbach alpha, Stratified Alpha, and Feldt-Raju coefficients. Internal consistency was determined through the calculated coefficients and identified ranges as follows (also refer to Figure 1):

Table 6 through Table 8 present the Cronbach alpha, stratified alpha, and Feldt-Raju coefficients for ELA, Mathematics, and EOC by grade/course and test form. The Cronbach alpha ranged from 0.88 to 0.93 for ELA, 0.90 to 0.96 for Mathematics, and 0.85 to 0.95 for EOC. The stratified alpha coefficients ranged from 0.88 to 0.93 for ELA, 0.90 to 0.96 for Mathematics, and 0.85 to 0.95 for EOC. The Feldt-Raju coefficients were between 0.84 and 0.92 for ELA, 0.86 and 0.94 for Mathematics, and 0.85 and 0.93 for EOC. (Florida Department of Education, 2017, p. 10)

Figure 1
FSA Reliability Coefficients for English and Math Exams (Tables 6, 7, and 8)


**Table 6: Reliability Coefficients (ELA)**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Form</th>
<th>Cronbach Alpha</th>
<th>Stratified Alpha</th>
<th>Feldt-Raju</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Paper</td>
<td>0.90</td>
<td>0.90</td>
<td>0.88</td>
</tr>
<tr>
<td>4</td>
<td>Online</td>
<td>0.91</td>
<td>0.91</td>
<td>0.89</td>
</tr>
<tr>
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<td>Accommodated</td>
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<td>0.89</td>
<td>0.86</td>
</tr>
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<td>0.89</td>
</tr>
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<td>Accommodated</td>
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<td>0.88</td>
<td>0.84</td>
</tr>
<tr>
<td>6</td>
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</tr>
<tr>
<td></td>
<td>Accommodated</td>
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<td>0.90</td>
<td>0.90</td>
</tr>
<tr>
<td>7</td>
<td>Online</td>
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<td>0.92</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.90</td>
<td>0.90</td>
<td>0.87</td>
</tr>
<tr>
<td>8</td>
<td>Online</td>
<td>0.93</td>
<td>0.93</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.93</td>
<td>0.93</td>
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</tr>
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<td>9</td>
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</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.92</td>
<td>0.92</td>
<td>0.90</td>
</tr>
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<td>10</td>
<td>Online</td>
<td>0.93</td>
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<td>0.91</td>
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<td></td>
<td>Accommodated</td>
<td>0.92</td>
<td>0.92</td>
<td>0.90</td>
</tr>
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</table>
### Table 7: Reliability Coefficients (Math)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Form</th>
<th>Cronbach Alpha</th>
<th>Stratified Alpha</th>
<th>Feldt-Raju</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
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<tr>
<td></td>
<td>Accommodated</td>
<td>0.94</td>
<td>0.94</td>
<td>0.94</td>
</tr>
<tr>
<td>4</td>
<td>Online</td>
<td>0.94</td>
<td>0.94</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.93</td>
<td>0.93</td>
<td>0.92</td>
</tr>
<tr>
<td>5</td>
<td>Online</td>
<td>0.96</td>
<td>0.96</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.95</td>
<td>0.95</td>
<td>0.89</td>
</tr>
<tr>
<td>6</td>
<td>Online</td>
<td>0.95</td>
<td>0.95</td>
<td>0.93</td>
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<tr>
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<td>Accommodated</td>
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<td>0.93</td>
<td>0.90</td>
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<tr>
<td>7</td>
<td>Online</td>
<td>0.95</td>
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<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.93</td>
<td>0.93</td>
<td>0.90</td>
</tr>
<tr>
<td>8</td>
<td>Online</td>
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<td>0.92</td>
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<tr>
<td></td>
<td>Accommodated</td>
<td>0.90</td>
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</table>

### Table 8: Reliability Coefficients (EOC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Form</th>
<th>Cronbach Alpha</th>
<th>Stratified Alpha</th>
<th>Feldt-Raju</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra 1</td>
<td>Online – Core 8</td>
<td>0.93</td>
<td>0.93</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Online – Core 9</td>
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<td>0.93</td>
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</tr>
<tr>
<td></td>
<td>Online – Core 10</td>
<td>0.93</td>
<td>0.93</td>
<td>0.92</td>
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<tr>
<td></td>
<td>Online – Core 11</td>
<td>0.94</td>
<td>0.94</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.85</td>
<td>0.85</td>
<td>0.85</td>
</tr>
<tr>
<td>Algebra 2</td>
<td>Online – Core 5</td>
<td>0.94</td>
<td>0.94</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Online – Core 6</td>
<td>0.94</td>
<td>0.94</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Online – Core 7</td>
<td>0.94</td>
<td>0.94</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Accommodated</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>Geometry</td>
<td>Online – Core 5</td>
<td>0.94</td>
<td>0.94</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Online – Core 6</td>
<td>0.94</td>
<td>0.94</td>
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</tr>
<tr>
<td></td>
<td>Online – Core 7</td>
<td>0.95</td>
<td>0.95</td>
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</tr>
<tr>
<td></td>
<td>Online – Core 8</td>
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<td>0.94</td>
<td>0.92</td>
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<tr>
<td></td>
<td>Accommodated</td>
<td>0.88</td>
<td>0.88</td>
<td>0.88</td>
</tr>
</tbody>
</table>

(Florida Department of Education, 2017, pp. 11-12)
Test designers further pressed for high levels of reliability by calculating the Test Information Function (TIF), the conditional standard error of measurement, and a classification accuracy index. Inter-rater reliability was utilized for writing scores. Three measures of reliability helped guide test question writers during test design and after test implementation: Conditional Standard Error of Measurement, IRT marginal reliability, and Cronbach’s alpha. (Florida Department of Education Statewide Assessment Program Information Guide, 2018).

Test Validity
FLDOE’s work on validity involved the alignment of tests with the state standards. Attention was given to having an appropriate number of questions in respective standards-based categories. Observed correlation matrixes were generated for each grade level test to study the number of items from the various standards categories. Goodness-of-Fit measures were employed for internal validity and a factor analysis was conducted. Figure 2 (see next page) displays a sample of categorical correlations conducted on the ELA examination (Florida Department of Education, 2017).

The statistical analysis conducted establishes both reliability and validity in the tests administered to Florida students. These measures strengthen the authenticity of Florida’s testing instrumentation, which subsequently builds confidence in Florida’s testing and accountability systems.
A Sample of Calculated Correlations from the Florida ELA Exam

Table 34: Observed Correlation Matrix Among Reporting Categories (ELA)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Reporting Category</th>
<th>Number of Items</th>
<th>Cat1</th>
<th>Cat2</th>
<th>Cat3</th>
<th>Cat4</th>
<th>Cat5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Key Ideas and Details (Cat1)</td>
<td>15</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Craft and Structure (Cat2)</td>
<td>16</td>
<td>0.76</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integration of Knowledge and Ideas (Cat3)</td>
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<td></td>
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<tr>
<td></td>
<td>Language and Editing Task (Cat4)</td>
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<td></td>
</tr>
<tr>
<td>4</td>
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<tr>
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<tr>
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<tr>
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</tr>
<tr>
<td></td>
<td>Text-Based Writing (Cat5)</td>
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<td>0.49</td>
<td>0.50</td>
<td>1.00</td>
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<tr>
<td>5</td>
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<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Craft and Structure (Cat2)</td>
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<tr>
<td></td>
<td>Integration of Knowledge and Ideas (Cat3)</td>
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<td>0.69</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Language and Editing Task (Cat4)</td>
<td>12</td>
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<td>0.62</td>
<td>0.58</td>
<td>1.00</td>
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<tr>
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<td>Text-Based Writing (Cat5)</td>
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<td>0.53</td>
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<td>6</td>
<td>Key Ideas and Details (Cat1)</td>
<td>15</td>
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<td>Craft and Structure (Cat2)</td>
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<td>Text-Based Writing (Cat5)</td>
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REFERENCES


