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ACCREDITATION AS A FRAMEWORK FOR SCHOOL IMPROVEMENT: A QUANTITATIVE STUDY

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ACCREDITATION AS A FRAMEWORK FOR SCHOOL IMPROVEMENT: A
QUANTITATIVE STUDY

By

MICHAEL A. BURROUGHS

A doctoral dissertation submitted to the
College of Education
in partial fulfillment of the requirements
for the degree Doctor of Education
in Organizational Leadership.

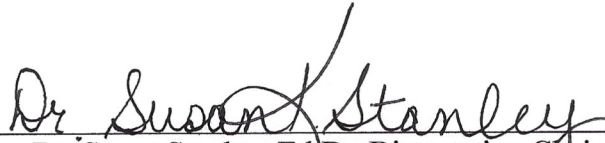
Southeastern University
June, 2023

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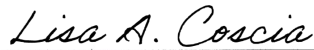
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DEDICATION

This dissertation is dedicated to my three children who have inspired me through their own Christian education journeys, and to my wife, who has supported my education and my life-long work of advancing Christian education.

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I would like to acknowledge my dissertation team. My chair, Dr. Susan Stanley, was a constant encouragement, and challenged me to push to the end. Dr. Thomas Gollery brought crystal clear clarity when the focus got very blurry.

Jesus says that when a student is fully trained, that student will be just like their teacher. I want to thank Dr. Sarah Yates, Dr. Karen Ingle, Dr. Charles Smith, and Dr. Amy Bratten for being excellent teachers. Regardless of the content, I was inspired and motivated to become a little bit like each of you. Your exceptional approach to academic integrity, your role modeling, and your life-long commitment to shaping educational dialogue have left a permanent impact on how I think, and work.

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Abstract

This study investigated the perceptions of heads of schools from accredited schools concerning whether the accreditation process, as prescribed by the League of Christian Schools (LCS), leads to improvement in leadership capacity and the impact of instruction on the learning environment. The League of Christian Schools has developed an accreditation process that is based in systems theory as espoused by Senge (2006), which contributed to the theoretical framework for this study. Administrators in LCS member K12 schools provided 25 responses to an anonymous on-line survey. Quantitative data were collected and analyzed to determine perceptions regarding increased organizational capacities in the years following initial accreditation. The major finding of this research study is the strong belief by Christian school administrators that the LCS accreditation process has improved the school over time. The mean score perceptions regarding the effect accreditation has on leadership capacity was 4.22, which was statistically significant ($t_{(24)} = 11.91; p < .001$) with a huge effect ($d = 2.38$). Concerning Leadership Capacity, eighty percent (80%) responded that they *agreed* (50.9%) or *strongly agreed* (37.1%) that the accreditation process increased leadership capacity. Concerning Instructional Capacity, a one sample t test showed statistical significance ($t_{(24)} = 9.99; p < .001$) of study participant mean score of 4.20 when asked about improved instruction. The effect was huge ($d = 2.00$). For perceptions of the impact of accreditation on the instructional program, over eighty-six percent (86.5%) either *agreed* (49.5%), or *strongly agreed* (37.1%) to instructional improvement.

Keywords: accreditation, private schools, Christian education, school improvement, leadership capacity, instructional impact, eleot

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I. INTRODUCTION

American society is one of diversity. Increasingly, the educational landscape for K12 schools is also becoming equally diverse. In 2021, private schools benefitted from the most significant expansion of choice options in the United States (U.S.), with legislators in 18 states creating new school choice programs and 21 states expanding existing programs (Dewey, 2021; McShane, 2021). As public opinion continues to shift in favor of school choice, support for charter and private school options is gaining momentum (School Choice in the Era of Coronavirus: AFC's Seventh Annual National Survey Results, 2021). To attract parents, private schools must gain public trust. Parents and policymakers need confidence that private schools offer rigorous academic experiences, observe best professional practices, focus on quality outcomes, and commit to organizational improvement and student achievement. Accreditation in K12 affirms and validates a school's commitment to increased capacity, continued development, and long-term improvements. Accreditation may be the answer, offering the quality framework for improvement that states need to ensure quality schools continue to thrive and serve the community.

Background of the Study

Accreditation in the United States rose in the late 19th century in response to a need for secondary schools to validate that the school's graduates were indeed ready for and capable of college-level work (Brittingham, 2009). Initially, the accreditation process was dominated by

inputs, such as teacher qualifications and the quality of facilities. However, by 2010, accrediting agencies were evaluating school reports on outcomes including student performance data, and professional development activities and results (Bernasconi, 2004). Despite attempts by accrediting agencies to foster a framework for continuous school improvement, a correlation between accreditation and school improvement is not clear.

Accreditation benefits schools though the role of accreditation varies from state to state. While accreditation may bolster public confidence in the academic program (Oldham, 2018), a private school may need accreditation for participation in other programs that benefit the community (Butler, 2008). For example, in the state of Florida, certain scholarship programs are linked to a program's accreditation. The Voluntary Pre-Kindergarten (VPK) scholarship and the School Readiness scholarship benefit those programs that hold accreditation from an association approved by the state of Florida (Florida Early Learning, n.d.). In several states, participation in inter-scholastic athletics requires a school to hold a valid accreditation (Approved Accrediting Agencies, 2020; Virginia Independent Schools Athletic Association - About VISAA, n.d.). Nationally, special recognition programs like the National Honor Society also require a school to be accredited by approved accrediting agencies (NHS, 2017). However, the strength of accreditation through recognized agencies still remains the guaranteed transfer of credits between public and private institutions, as well as private schools and institutions of higher learning (Oldham, 2018).

Where school improvement is discussed, student performance is most often cited as the evidence of improvement. A single indicator does not measure the health of any organization or business. Yet, student performance remains the one constant criterion that seems to trump all other criteria in educational circles. Stotts (2019) found no relationship between accreditation

and student performance after reviewing student assessment data for 20 elementary schools that had earned STEM certification, a specific type of accreditation. In contrast, a 2018 study compared improvement efforts of forty schools accredited by the state of Michigan with forty schools accredited by a private agency. Fleming (2018) found that schools accredited by the private agency scored significantly higher in improvement than schools accredited by the Michigan Department of Education. After observing no correlation between test scores and accreditation, Stotts (2019) conceded that student performance was only one possible measure of improvement, further suggesting that other improvement measures be considered in future research. However, the impact of other school improvement factors is lacking in the research literature.

A study conducted by Serafin (2014) further advances Fleming's conclusion that accreditation plays an important role in improving schools as a system. Serafin (2014) conducted a qualitative study of private schools in southern California to evaluate whether schools actually improve through the accreditation process and a cycle of review offered through the WASC (WASC). Serafin's findings affirm that accreditation is a catalyst for organizational change and improvement that (a) helped leadership define their role as a resource and leader in improvement initiatives, (b) consistently allocated time to school improvement planning and strategies, and (c) fostered collaboration and shared leadership among staff and stakeholders. Systemic change must be just that—systemic. Serafin's study highlights the importance of viewing school improvement in multiple and unilateral ways, rather than placing focus primarily on student test data (2014).

In 2015, Every Student Succeeds Act (ESSA) was passed as a landmark replacement to the historic No Child Left Behind Act. The ESSA codified an impetus for states and districts to

devise plans for school improvements that included intervening practices that could be substantiated by evidentiary effectiveness. Private schools may benefit significantly from similar approaches to improvement. As states grapple with regulating school choice funding for private schools, accreditation may be the best and most effective measure of private school quality and commitment to ongoing, systematic school improvement.

Theoretical Framework

The theoretical framework for this research emerged from a review of existing literature about K12 school accreditation, school improvement, and organizational change. Senge (2006) espouses the systems theory of organizations, viewing organizations as an amalgamation of components and subsystems that interact or correlate in some meaningful way to affect outcomes. The systems theory, borrowed from the biological sciences, was first applied to organizational management by Katz and Kahn in the mid-1960s (Katz & Kahn, 1966; Lyden, 1969). However, Deming first applied the concept of systems to organizational improvement through organizational learning (Deming, 2000; Horine et al., 1994; Senge, 2006). Senge advanced Deming's model toward a concept called *systems thinking*, which relies upon the collective thought of stakeholders to build the shared vision through change. Therefore, Senge (2006) viewed organizational change as an ongoing, systemic process that requires continued evaluation drawn from quality feedback. Senge's model required a genuine commitment to the process and ongoing team learning to realize the change (2006).

The League of Christian Schools (LCS) accreditation standards have been developed to measure each component from a systems point of view. For example, in the past, accreditation standards were concerned that sufficient textbooks supplied student need. Currently, LCS standards view curriculum as a system. The current standard reads, "The school shall

systematically evaluate the effectiveness and relevance of the curriculum, not to exceed a five-year cycle," using standardized assessment results to "modify and improve instruction" (League of Christian Schools, 2019, p. 32). Each accreditation standard is rated by the evaluator as a one through four, with one being non-existent or emerging and four fully integrated. The result of the accreditation process is an index of organizational effectiveness, which is a composite of the evaluator ratings, making the accreditation process ideal for measuring the organization's efficacy as a system.

This research correlated student performance and learning environments as components of school improvement resulting from participation in LCS accreditation. A Christian school is an open system, meaning it interacts with the environment, namely the community served. In a school, the educational program is a system, but other systems (e.g., sports, school government, food services) enhance school life and add to the long-term sustainability of the school and the community the school serves. An improving organization is one in which all stakeholders, at all levels, collectively and collaboratively, are increasing capacity (Senge, 2006). The very nature of systems theory is the interaction of variables within the organization, focusing on long-term growth, by acting in a way that consistently achieves the organizational strategy. Consistent with systems thinking, this research included the relationships of two different subsystems (learning and instructional environment) to measure organizational efficacy as a measurable improvement. The researcher used systems theory to guide the process and evaluation of the degree to which subsystems of a private school correlated.

Problem Statement

Each year since 1971 the National Center for Education Statistics has facilitated the administration of the National Assessment of Educational Progress (NAEP) exam to assess the

gains and losses of US students. The 2020 administration of the exam was conducted prior to the pandemic and the consequential closing of schools and shows the greatest decline in math and reading scores in decades (National Center for Education Statistics, n.d.). While the United States has remained in the middle of the pack internationally (Schleicher, 2019), this sharp decline on the NAEP could signal a critical and negative trend. The need for systemic improvements in instruction, curriculum, and student performance are critical for the future of education. The accreditation framework for K12 schools can provide a system of improvement that yields systemic improvements that result in student achievement gains.

Passed into law in 2015, the Every Student Succeeds Act (ESSA) requires state departments of education to develop and maintain school improvement plans aimed at state, local, and school levels. This comprehensive attempt to transform schools touches every institution in the K12 public sector. However, private schools operate outside of that realm and requirement and, consequently, private schools rarely engage in meaningful, intentional, and community-oriented improvement efforts. Like other organizations, private schools rely upon the initiative and motivation of central organizational leadership to advance organizational improvement (Burke, 2017; Conrad, 2013). At the heart of a school, leadership is the crucial player for improving all of the systems that constitute a school, in addition to the systems that inform improved instruction, and student achievement. Even though school improvement activities are replicated in nearly every school district and school building in the nation, a wholesale transformation of learning has yet to become a reality (Elgart, 2017). As school choice opens the door for private schools to serve a larger community, private schools can engage in and benefit from quality school improvement and accountability through accreditation processes and

protocols. This study will analyze student performance and teacher instructional performance as an integral part of the accreditation process.

Researchers studying accreditation as a means of school improvement have had mixed results. While Stotts (2019) could not correlate a relationship between earning accreditation and improved student performance, Fleming (2018) found that student performance results in accredited schools when compared to student assessments in non-accredited schools. Other researchers affirm the positive role that accreditation has informing improvement strategies for school leaders (Holland, 2019; Serafin, 2014; Starkovich, 2010). The accreditation process can provide succinct direction to needed school improvements.

Deficiencies exist in the current literature regarding private schools and accreditation. Stotts (2019) and Fleming (2018) analyze assessment data and accreditation, however, both researchers used populations from public schools. Other researchers analyze the accreditation of private schools, but do not use student assessments as an analyzed data set. Qualitative studies exist that examine perceptions and roles of accreditation in many aspects of the learning environment, including instruction, which is a part of this study as well (Hiltibran, 2020; Wozniak, 2017).

As school choice gains momentum across the United States, more at-risk students are attending private schools. Accreditation by a third-party agency may be an attractive alternative to private schools resistant to government control and oversight. Accrediting agencies must provide evidentiary data that school improvement can be achieved and sustained through thoughtful engagement and active participation in a recognized accreditation process.

Purpose Statement

The purpose of this quantitative-methods study was to determine if there was a correlation between accreditation and school improvement for Christian schools engaged in the League of Christian Schools accreditation process. School improvement has been broadly defined as improved student test performance and improved instruction, two indicators of school improvement identified by Elgart (2017).

Overview of Methodology

This study used a quantitative-methods approach to determine if a correlation existed between K12 school accreditation and school improvement. Two internal systems were measured for progress: student assessments and effective learning environments. Additionally, perceptions of heads of schools regarding school improvement efforts were collected and analyzed.

Research Design

A non-experimental, quantitative research design was used to address the study's topic and research problem. The specific research methodology was a survey research approach (Fraenkel et al., 2019), which allows for the possibility of generalization of findings to real world settings and is a desirable methodological choice for study purposes considering its ability to generate large amounts of data in an efficient, cost-sensitive manner (Muijs, 2011). Additionally, surveys are more effective in guaranteeing respondent anonymity, thereby promoting the possibility of more candid responses to survey items. The survey approach is also thought to be well-suited for the purposes of canvassing opinions, feelings and perceptions associated with a particular topic or issue in question.

The non-experimental research design was considered best suited for the study considering that it is not dependent upon the manipulation of an independent variable. The study

was conducted using a cross-sectional survey considering its exclusion of manipulation of the independent variable and exclusion of random assignments of participants in groups, common features associated with traditional experimental designs.

Student Assessments and Teacher Performance

A quantitative approach was used to analyze degrees of variance for improvements in student assessments and improvements in teacher performance. The independent variable for this research was the accreditation process. Schools that undergo accreditation are evaluated against a set of organizational standards that define performance expectations in several school functions, including instructional impact, teaching, and learning. The dependent variables for this quantitative research were school leader feedback, student assessment performance, and efficacy of learning environments.

Sample/Sample Selection

The sampling technique in the study was non-probability and purposive (Mills & Gay, 2019). The sample population for the proposed study is defined as the heads of schools in K12 Christian schools that have undergone initial accreditation and at least one additional 5-year term of accreditation through the League of Christian Schools accreditation agency. All schools that met these criteria were considered a part of the target population. For study participation purposes, schools must also have administered a nationally normed achievement test and the Effective Learning Environments Observation Tool (eleot).

Confidentiality and Ethical Issues

The quantitative portions of this research were post hoc. Grade-level test data for accredited schools was already stored in a locked and fireproof storage room at the offices of the League of Christian Schools. Schools are required to report assessment data for continued

compliance for accreditation. That data was digitized, redacted, and stored on a password-protected flash drive. A backup of the data was stored on a cloud-based server. Additional student assessment data was supplied anonymously by heads of schools as a voluntary option during the survey.

After receiving IRB approval, data was collected. All possible members of the population were contacted via email for inclusion in the study. Informed consent was obtained from each participating principal. Upon receipt of the signed informed consent, an email was sent with the link to the survey. Student assessment data was entered in a spreadsheet for analysis. Scores from eleot observations were retrieved from past accreditation visits and entered into a spreadsheet indicating initial observations and those conducted 5 years later.

Research Instrumentation

The instrument associated with student academic achievement through 2015 was the SAT10. The SAT10, a standard in student achievement testing since 1922, is a valid and reliable measure of student learning achievement (Carney & Morse, 2005; *Stanford Achievement Test Series | Tenth Edition*, n.d.). The SAT10 is a proctored exam administered by qualifying classroom teachers. After 2015, schools began adopting other nationally normed assessments including the Iowa Test of Basic Skills (ITBS), Tera Nova, and the Measure of Academic Progress (MAP). All accredited schools are required to annually provide evidence of administration by submitting executive summaries of data to the accrediting agency.

The teacher instructional performance variable was measured using the *Effective Learning Environments Observation Tool* (eleot). The eleot is a classroom observation instrument with 28 indicators organized into seven categories called *environments*: 1) Equitable Learning, 2) High Expectations, 3) Supportive Learning, 4) Active Learning, 5) Progress

Monitoring and Feedback, 6) Well-Managed Learning, 7) Digital Learning (Cognia Improvement Network, n.d., para. 2). The tool is produced by Cognia, which stated, "The eleot provides useful, relevant, structured, and quantifiable data on the extent to which students are engaged in activities and/or demonstrate knowledge, attitudes, and/or dispositions that are conducive to effective learning" (Cognia Improvement Network, n.d., para. 1). Reliability and validity are regularly analyzed to confirm the eleot accurately reflects "classroom practices across a school on a given day" (Cognia Improvement Network, n.d., sec. Is eleot a valid and reliable tool?). Members of the accreditation team administer the eleot in each school during the accreditation visit. To utilize the eleot, accreditation team members must earn and maintain eleot certification, which ensures consistent results with the instrument.

Research Questions

The study's topic and purpose were addressed through the statement of four research questions and accompanying hypotheses. The following represents the two research questions and sub-questions, along with hypotheses proposed used for study purposes:

1. To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process lead to school improvement in leadership capacity?
2. To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in the impact of instruction?
 - a. To what degree did teacher instructional environment (eleot) scores change after earning accreditation?
- 3.

Research Hypotheses

The following null hypotheses are proposed:

1. The second research question:

H1: Private school principals will perceive that the results of accreditation within the LCS Accreditation process led to school improvement in leadership capacity?

2. The first research question:

H2: Private school principals will perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in the impact of instruction.

The research sub questions.

H2_a: Teacher instructional environment (eleot) scores will improve after earning accreditation.

Overview of Analyses

To analyze the data, correlation analysis was applied to each research question. Test data was collected for each participating school. The student assessment data used were from the year before accreditation for math and reading along with math and reading five years after accreditation. The test scores for reading and math were entered into a spreadsheet for each school. Teacher eleot scores were collected for each participating school for the year prior to accreditation and the fifth year after accreditation. The eleot scores were entered into a spreadsheet by columns and the difference between the most recent data from the earlier data provided the variable to be tested for each data set. The two variables were analyzed using a Pearson's (*r*) correlation to determine whether a correlation exists.

Preliminary Analysis

Initial analysis occurs when the difference between the most current assessments and previous assessments have been tabulated. A positive score indicated a gain in student performance and teacher instructional environment. However, a negative score indicated a loss in student performance or teacher instructional environment.

Data Analysis by Research Questions

The study's two research questions were addressed using descriptive and inferential statistical techniques. The probability level of $p \leq .05$ was identified for study purposes as the threshold value for findings to be considered statistically significant. The conventions of effect size interpretation proposed by Cohen (1988) and Sawilowsky (2009) were used to describe magnitudes of effect from the numeric effect sizes (d) achieved in the analyses in research questions one and two.

In research questions one and two, the one sample t test (Gerald, 2018) was used to assess the statistical significance of study participant mean score response within the two research questions. The assumption of data normality in research questions one and two was assessed through an inspection of the dependent variable's respective skew and kurtosis values. Skew values between $-2.0/+2.0$ and kurtosis values between $-/+7.0$ were considered indicative of data normality (George & Mallery, 2019). The magnitude of response effects achieved in research questions one and two were addressed using Cohen's d (Field, 2017). The study's data were initially collected and recorded in Excel Spreadsheet format, and subsequently migrated to the 29th version of IBM's Statistical Package for the Social Sciences (SPSS) for analytic and reporting purposes.

Limitations

Possible limitations exist within this research. The population for this research is Christian schools that are accredited by the League of Christian Schools. This limitation prohibits the results from generalizability. The sample size may be a limitation of this study, as well. Over 130 schools were included in the target population and were assumed to be participating. However, if participation fluctuates, this may impose an unintended limitation.

Additionally, limitations in this study may have occurred in the results of the *eleot*. While all *eleot* observers must be certified on the instrument, observers may have had differing levels of experience and confidence with the tool when used in the field for accreditation.

Definition of Key Terms

The following words and phrases are key terms for the study.

- **Annual Accreditation Status and Progress Report (ASPR):** the document that LCS-accredited schools complete annually as the required reporting for the continued accreditation.
- **Cognia:** a nonprofit organization that services over 36,000 schools and systems in the United States and 85 countries. The organization works in the areas of school improvement accreditation, assessments, and professional development (*Cognia*, n.d.-b).
- **eleot:** This is a classroom observation tool that comprises 28 items organized in seven environments aligned with the Cognia accreditation standards and used in LCS Accreditation processes. The tool is based on the most current research on effective learning (Cognia Improvement Network, n.d.). “The *eleot* provides useful, relevant, structured, and quantifiable data on the extent to which students

are engaged in activities and/or demonstrate knowledge, attitudes, and/or dispositions that are conducive to effective learning (Cognia Improvement Network, n.d., para. 1).

- **League of Christian Schools:** A nonprofit organization services over 300 schools and systems in the United States and 4 countries, this organization works in the areas of accreditation professional development, teacher certification, and school improvement.
- **School Improvement Plan (SIP):** This is a document required by League of Christian School accreditation that informs organizational change by identifying this school performance goals based on data, measurable objectives or outcomes, instructional strategies, and the activities to be taken to implement, evaluate, and improve.
- **STEM certification:** A specific framework and improvement process presented by Cognia that recognizes programs with solid and successful STEM focus (Cognia, n.d.-a).
- **student achievement:** This refers to the quantitative measured outcomes that reflect the extent to which a student has mastered academic course content. In this study, these outcomes are measured based on a student's performance on a nationally normed achievement test.

Significance

National student assessment data clearly shows that student performance of 13-year-old students has declined since 2012, creating an impetus for schools to improve student learning. School improvement requires the use of data on student achievement and teacher instructional

management (Bernhardt, 2005). Private schools do not fall under regulatory requirements for creating or managing school improvement plans. Additionally, the lack of research using such data as student performance data and instructional data in accredited schools calls for further study. This study will help schools determine if accreditation can facilitate authentic improvement while providing legislators support for accreditation as a regulatory agent for funding models.

Private schools need a solid framework for improvement. With limited human and fiscal resources, private school leaders often lack the business acumen to embark on complicated and uncertain improvement strategies that may or may not yield real improvement. Accreditation has been a part of the education landscape for over 100 years and has offered varying degrees of support and success to private schools. However, modern accreditation processes have far more to offer private school heads to understand and manage school transformation.

Chapter 2 presents a comprehensive review of the literature focused on the current body knowledge associated with accreditation and school improvement.

II. REVIEW OF LITERATURE

The purpose of this quantitative-methods study was to determine if there was a correlation between accreditation and school improvement for Christian schools engaged in the League of Christian Schools accreditation process. School improvement has been broadly defined as improved student test performance and improved instruction, two indicators of school improvement identified by Elgart (2017).

Continuous improvement of schools has been a part of the educational landscape for decades. Despite the recommendations of the 1966 Coleman Report to address the disparities of education for minority students, government-controlled education in the US has failed to narrow the achievement gap between White students and minority students (Coleman & Others, 1966). The National Assessment of Educational Progress (NAEP) has demonstrated stagnant scores in reading for over three decades (National Center for Education Statistics, n.d.). NAEP math scores have been stagnant for over a decade. Despite nationwide school improvement activities implemented in every school and every state, wholesale school improvement remains an elusive target.

Why Accreditation

Accreditation is a voluntary process whereby a school or local education agency (LEA) submits programs and systems for review and scrutiny by an external agency (Wieder, 2011). The accreditation approval signals that the school or LEA has achieved compliance with

accepted standards of quality or best practices. Benefits of accreditation vary from state to state but may be a factor for inclusion into certain programs or exclusion from others. For example, students graduating from non-accredited schools in California or Florida will be subjected to more stringent college admissions criteria when applying to state colleges and universities (Wieder, 2011). In Georgia, graduates from accredited schools have an easier path to qualifying for the HOPE scholarships (Wieder, 2011). Other states may require accreditation for certain scholarship programs, athletic participation, or honor society affiliations.

State departments of education are public school systems in each state that provide state oversight to local education agencies (counties, districts, or parishes), which, in turn, oversee individual schools. The relationship between state departments of education and the local districts is shaped by organizational alignment, resourcing, and compliance monitoring, much of which revolves around school improvement. Christian schools lack similar organizational oversight. Accreditation processes and protocols cull out areas of improvement while providing a concept map for embarking on the improvement journey. Such were the findings of Earle's (2018) efforts to determine if accreditation could evaluate a school's program to identify specific areas of improvement for all stakeholders. Earle conducted a qualitative program evaluation of a school undergoing an accreditation process offered by the Association of Christian Schools International. Earle explored the extent to which stakeholders believe the school complies with four specific accreditation standards, one of which was school improvement. The sample for Earle's study was focused on various stakeholders, resulting in 22 parents, 15 staff members, five administrators, and three board members ($n = 45$). The researcher developed and presented three online surveys, one to each of the groups in the sample. The researcher then classified and coded the results by group and gender and compared responses. Earle (2018) only indicated that the

results were "passed into SPSS for statistical analysis" before comparing averages of responses by group, gender, and standard (p. 45). When focusing solely on the accreditation standard for School Improvement, for all groups, more than half of respondents did not know, or did not believe that school improvement was (a) focused on student achievement, (b) collaborative, (c) reflected in all areas of the school, nor was it communicated to stakeholders (Earle, 2018).

Earle's (2018) study captures the very nature of accreditation. Earle set out to determine if accreditation could identify strengths and weaknesses, while accurately identifying areas needing improvement. Though all stakeholder groups failed to see improvement at work in the school, the accreditation process identified areas of improvement and provided a roadmap for next steps on the improvement journey. Earle's study was conducted in the midst of the accreditation process. What is lacking in this study, however, is how the outcome of the accreditation process informed improvement efforts that may have been realized within the school over the following months and years.

Public schools have state and district oversight that provides structures of accountability. But more importantly, state and local education agencies also provide improvement initiatives with professional development and program support to ensure the success of such programs. Private schools lack these accountability structures. Consequently, school improvement is left to the discretion of school leadership. Accreditation can provide similar focus and impetus for improvement that state and districts provide. In the state of Nebraska, all public schools must be accredited (Gibbons, 2017). Schools can opt for a state accreditation program called the Nebraska Frameworks model, or the AdvancED accreditation model. Gibbons (2017) conducted a descriptive quantitative study to determine what drives the decision for schools to choose one model over the other. Two of Gibbons' research sub-questions were germane to this study.

Gibbons sought to understand how important the actual accreditation standards were to actual school improvement. Similarly, Gibbons wanted to understand the significance of the state framework to actual school improvement (2017).

After receiving IRB approval, Gibbons (2017) distributed an electronic, self-created survey to teachers and administrators in 27 public school districts across the state ($n = 383$). Gibbons then analyzed the survey results, establishing means and standard deviations. Concerning the level of influence that accreditation standards had on the strategic planning process, AdvancEd accredited school staff had a mean score of 3.79 on a 5.0 Likert scale. In contrast, staff from schools accredited with the Nebraska Framework model rated the level of influence that accreditation standards had on the strategic planning process as a mean of 3.43, indicating that staff and leaders from accredited schools place greater value on the accreditation standards to inform school improvement efforts than staff and leaders using another form of accreditation. For private schools that lack any form of state accountability or improvement framework, accreditation can serve as catalyst for school improvement efforts. Similar to Gibbons' (2017) results, staff and leaders in private schools could view the accreditation standards as a significant influence on the development and implementation of strategic improvement plans.

Although Earle's (2018) focused on stakeholders, most of whom were parents, Starkovich (2010) conducted a study focused on the input of teachers as stakeholders seeking to understand the relationship between the accreditation process and teacher perceptions of the improvement effort. Starkovich explored the importance of stakeholder (i.e., principal, teachers, support staff, local governing body, clergy, parents, and parishioners) participation in the

accreditation process and if teachers believed that the accreditation process resulted in continuous improvement in their schools.

Starkovich (2010) conducted a mixed-methods study of the accreditation process implemented by the 15 Catholic Dioceses located in the state of Texas. For this study, Starkovich created a survey to be conducted online, providing a link to the sample population of staff and personnel from every Catholic elementary school in Texas ($n = 705$). In addition to the surveys, Starkovich collected and reviewed documents. The dependent variable for this study was the accreditation process. The independent variable was teacher perception. Starkovich used ANOVA to analyze the data, while descriptive statistics were used to classify and summarize (2010).

Starkovich (2010) found that more than 71% of respondents believed the accreditation process was essential to school improvement efforts with no variance between administrators, teachers, and other professional staff. Additionally, the majority of respondents believed that accreditation yielded both short-term and long-term school improvements. Starkovich analyzed open response questions, grouping them by emerging themes. The two common recurring responses to the question regarding the "greatest strengths of the accreditation process" were that:

1. The accreditation process "identifies strengths and weaknesses of the school"
(Starkovich, 2010, p. 118)
2. The accreditation process focused on school improvement.

For private Christian schools, the accreditation process is the primary means by which an administrator can understand the school's strengths and weaknesses and concentrate on specific elements that yield improvement.

Holland (2019) obtained similar results to Starkovich (2010) while studying teacher perceptions about their role in the accreditation process and improvement processes. The purpose of Holland's qualitative case study was to explore how independent school educators perceive their role in accreditation review processes and institutional improvement plans associated with these procedures. More specifically, Holland asks how educators are involved in the accreditation process and how these educators perceive their role in school improvement efforts associated with accreditation results. For the study, Holland used a convenience sampling of 156 teachers from eight private schools ($n = 156$). After receiving IRB approval, the researcher contacted eight schools that agreed to participate. Holland emailed informed consent and survey links to all participants. The researcher also gathered documents from each school. After the surveys were completed, the researcher conducted semi-structured interviews with eight of the survey participants. Holland then analyzed the data using open coding techniques and cyclical analyses. The codes were organized into categories and then analyzed for themes. The analyses generated patterns of themes that incorporated several sources of data. Holland found that teachers discovered opportunities for leadership through the accreditation process, perceiving a great sense of collaboration. Additionally, the overwhelming majority of teachers were actively engaged in improvement efforts directly associated with the accreditation results (Holland, 2019).

Contrary to Holland's findings that teachers were actively engaged in improvement, research by Boles (2012) found the opposite effect. Boles conducted a quantitative study of superintendents, principals, and teachers from accredited public schools to determine if a difference in perceptions existed regarding accreditation results. Boles developed a 36-question survey using a Likert scale, categorizing each question into one of four categories defined during

his review of literature: vision and leadership, collaboration, engagement, and implementation integrity. The four categories served as the dependent variables for the study. Boles identified 23 public school superintendents ($n = 23$), 69 public school principals ($n = 69$), and 115 public school teachers ($n = 115$) for the sample. The independent variables were the superintendents, principals, and teachers. To collect the data, surveys were sent by mail to all participants. The survey data were analyzed using factorial ANOVA. Boles observed a significant difference in teacher responses on the measure for engagement in the survey. However, Boles accepted the null hypothesis for three of the four research questions, indicating that superintendents, principals, and teachers similarly perceived personal investment in the school improvement process. However, the most significant finding in Boles' (2012) study was that teachers did not perceive any improvement in the ability to educate students after receiving accreditation.

Though valuable time and resources are invested in the accreditation process to bring a school into compliance with accreditation standards, accrediting agencies expect a commitment to those changes and ongoing school improvement. Interested in understanding what happens in a school after the accreditation ends, Serafin (2014) asked what actions school staff implement in response to an accreditation recommendation and how these actions are evaluated. Serafin conducted a qualitative study using a grounded theory approach. Following IRB approval, the researcher identified participants through internet searches, contacting them directly. After obtaining participants' research consent forms, the researcher conducted 34 interviews ($n = 34$) from eight different schools. The researcher designed interview questions, observed faculty meetings pertaining to accreditation, and conducted a textual analysis of the school's self-study, reports, and visiting committee reports. The researcher also reviewed other documents, including student assessment data. Serafin transcribed the interviews and observation notes to analyze the

data, using codes to establish themes and relationships. The overarching conclusion of the researcher was that accreditation catalyzed organizational change leading to "appreciable changes" in every participant's school (Serafin, 2014, p. 148).

Earlier research conducted by Rosa (2013) yielded similar results to Serafin (2014). Rosa conducted a quantitative study to determine if principals perceived that accreditation was effective in realizing school improvement. Rosa identified 216 schools ($n = 216$) that underwent accreditation during the 2005/2006 school year. Rosa surveyed principals using a self-created instrument. After distributing a pre-survey letter, Rosa followed up with the survey via electronic means. Survey data were transferred to spreadsheets and analyzed using a Pearson r or product-moment correlation coefficient procedure. Rosa found that most principals perceived the process of accreditation (creating the self-study) and the resulting action plan were instrumental in facilitating school improvement. Rosa's conclusions are important for accreditation as a tool for improving schools, but more significantly for private schools with minimal influence from state agencies expecting improvements (2013).

The Accreditation Process

Accreditation is available to public and private schools alike. However, the motivation to become accredited can vary. In many cases, the process is different as well. Private schools can access the accreditation protocols of the national agencies or opt to access accreditation services from associations specializing in smaller programs focusing on special needs education, or religious, denominational, faith-based programs.

Around 20 states require public schools to be accredited (Oldham, 2018). States like Nebraska and Michigan allow schools to choose between a state framework of accreditation and a framework maintained by third-party associations (Fleming, 2018; Gibbons, 2017). There are

four primary agencies associated with public school accreditation: New England Association of Accreditation, Middle States Association, Cognia, and Western Association. These four associations compete for a market share in every state, as well as many foreign countries. All four associations also share a similar framework for accreditation to which public and private schools must adhere: submission of a self-study and hosting a visiting team from the association (Cognia, n.d.-a; Middle States Association, n.d.; NEASC, n.d.; WASC, n.d.). Though each association carries out varying procedures for on-boarding new candidate schools and delivery of the accreditation process and protocol, the two main components remain the self-study and the site visit.

Internal Review: Self-Study

As the largest accrediting agency in the United States, Cognia administers the most widely used accreditation protocol (Cognia, n.d.). Unlike state rating systems that focus more on compliance and checklists, accreditation measures organizational capacity and improvement over time, viewing a school as a system (Elgart, 2011). To accomplish an effective review, each candidate school must compile and submit a self-assessment of the school based on the accreditation standards. This internal analysis consists of several elements that triangulate to validate a school's current reality. The first element a school must complete is a rating of the Performance Standards called School Quality Factors (Elgart, 2017). The School Quality Factors Diagnostic presents guiding questions rooted in seven focus areas:

- clear directions
- healthy culture
- high expectation
- impact of instruction

- recourse management
- efficacy of engagement
- implementation of capacity

The diagnostic requires school leaders and stakeholders to identify a degree of fulfillment based upon a Likert scale ranged from 1 (*not observed*) to 4 (*very evident*) (Elgart, 2017).

The second element is the administration of required stakeholder surveys and inventories (Elgart, 2017). These required surveys collect feedback from stakeholder groups on items like school culture, academic climate, professional practices, community, and instructional impact. Surveys are administered to faculty, leadership students, parents, governing body, and even members of the community. Stakeholders can rate each item with a rating based on personal experience or perception. Some survey items allow the participant to choose descriptors to most effectively convey personal experiences, and other survey items are designed to better understand stakeholder involvement in improvement efforts. The inventories are special surveys that identify the frequency of professional practices observed in the classroom. Presented to students and teachers, the inventories collect data on the frequency of specific profession engagement strategies that students experience. Inventory data can analyze teacher reporting on engagement compared to the student experience on the same or similar criteria (Elgart, 2017).

The third element for the accreditation self-evaluation is the administration of the Effective Learning Environments Observation Tool (eleot) (Elgart, 2017). The eleot is administered by an observer certified to use the tool. The observer uses the eleot to identify “observable evidence of classroom environments that are conducive to student learning,” focusing on student engagement within the classroom environment rather than direct instructional strategies (Cognia, 2016, para. 1). The eleot tool is used to collect data from every

classroom and instructor within a building, regardless of the subject content. Certified elect observers complete the elect by rating each of the seven environments on a Likert scale, ranged from 1 (*not observed*), to 4 (*very evident*). This rating system is applied to each of the seven observable environments: (a) equitable learning environment; (b) high expectations environment; (c) supportive learning environment; (d) active learning environment; (e) progress monitoring and feedback environment; (f) well-managed learning environment; (g) digital learning environment. The completed elect rating data is transcribed to a worksheet, and the data is further analyzed, identifying areas of improvement (Elgart, 2017).

These self-diagnostic tools all provide Likert scale responses. School leadership can further analyze the Likert scale data from each of the diagnostics as interval data measuring central tendency. From this analysis, school leadership can make inferences and draw conclusions on the school's capacity, current reality, and areas in need of improvement. Once all diagnostics, surveys, inventories, and elects are completed, the school staff and leadership submit it to Cognia prior to the site visit, called the Engagement Review (*Cognia, 2022*).

In addition to these aforementioned items, an additional document called Assurances outlines compliance items related to regulatory compliance and answered with a “yes” or “no” response (*Cognia, 2022*). The assurances are based upon state or federal compliance factors governing practices like the number of instructional days or filing certain federal forms. When completed, all these documents are submitted for review, along with additional evidence or artifacts, to validate the veracity of the contents of the self-evaluation. This self-assessment aims to triangulate practices to policy or procedure, with evidence to support the claim, eliminating the temptation for schools to report best practices that cannot be validated.

External Review: The Site Visit

After the school has submitted the required self-assessments, a team of professionals will visit the school for 1 to 3 days to review evidence, interview all stakeholder groups, conduct additional eleot observations, and debrief on discoveries found on site (*Cognia*, 2022; Elgart, 2017). Each team member will be assigned specific standards to complete before arrival. Each member will review the school's self-evaluation and all supporting documentation submitted by school leadership to validate the self-evaluations' veracity.

The central component used for evaluating the organization is the accreditation diagnostic. Identical to the diagnostic completed by the school, the accreditation diagnostic is completed by the visiting team from a completely objective perspective of the school (Krenson, 2014). The team ratings are compared to the ratings of the school personnel. Standards and indicators with greater discrepancies become focused targets for improvement efforts. Throughout the site visit, the visiting team will conduct debriefing sessions to discuss team member findings to ensure that all evidence is seen and understood in context (Krenson, 2014).

In addition to the diagnostic, the team administers eleot observations and uses standard questions to interview parents, students, teachers, board members, and other stakeholders to supplement survey results (Krenson, personal communication, July 21, 2014). After team members conduct eleot observations, the team analyzes the data to determine the environments with the greatest strengths and deficiencies. The visiting team members will also conduct individual and group interviews to identify themes and draw conclusions that may drive improvement efforts. Finally, the team will determine to what degree the school provided realistic self-reflection. From this strategic point of view, the team can effectively document the next steps for the school to take to increase organizational capacity in the areas where a

discrepancy exists between what the school reported and what the team discovered. The visiting team will conclude with a recommendation to accredit or not accredit. An overview of the team's findings is presented to school leadership prior to exit. The team's report and recommendation are then submitted to Cognia for review by the Global Commission. If approved for 5-year accreditation, the resulting document provides the school with a road map for school improvement that will enable them to articulate strategies and steps with measurable targets for increasing capacity and organizational effectiveness. As a point of distinction, accreditation site visits have been conducted virtually since the pandemic (Krenson, personal communication, July 21, 2014).

Private School Accreditation Processes

Private schools have access to many options for accreditation. Eligible agencies vary as each state recognizes various state, regional, and national agencies (Oldham, 2018). As the regulating office for international students studying in the United States, the Department of Homeland Security maintains the most comprehensive list of independent accreditation agencies, with just under 100 accrediting associations (Department of Homeland Security, 2013). Each association maintains independent and somewhat unique accreditation standards that reflect each organization's unique mission and purpose. The accreditation processes for most of these associations require an application, an assessment of readiness to undergo accreditation, the self-evaluation process, and then a site visit. The self-assessment phase can last up to two, three, or four years. Approval of accreditation in most cases hinges on the successful review by the visiting team. For the purpose of this research, the accreditation protocol of the League of Christian Schools was reviewed.

The League of Christian Schools provides a 5-year accreditation for schools that successfully complete the self-evaluation and the site-visit (League of Christian Schools, 2019). The final visiting team report (VTR) is submitted to the accreditation commission and the board of directors for a consensus vote for approval. Before the vote takes place, the school will submit an application and enter into the candidacy period. This formal period cannot exceed four years and allows the school to begin the self-evaluation process. During the self-evaluation phase, the school evaluates organizational effectiveness against a rubric covering seven standards of organizational effectiveness for schools. The rubric allows schools to self-assess the level of alignment that most closely resembles the organization's current reality. The rubric presents four options for each standard and must be validated by evidence or artifacts that clearly demonstrate the rating level. The rating scale is a 4-point Likert scale ranged with 1 (*non-existent*) to 4 (*fully integrated and actualized system*). In addition to the rubric, schools must also respond to over 40 compliance standards. The compliance standards are comprised of items that a school either does or does not meet, such as background screening for all employees (League of Christian Schools, 2019).

Once the self-analysis is completed, the accreditation rubric and the supporting documentation are presented to the visiting team for review prior to arriving at the school (League of Christian Schools, 2021). Team members are required to review the documents and clarify any discrepancies prior to arrival for the team visit. Once on site for the site review, the team embarks on class observations, stakeholder interviews, and document reviews. The team completes a rubric similar to the self-study. The results of the team's findings inform the improvement recommendations the team provides for the school. To pass accreditation, a school

must comply with at least 80% of all compliance standards and at least 70% of all standards combined (Rego, 2022).

The team's final report is submitted to the LCS accreditation commissioner for review by the accreditation commission. The commission reviews the report and engages in discussion and a vote for granting approval for accreditation (League of Christian Schools, 2019). Once the commission approves, the report is forwarded to the board of directors for a procedural vote granting 5-year accreditation. Upon approval, the school is notified of the approval. However, if a school is denied accreditation, the school is given a timeframe wherein the school can improve the performance in the deficient areas and host a secondary visit to review those items. The second report is presented the same way for approval. If a school does not meet the requirements, accreditation is not granted (League of Christian Schools, 2019).

Accredited Compared to Non-Accredited

In 2010, Langevin conducted research that identified a correlation between accreditation and student performance. Langevin (2010) attempted to determine if significant differences existed between the accreditation outcomes of affluent schools and poor schools. Though Langevin's research did indicate poorer schools receive lower overall scores than affluent schools, Langevin went on to determine that accreditation served as a predictor of high school student performance in math and reading. Langevin conducted a quantitative study of 401 public high schools ($n = 401$) located in Illinois, Indiana, Kentucky, Michigan, and Ohio. The independent variable in Langevin's study was the accreditation status. The dependent variables were the seven standards associated with AdvancED accreditation. The independent variables were math and reading results collected using standardized assessment data (Langevin, 2010).

After the IRB determined Langevin's (2010) study to be exempt, Langevin collected relevant accreditation scores, test scores, and other pertinent information. Langevin used multiple regression tests to analyze if any of the seven accreditation standards could predict student performance in reading and math as measured on standardized tests. The study's findings resulted in the emergence of an additional research question: do accredited schools outperform non-accredited schools in mathematics and reading? After running a *t*-test, Langevin (2010) discovered that schools of poverty that are accredited significantly outperformed non-accredited schools of poverty in both mathematics and reading.

One study conducted on preschools in Pennsylvania produced similar results to Langevin (2010). In 2018, Greer conducted a quantitative study of students entering kindergarten in three elementary schools located in Pennsylvania. Greer wanted to compare the literacy readiness scores of students who had completed at least one year in accredited preschools to students who had completed at least one year at a non-accredited preschool. The study aimed to determine if a relationship between these two groups of students upon entry to kindergarten could be uncovered. The significant research question in this study had to do with the difference in literacy readiness between students from accredited preschools and non-accredited preschools entering three different elementary schools (Greer, 2019).

For this quantitative study, Greer (2019) had a possible population of 498 students who entered kindergarten at the three selected elementary schools in Pennsylvania ($n = 498$). After receiving IRB approval, Greer identified 169 students that had attended at least one year in an accredited preschool ($n = 169$) and 118 students that had attended at least one year in a non-accredited preschool ($n = 118$). The independent variable for the study was the student composite scores on the DIBELS Next Beginning of the Year (BOY) Kindergarten Benchmark

Assessment, a nationally normed emerging literacy assessment. The dependent variable was the accreditation status of the preschool attended (Greer, 2019).

After collecting the data, analyses were conducted using descriptive statistics, a two-tailed, non-directional independent samples *t*-test, and ANOVA (Greer, 2019). Greer accepted the null hypotheses for the research question. Although Greer's findings were not statistically significant at the time of the research, trends over time may be more telling. In terms of raw numbers, 59% of students from accredited preschools met the composite score for literacy readiness, compared to 55% of students from non-accredited preschools, indicating a higher percentage of kindergarten-ready students emerging from accredited programs. Moreover, when comparing the other end of the spectrum, 41% of students from accredited schools fell below the minimum composite score, while 45% of students from non-accredited schools fell below, signaling that a larger percentage of students from non-accredited schools may not be ready for kindergarten (Greer, 2019).

Accreditation Leads to Improvement

Most organizations can be defined as improving, stagnant, or declining. Schools engage in ongoing organizational change as a method for continual improvement. For most Christian schools, establishing a reputation of quality academics offered in a distinctive spiritual culture is tantamount to being a great Christian school. However, quality education and spiritual environments are challenging to define. To understand school improvement, consideration should be given to what factors constitute an improvement. In 2021, Johnston researched factors that contribute to schools' growth. Johnston observed that schools have faced increased pressure since the early 2000s due to changing expectations, lack of continued vision, and financial instability. However, after decades of decline, some schools were still witness to substantial

growth. The purpose of Johnston's study was to analyze three mid-sized Christian schools that had experienced three consecutive years of enrollment growth to determine factors associated with school growth.

Johnston (2021) conducted a qualitative model using a case study design of three schools to determine what practices influence Christian school enrollment and what factors influence parent decisions to enroll in a particular Christian school. Johnston relied on interviews, archival data, and documents such as mission and purpose statements, advertising materials, and marketing budgets for analysis. One principal from each school was interviewed and provided five parents to interview based upon recency of enrollment ($n = 18$). After receiving Institutional Review Board approval, the researcher obtained informed consent and interviewed the participants using crafted questions. The interviews were transcribed and coded using axial and open coding and then analyzed using within-case analysis to identify themes (Johnston, 2021).

From Johnston's (2021) research emerged three factors that influence enrollment growth in Christian schools. The first is the Biblical worldview and Christian environment. All participants agreed that the inculcation of biblical ideals into the curriculum and school culture was significant. The second factor was the "environment of community," where parents feel valued by the organization and believe their children are accepted and nurtured (Johnston, 2021, p. 64). The third factor was academics and programs. During the interviews, administrators and parents echoed the belief that the academic programs were excellent. Johnson (2021) pointed out that quality of academics and programs was a primary driver of decision-making.

An organization cannot grow beyond the organization's capacity. Expanding organizational capacity is at the core of improvement and, subsequently, school growth. According to Johnston (2021), three distinct factors align to school growth: spiritual community,

Biblical worldview, and quality academics and program. As measured by the League of Christian Schools (LCS), accreditation includes specific measures for Biblical worldview and Christian culture. The accreditation process attempts to identify a biblical worldview in all leadership, academia, programs, and services. Schools are evaluated on the degree to which the school adheres to consistent policies that are markedly biblical. As the primary factor in Christian school growth, this standard needs to be measured through accreditation. Additionally, the League has an entire standard devoted to the community, including a series of surveys for schools to use on parents, students, staff, and other stakeholders. These surveys intend to triangulate the degree to which the school cultivates a sense of community and resource sharing. In this study, Johnston affirmed that school growth, in part, hinged on quality academic programs. Johnston (2021) also affirmed that parents and administrators concurred on the importance of having a reputation for quality academics.

Moreover, each school head conveyed through interviews that they had a quality academic program (Johnston, 2021). Though it was not in Johnston's scope of research, student assessment performance adds validity to claims of quality academic programs. The LCS accreditation protocol requires schools to report student assessment data annually as a means of verifying compliance with standards and demonstrating a school's academic growth or loss. Quantifying test gains or losses can bolster a school's sentiment of quality academics.

League of Christian Schools' accreditation standards and processes align with and measure Johnston's (2021) school growth factors from a systemic perspective as these factors exist within a Christian school context. Research has also connected systems thinking to student performance and organizational improvement. Minnick (2016) conducted qualitative multi-case study of three public schools in Pennsylvania. Based in Senge's systems theory, Minnick's

research attempted to determine what elements of Senge's model were present throughout and responsible for improvement. Minnick focused on three schools, two of which successfully met adequate yearly progress (AYP), and one that did not. The independent variable was the presence of elements of the Senge model. The dependent variable was the successful completion of improvement to pass the AYP. It is important to note that Minnick recognizes the significant role that student assessments played in the AYP formula, including the improvement of underperforming students. Minnick used semi-structured interviews for the principals and a focus group of teachers from each school. After conducting the interviews, Minnick conducted within-case and cross-case analyses. Minnick's research found that all five elements of Senge's systems model were present in the two schools that met AYP, while they were lacking in the school that failed to turnaround. But, more significantly, Minnick concludes that the implementation of the Senge model had the cumulative result of improving student test scores. As has been pointed out, accreditation has shifted in recent years to evaluating the degree to which schools understand and manage the systems that improve the schools (Minnick, 2016).

Systems theory is the theoretical framework of this study. Where Minnick's (2016) research observed a relationship between systems theory and school improvement, Adhanom (2016) observed that other organizational frameworks may yield elements of organizational improvement as well. Abraham Adhanom applied organizational designs to Christian schools based on a grounded theory approach to establish a sustainability framework. Adhanom agreed that quality academics and the integration of faith are attributes of effective Christian schools. However, Adhanom was interested in creating a deeper understanding and structure for long-term sustainability within Christian schools. Adhanom conducted qualitative research to identify characteristics of a sustainable Christian school. The culmination of this research was a

theoretical framework for school improvement and sustainability using the acronym CONCORD: Connect, Organize, Negotiate, Cultivate, Optimize, Resource, and Develop (Adhanom, 2016).

Desiring to create an organizational performance model that could assist failing schools into transformation, Adhanom (2016) used purposeful sampling to identify 32 participants from five schools ($n = 32$) to guide his theory development. Unlike Johnston (2021), who was trying to identify factors for growth, Adhanom's research questions focused on preventing failure. Not only was Adhanom trying to discover attributes of effective Christian schools, but Adhanom also sought internal and external factors that lead to decline and ultimate failure. Adhanom's (2016) final research question focused upon his theory of a change model that may guide a Christian school toward continuous improvement.

Adhanom (2016) conducted interviews and reviewed documents after obtaining voluntary participating consent forms from participants, according to IRB requirements. The interview questions involved conceptualization in formulating concepts and operationalization in describing the attributes and values of variables represented in the research. The researcher grouped his interviews and interview questions categorically as strategic, managerial, and operational. Depending on the population, Adhanom used the corresponding category of questions accordingly (e.g., board members would receive strategic category questions). The transcribed interview data were analyzed with selective coding, organized into themes, and the results were presented in tables and descriptive narratives (Adhanom, 2016).

The culmination of Adhanom's (2016) research was an organizational and theoretical framework for school improvement that he notated by the acronym CONCORD:

"... Connect with the stakeholders of Christian education, organize capabilities, negotiate with constituents, cultivate desired spiritual, social and moral values; optimize product qualities and operational strengths, aggressively build resources, and develop efficient systems and processes to sustain continuous improvement and performance transformation initiatives" (p. 167).

Deliberately naming his framework with action verbs, Adhanom (2016) intended to depict schools' activities toward organizational improvement. Furthermore, built upon predominant organizational change models, Adhanom's (2016) framework reflects five critical components of the accreditation standards and protocols used by the League of Christian Schools. Adhanom's work further underscored the efficacy of the accreditation model by aligning the crucial improvement factors to the STAR model of organizational change, a "holistic way of thinking about an organization as consisting of a structure, information decision processes, reward systems, and people" (Galbraith, 2014, p. 16). Adhanom's research also substantiated that research continues to affirm that undertaking activities such as the CONCORD framework or LCS accreditation protocol are likely to yield increased organizational capacity and sustainability (2016).

Adhanom's (2016) research also highlighted the value of systems thinking as his model views an organization's activities as interrelated and intersecting in meaningful ways to fulfill the school's mission. Modern accreditation protocols are increasingly based on systems theory, analyzing systems rather than isolated practices and policies. The LCS accreditation model is based upon a systems theory approach to school improvement. Systems theory of organizations posits that an organization is made up of systems that interact (Senge, 2006). Accreditation based upon systems theory may improve schools to a greater degree than non-systems models. Such

were the findings of research conducted by Fleming (2018), which compared two accreditation processes and models, AdvancED's systems theory model and Michigan Department of Education's non-systems-based model.

Improvements Resulting from Accreditation

Research affirms that accreditation aligns clearly to factors that lead to improvement, including growth factors, organizational models, and systems theory. Evidence also exists to validate that accreditation improves schools. Student improvement generally means improvement in assessment scores (*U.S. Department of Ed, n.d.*). The research presented by Fleming (2018) and Stots (2019) considered the impact of accreditation on student academic performance.

Fleming (2018) used a quantitative design with a causal-comparative approach to determine if a statistical significance exists between the School Systems Review (Michigan) and the Interim Self-Assessment (AdvancED), as well as academic achievement on the Michigan Top to Bottom list. Fleming used a random selection of 40 schools accredited by the Michigan Department of Education and 40 accredited by AdvancED ($n = 80$) for her research. The independent variable was the accreditation protocol. The dependent variables were the percentile rank, gap percentile rank, and improvement percentile rank based upon the Michigan DOE Top to Bottom (TTB) list. The instruments used were the School Systems Review for Michigan state-accredited schools, the Interim Self-Assessment for AdvancED accredited schools, and the Education YES! diagnostic document that is required for all Michigan accredited schools (Fleming, 2018).

This research was conducted post hoc; therefore, the researcher collected existing data from the School Systems Review (SSR) for Michigan-accredited schools (Fleming, 2018).

Fleming collected data from the Interim Self-Assessment (ISA) for AdvancED-accredited schools. The researcher conducted statistical analysis for this study to determine the frequency, mean, median, and percentages for the process data collected from the SSR and ISA diagnostics. Fleming then used *z*-scores to determine the ranking above or below the state average. The data were analyzed using a one-way ANOVA to determine the statistically significant variance (Fleming, 2018).

Fleming (2018) found that schools accredited with a systems theory framework have a statistically significantly higher mean on the Michigan Top To Bottom list. The researcher concludes that systems theory is an appropriate and effective tool for turning around struggling and low-performing schools. Fleming (2018) pointed out that there is limited research utilizing quantitative methods in evaluating accreditation models and school efficacy. This research is valuable for the public sector and challenges schools in the private sector to consider how the systems theory of accreditation can assist schools on the improvement journey .

Research conducted by Stott (2019) arrived at the opposite conclusion than Fleming (2018). Stotts conducted quantitative research using a causal-comparative approach to measure the impact of AdvancED STEM accreditation on student test outcomes in Georgia public elementary schools accredited using the AdvancED STEM ($n = 20$) certification model. The sample population given in Stott's research was all students in 20 elementary schools, although Stott did not provide that number of students. Stott's research question focused on increasing student test performance in language arts, math, science, and social studies, using test scores for two years prior to accreditation and two years after accreditation. Stott's independent variables were schools before accreditation and schools after accreditation. The dependent variables were the end-of-grade assessments for elementary students (Stotts, 2019).

Stott (2019) analyzed existing post hoc assessment data provided by the Georgia Department of Education, eliminating the requirement of informed consent from participants. To analyze the data, the study used an independent *t*-test, comparing the means from the group before accreditation to the group after receiving accreditation. As a result of the analysis, Stott was forced to accept the null hypothesis for all four subjects (2019).

Although this is the opposite finding of Fleming (2018), differences between Stott (2019) and Fleming may be more reflective of the respective systems in which the schools operate. Since both researchers arrived at opposite conclusions with the same accreditation model, the discrepancy may very well be explained in the analysis between the states of Georgia and Michigan. Both Stott's (2019) and Fleming's (2018) research were vital because both identified significant indicators of organizational improvement beyond student assessment data, signaling that organizational improvements may exist in areas of the school that are not reflected in student assessment results.

As pointed out in other studies, quality academics are a factor of improvement and growth (Fleming, 2018; *US Department of Ed*, n.d.; Stotts, 2019). However, even national proctored exams such as the National Assessment of Educational Progress (NAEP), the only nationally administered subject-level student assessment in the U.S, has shown score stagnation for decades (National Center for Education Statistics, 2021).

Summary

Chapter 2 has presented pertinent literature on K12 accreditation, a description of two accreditation models, research germane to accreditation outcomes, and the role accreditation has played in improving educational institutions. The background information sheds light on administrators' and educators' perceptions regarding the accreditation process.

The literature review demonstrates the tremendous need for further research in K12 accreditation and, more specifically, private school accreditation. What is clear from the research is that schools that fail to meet academic benchmarks can and do have accreditation denied (Hubbard, 2019). Furthermore, non-accredited private schools will continue to be subject to greater scrutiny when graduates attempt to enroll in institutions of higher learning (LeForestier, 2018). In Chapter Three, the researcher presents the methodology of this study.

III. METHODOLOGY

This quantitative methods study aimed to determine if there was a correlation between accreditation and school improvement for Christian schools engaged in the League of Christian Schools (LCS) accreditation process. This chapter reviews the methodology and design for this research study, wherein data from Effective Learning Environment Observation Tool (eleot) scores and student assessments taken prior to accreditation are compared to the same data five years after earning accreditation. The data for the study consisted of eleot scores, student assessment data collected during the initial accreditation visit, the same data collected prior to the 5-year accreditation renewal cycle, and survey responses from heads of schools. Additionally, head of schools were asked to provide feedback concerning their perceptions of improvement following accreditation approval.

Description of Methodology

A non-experimental, quantitative research design was used to address the study's topic and research problem. The specific research methodology was a survey research approach (Fraenkel et al., 2019). Survey research was adopted for use in the study for its benefit of generating considerable amounts of data on a given topic, its flexibility, scalability and its ability to generate considerable statistical power for statistical significance testing purposes (Jones et al., 2013). Survey research allows for the possibility of generalization of findings to real world settings and is an attractive methodological choice for study purposes considering its ability to

generate large amounts of data in an efficient, cost-sensitive manner (Muijs, 2011). Additionally, surveys can be more effective in guaranteeing anonymity, thereby promoting the possibility of more candid responses to survey items. The survey approach is also thought to be well-suited for the purposes of canvassing opinions, feelings and perceptions associated with a particular topic or issue in question.

The non-experimental research design was considered best suited for the study considering that it is not dependent upon the manipulation of an independent variable. The study was conducted using a cross-sectional survey considering its exclusion of manipulation of the independent variable and exclusion of random assignments of participants in groups, common features associated with traditional experimental designs.

Research Context

For this study, the accreditation status served as the independent variable. The student achievement data and the eleot scores were dependent variables. The researcher utilized a correlation analysis to examine differences between pre-accreditation test performance and eleot data compared to the same data five years later, prior to re-accreditation.

Some literature exists germane to K12 school accreditation; however, a gap exists in the literature where accreditation, student achievement, and learning environment are connected. Much literature has been written concerning accreditation for higher education; however, a void remains where the overall effectiveness of accreditation actualizes school improvement in K12 programs. This study aims to provide a positive addition to the body of knowledge regarding the role of accreditation in improving K12 education to guide future education leaders on the school improvement journey.

Participants

The population for this study included 67 K12 schools that had earned accreditation from the League of Christian Schools between 2011 and 2022. Through the Cognia accreditation dashboard, data was gathered regarding the eleot data for, including school-wide eleot scores. Additionally, student achievement data was collected from schools' annual reporting of accreditation progress in the annual Accreditation Survey and Progress Report (ASPR) and using surveys. The ASPR is required annually for each accredited program and validates compliance to the standards, including administering a nationally normed achievement test or equivalence. Since not all schools are fully compliant on both the eleot and the student achievement data, 21 schools had submitted complete data for both. Unfortunately, because accreditation visits randomly select classrooms to view, there were insufficient replications of eleot and assessment data to triangulate.

The sampling technique that was used in the study was considered non-probability and purposive in nature (Mills & Gay, 2019). The sample population for the study was defined and delimited to the heads of schools in K12 Christian schools that have undergone initial accreditation and at least one additional 5-year term of accreditation through the League of Christian Schools accreditation agency. All schools that met these criteria were considered a part of the target population. For study participation purposes, schools must also have administered the *Effective Learning Environments Observation Tool* (eleot).

Statistical Power Analysis

Statistical power analysis using the G*Power software (3.1.9.2, Universität Düsseldorf, Germany) was conducted for sample size parameter estimates associated with statistical significance testing purposes at the outset of the study (Faul et al., 2009). The study's statistical

power analysis was delimited to foreseen large and medium response effects, a power ($1 - \beta$) index of .80, and a probability level of .05. A one-sample *t*-test was used for statistical significance testing purposes in research questions one and two. As such, a medium effect ($d = .50$) required 27 participants and 12 for a large effect ($d = .80$) to detect a statistically significant finding. The study's final, actionable sample of participants was 25.

Instruments

The study's research instrument, a closed structured Likert-type survey consisting of 11 survey items, was researcher-created considered the absence of a standardized research appropriate in addressing the study's construct. Research instrument validation was addressed through a three-phase validation process like the validation procedure proposed by Boateng, et. al (2018). The research instrument was comprised of a 5-Point Likert-type scale, ranging in response choice from "strongly agree" to "strongly disagree", with a mid-scale option of "uncertain". The 5-Point Likert-type scaling was selected for use in the study for its robustness in matters of internal reliability. As Dillman, et. al., (2014) noted, "The most common format used today employs the five categories of "strongly agree, agree, undecided (or neither agree nor disagree), disagree, and strongly disagree. The use of such named categories is user-friendly and has been found to provide acceptable levels of reliability" (p. 159)

In the first phase of the instrument validation process, the content validity judgement phase, themes considered essential to the study's construct were converted into survey items through a subject/matter expert (SME) jury-type process. In the second phase of the instrument validation process, the survey draft was administered to a small group of potential study participants on a pilot study basis. Data achieved through the pilot study administration were assessed for internal reliability purposes using Cronbach's alpha (α). At the outset of the study,

an alpha level of at least $\alpha = .70$ was viewed as adequate, providing support for moving ahead with the survey for its final administration (George & Mallery, 2019). The internal reliability level achieved in the pilot study phase of research instrument validation far-exceeded the threshold value of $\alpha = .70$, thereby validating the research instrument's use in the study. The third phase of the instrument validation process involved the final administration of the survey to the entire group of study participants and the assessment of internal reliability of study participant response to survey items on the research instrument using Cronbach's alpha.

The teacher instructional performance variable was measured using the *Effective Learning Environments Observation Tool* (eleot). The eleot is a classroom observation instrument with 28 indicators organized into seven categories called *environments*: 1) Equitable Learning, 2) High Expectations, 3) Supportive Learning, 4) Active Learning, 5) Progress Monitoring and Feedback, 6) Well-Managed Learning, 7) Digital Learning (Cognia Improvement Network, n.d., para. 2). The tool is produced by Cognia, which stated, "The eleot provides useful, relevant, structured, and quantifiable data on the extent to which students are engaged in activities and/or demonstrate knowledge, attitudes, and/or dispositions that are conducive to effective learning" (*EProve™ Eleot® - The Effective Learning Environments Observation Tool*, n.d.-a, para. 1). Reliability and validity are regularly analyzed to confirm the eleot accurately reflects "classroom practices across a school on a given day" (*EProve™ Eleot® - The Effective Learning Environments Observation Tool*, n.d.-a, sec. Is eleot a valid and reliable tool?). Members of the accreditation team administer the eleot in each school during the accreditation visit. To utilize the eleot, accreditation team members must earn and maintain eleot certification, which ensures consistent results with the instrument. As a follow-up, an ancillary

analysis was conducted using eleot scores for future consideration in additional studies on the topic of accreditation.

Validity of Stanford Achievement Tests (SAT10)

Since 1923, the Stanford Achievement Test (SAT10) has been a significant part of the K12 academic landscape (Carney & Morse, 2005). The SAT10 has been developed intentionally to reduce any biases from stereotyping to biases in gender, ethnicity, cultural identity, disability, or social economic status. The content of the SAT10 is valid, as evidenced in the test blueprint and content development. However, the developers of the SAT10 observed that each school must “determine that the content of the test matches the curricula” of the school (Carney & Morse, 2005, para. 15).

Reliability of Stanford Achievement Tests

Additionally, the assessment is regarded as a reliable and valid measure of academic achievement. The SAT10 was analyzed using a review of Kuder-Richardson Formula 20 (KR20) coefficients. The tests were deemed reliable, with the majority of tests in the “mid-.80s to .90s” (Carney & Morse, 2005, para. 13).

Validity of Iowa Test of Basic Skills (ITBS)

The Iowa Test of Basic Skills (ITBS) has been used for measuring student growth in achievement for math, reading, language, and other areas since 1955. Validity for the ITBS is similar to the SAT10 in that the publisher recommends an item-by-item analysis in determining the validity of the test for the user. However, to eliminate bias, additional statistical data is available for the ITBS that summarizes item analyses, including item p -values and discrimination indices.

Reliability of Iowa Test of Basic Skills (ITBS)

The Iowa Test of Basic Skills is a nationally norm-referenced test with reliability coefficients based on KR20 in the expected range of the middle .80s to low .90s (Engelhard & Lane, 2007).

Validity of Terra Nova

The Terra Nova test battery provides educators with a comprehensive tool to measure and monitor student progress relative to local, state, and national standards in the domains of reading, language, mathematics, science, and social studies. The Terra Nova 3 has been developed intentionally to ensure both content and construct reliability (Anderson & Harwell, 2010).

Reliability of Terra Nova

“Intraclass correlations and weighted kappa coefficients were used to assess agreement among raters” (Anderson & Harwell, 2010, para. 25). The values reported exceeded .90, pointing to sufficient reliability.

Validity of Measure of Academic Progress (MAP)

Validity coefficients for the MAP strongly related to the ITBS and the SAT9. Coefficients have not shifted more than 0.01 in over a quarter of a century.

Reliability of Measure of Academic Progress

The reliability of MAP was tested using a marginal reliability estimate based on a test-retest scenario. The standard of error was low, indicating a high level of efficiency.

Validity of Effective Learning Environment Observation Tool (eleot)

“Face validity based on test content has been established through expert judgments of the theoretical relationship between the seven environments and the 30 items describing aspects of

those environments.” (*EProve™ Eleot® - The Effective Learning Environments Observation Tool*, n.d.-a, sec. Research)

Reliability of Effective Learning Environment Observation Tool (eleot)

“The overall reliability of the measure is .94 using Cronbach's Alpha, which is considered a very strong level of reliability” (*EProve™ Eleot® - The Effective Learning Environments Observation Tool*, n.d.-a, sec. Research).

Procedures

This study examined the perceptions of private school administrators toward school improvement efforts in the years following initial accreditation, as well as the impact accreditation has on student performance and the learning environment. The researcher compared schools with different demographic characteristics based on school size and population, as well as whether the school operates in an urban, rural, or suburban context. Prior to data collection, documentation required by the university's Institutional Review Board was submitted and approved for conducting this study (Appendix A). After returning the Informed Consent form, heads of schools received an email with the link to the online survey. The email contained an explanatory letter with detailed instructions and an explanation of the purpose of the survey (Appendix B). Once enough surveys had been submitted online, the researcher coded and analyzed the data.

Assessment data for reading and math from accredited schools were collected during the year prior to initial accreditation and then the year of the 5th year of accreditation. This data was entered into a spreadsheet for easy management. Assessment data were collected as National Percentile Rankings or Normal Curve Equivalents.

In addition to the student assessment data, the researcher collected scores from the Effective Learning Environment Observation Tool (eleot). This data was collected from accreditation reports that had been submitted from the initial accreditation and then from the five-year accreditation renewal. These two data points represented the eleot score prior to being awarded accreditation and the eleot scores after being accredited for five years. This data was transferred to a spreadsheet for easy management. Data was stored as overall eleot for each school, and then the data for each reading and math class within each school.

Data Analysis

The study's preliminary, foundational analyses were descriptive in nature and technique. Demographic data were analyzed using frequencies (n) and percentages (%). Initial survey response findings were addressed using the descriptive statistical measures of central tendency (mean scores), variability (standard deviations; minimums/maximums), standard errors of the mean, and data normality (skewness and kurtosis) for comparative and illustrative purposes.

The study's two research questions were addressed using descriptive and inferential statistical techniques. The probability level of $p \leq .05$ was identified for study purposes as the threshold value for findings to be considered statistically significant. The conventions of effect size interpretation proposed by Cohen (1988) and Sawilowsky (2009) were used to describe magnitudes of effect from the numeric effect sizes (d) achieved in the analyses in research questions one and two.

In research questions one and two, the one sample t -test was used to assess the statistical significance of study participant mean score response within the two research questions (Gerald, 2018). The assumption of data normality in research questions one and two was assessed through an inspection of the dependent variable's respective skew and kurtosis values. Skew values

between $-2.0/+2.0$ and kurtosis values between $-/+7.0$ were considered indicative of data normality (George & Mallery, 2019). The magnitude of response effects achieved in research questions one and two were addressed using Cohen's d (Field, 2017). The study's data were initially collected and recorded in Excel Spreadsheet format, and subsequently migrated to the 29th version of IBM's Statistical Package for the Social Sciences (SPSS) for analytic and reporting purposes.

Research Questions

The study's topic and purpose were addressed through the statement of two research questions. The following represents the two research questions that were formally stated for study purposes:

Research Question 1

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in the impact of leadership capacity?

Research Question 2

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in Instruction?

Additional Research Question

To what degree did teacher instructional environment scores change after earning accreditation?

Summary

Chapter 3 summarizes the essential elements of the study's methodology. A quantitative, non-experimental research design featuring a survey research approach was used for study

purposes. Two research questions were formally stated to specifically address the study's topic and purpose, and descriptive and inferential statistical techniques were used to analyze study data. Chapter 4 contains the formal reporting of findings achieved in the study's analysis.

IV. RESULTS

This quantitative methods study aimed to determine if there was a correlation between accreditation and school improvement for Christian schools engaged in the League of Christian Schools accreditation process. This chapter reviews the results for this research study wherein a pre-experimental, retrospective quantitative research design was used to address the study's topic. The primary specific research methodology adopted was a survey research approach. The data collected for this study included surveys, eleot scores, and student assessment data prior to accreditation and the 5-year accreditation renewal cycle.

Two specific constructs were addressed in the study: leadership capacity and instruction. Two research questions were proffered to address the purpose and research problem, and a combination of descriptive, inferential, and associative/predictive statistical techniques were used to analyze the data.

Methods of Data Collection

Surveys were used to collect opinions on school improvement efforts following accreditation. After receiving IRB approval, the survey invitation was sent to schools by email with a letter and an informed consent form. Once the Informed Consent form was received, an email was sent to the participant with the internet link to the online survey. In the survey, schools had the option to submit assessment data for their last year of accreditation and 5 years prior.

Additionally, eleot data was used from archived data for each school participating. Observation results from eleot are maintained in an online database used by the League of Christian Schools.

The purpose of the study was to evaluate the degree to which accreditation experience and school improvement efforts effect school operations and outcomes for Christian schools engaged in the League of Christian Schools accreditation process. The following represents the formal reporting of study findings at the foundational descriptive statistical level of analyses and for the analyses associated with the study’s two research questions and hypotheses.

Descriptive Statistical Findings

Demographic Identifying Information

The study’s demographic information was evaluated using descriptive statistical techniques. The study’s demographic information was more specifically addressed using the descriptive statistical techniques of frequencies (*n*) and percentages (%).

Table 1 contains a summary of finding for the descriptive statistical analysis of the study’s demographic identifying information of participant geographic setting, school census (post accreditation), and school enrollment.

Table 1

Descriptive Statistics Summary Table: Demographic Variables

Demographic Variable	<i>n</i>	%	Cumulative %
Geographic Setting			
Rural	5	20.00	20.00
Urban	3	12.00	32.00
Suburban	17	68.00	100.00
Missing	0	0.00	100.00
Census (Post Accreditation)			
Much Lower Enrollment (25% or Greater Decrease)	2	8.00	8.00
Lower Enrollment (5% 24% Decrease)	1	4.00	12.00
About the Same Enrollment	1	4.00	16.00

Demographic Variable	<i>n</i>	%	Cumulative %
Higher Enrollment (5 % to 24%)	6	24.00	40.00
Much Higher Enrollment (25% or Greater)	15	60.00	100.00
Missing	0	0.00	100.00
School Enrollment			
150 or Less	8	32.00	32.00
151 to 350	9	36.00	68.00
351 to 600	4	16.00	84.00
601 and Greater	4	16.00	100.00
Missing	0	0.00	100.00

Descriptive Statistics: Study Constructs (Leadership Capacity; Instruction)

Descriptive statistical techniques were utilized to assess the study's response set data within the two constructs identified for study purposes (Leadership Capacity and Instruction). The study's response data were specifically addressed using the descriptive statistical techniques of frequencies (*n*), measures of typicality (mean scores), variability (minimum/maximum; standard deviations), standard errors of the mean (SE_M), and data normality (skew; kurtosis).

Table 2

Descriptive Statistics Summary Table: Study Constructs: Leadership, Resources, Leadership Capacity (Leadership & Resources), Instruction, and Overall

Construct	<i>M</i>	<i>SD</i>	<i>n</i>	SE_M	Min	Max	Skew	Kurtosis
Leadership	4.28	0.53	25	0.11	3.00	5.00	-0.52	-0.37
Resources	4.17	0.59	25	0.12	3.00	5.00	-0.05	-0.93
Leadership Capacity	4.22	0.51	25	0.10	3.09	5.00	-0.07	-0.61
Instruction	4.20	0.60	25	0.12	3.00	5.00	-0.18	-0.89
Overall	4.21	0.52	25	0.10	3.23	5.00	0.06	-0.86

Table 2 contains a summary of finding for the descriptive statistical analysis of the study's response set data associated with the constructs (Leadership Capacity; Instruction),

subconstructs of Leadership Capacity (Leadership; Resources), and the overall summary response level value for all 22 survey items represented on the study’s research instrument.

Table 3 contains a summary of finding for the descriptive statistical analysis of the study’s response set data associated with the constructs (Leadership Capacity; Instruction), and the overall summary response level value for all 22 survey items represented on the study’s research instrument by study participant geographic setting.

Table 3

Descriptive Statistics Summary Table: Study Constructs: Leadership Capacity (Leadership & Resources), Instruction, and Overall, by Geographic Setting

Setting/Construct	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skew	Kurtosis
Rural								
Leadership Capacity	4.27	0.53	5	0.24	3.45	4.73	-0.69	-0.88
Instruction	4.24	0.83	5	0.37	3.00	5.00	-0.50	-1.01
Overall	4.25	0.68	5	0.30	3.23	4.86	-0.57	-0.95
Urban								
Leadership Capacity	3.94	0.19	3	0.11	3.73	4.09	-0.53	-1.50
Instruction	3.79	0.29	3	0.17	3.45	4.00	-0.63	-1.50
Overall	3.86	0.12	3	0.07	3.77	4.00	0.60	-1.50
Suburban								
Leadership Capacity	4.25	0.55	17	0.13	3.09	5.00	-0.15	-0.62
Instruction	4.26	0.57	17	0.14	3.18	5.00	-0.26	-0.96
Overall	4.25	0.51	17	0.12	3.27	5.00	0.07	-0.93

Table 4 contains a summary of finding for the descriptive statistical analysis of the study’s response set data associated with the constructs (Leadership Capacity; Instruction), and the overall summary response level value for all 22 survey items represented on the study’s research instrument by study participant school enrollment category.

Table 4

Descriptive Statistics Summary Table: Study Constructs: Leadership Capacity (Leadership & Resources), Instruction, and Overall, by Enrollment Category

Enrollment/Construct	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skew	Kurtosis
150 and Less								
Leadership Capacity	3.90	0.37	8	0.13	3.09	4.36	-1.20	0.93
Instruction	3.83	0.42	8	0.15	3.18	4.36	-0.26	-1.35
Overall	3.86	0.31	8	0.11	3.27	4.27	-0.71	-0.16
151 to 350								
Leadership Capacity	4.19	0.52	9	0.17	3.45	4.91	0.002	-1.35
Instruction	4.25	0.71	9	0.24	3.00	5.00	-0.41	-0.95
Overall	4.22	0.58	9	0.19	3.23	4.95	-0.13	-0.95
351 to 600								
Leadership Capacity	4.68	0.47	4	0.24	4.00	5.00	-0.92	-0.89
Instruction	4.64	0.51	4	0.26	3.91	5.00	-0.82	-1.00
Overall	4.66	0.49	4	0.25	3.95	5.00	-0.87	-0.94
601 and Greater								
Leadership Capacity	4.45	0.43	4	0.21	4.00	5.00	0.31	-1.22
Instruction	4.36	0.43	4	0.21	4.00	4.82	0.09	-1.88
Overall	4.41	0.40	4	0.20	4.00	4.82	0.00	-1.85

Internal Reliability

The internal reliability of study participant response to survey items associated with the two constructs featured in the study was evaluated using the Cronbach's alpha (α) statistical technique. Using the conventions of alpha interpretation offered by George and Mallery (2020), the internal reliability levels achieved in the study across all 22 survey items represented on the research instrument was excellent at $\alpha = .95$. Exceptional levels of internal reliability were achieved for the constructs of Leadership Capacity ($\alpha = .89$) and Instruction ($\alpha = .93$).

Table 5 contains a summary of finding for the evaluation of internal reliability of study participant response to survey items across all 22 survey items represented on the research instrument.

Table 5

Internal Reliability Summary Table: Overall (All Items)

Scale	# of Items	α	Lower Bound	Upper Bound
Overall	22	.95	.92	.97

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Table 6 contains a summary of finding for the evaluation of internal reliability of study participant response to the 11 survey items associated with the construct of Leadership Capacity represented on the research instrument.

Table 6

Internal Reliability Summary Table: Construct of Leadership Capacity

Scale	# of Items	α	Lower Bound	Upper Bound
Leadership Capacity	11	.89	.84	.94

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Table 7 contains a summary of finding for the evaluation of internal reliability of study participant response to the 11 survey items associated with the construct of Instruction represented on the research instrument.

Table 7*Internal Reliability Summary Table: Construct of Instruction*

Scale	# of Items	α	Lower Bound	Upper Bound
Instruction	11	.93	.90	.97

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Findings by Research Question

The study's research problems were addressed through the formal statement of two research questions. The probability level of $p < .05$ represented the threshold value for findings in the research question to be considered as statistically significant. The conventions of effect size interpretation offered by Sawilowsky (2009) were applied to numeric effect sizes achieved in the analyses associated with the study's research questions. The following represents the reporting of findings by research question stated in the study.

Research Question #1

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in the impact of leadership capacity?

The one sample t -test (Gerald, 2018) was used to assess the statistical significance of study participant mean score response to perceptions of the effect of accreditation upon the school's operation in the construct of Leadership Capacity. The assumption of data normality in research question one was assessed through an inspection of the dependent variable's skew and kurtosis values. Applying the conventions of data normality through the data array's skew and kurtosis values proposed by George & Mallery (2019), the skew value of -0.07 and kurtosis value of -0.61 were well-with the parameters of $-/+2.0$ for skewness and $-/+7.0$ for kurtosis,

thereby satisfying of the assumption of data normality associated with the use of the one sample t test in research question one.

Study participant mean score perceptions of the effect of accreditation upon the school’s operation in the construct of Leadership Capacity of 4.22 (SD = 0.51) was statistically significant ($t(24) = 11.91; p < .001$). The magnitude of effect for study participant perceptions of the effect of accreditation upon the school’s operation in the construct of Leadership Capacity was considered as huge at $d = 2.38$.

Table 8 contains a summary of finding for study participant perceptions of the effect of accreditation upon the school’s operation in the construct of Leadership Capacity.

Table 8

Summary Table: Perceptions of the Effect of Accreditation upon the Construct of Leadership Capacity

Construct	<i>M</i>	<i>SD</i>	μ	<i>t</i>	<i>p</i>	<i>d</i>
Leadership Capacity	4.22	0.51	3	11.91	< .001	2.38

Note. Degrees of Freedom for the t -statistic = 24. d represents Cohen's d .

Research Question #2

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process leads to school improvement in Instruction?

The one sample t -test (Gerald, 2018) was used to assess the statistical significance of study participant mean score response to perceptions of the effect of accreditation upon the school’s operation in the construct of Instruction. The assumption of data normality in research question two was assessed through an inspection of the dependent variable’s skew and kurtosis values. Applying the conventions of data normality through the data array’s skew and kurtosis

values proposed by George & Mallery (2019), the skew value of -0.18 and kurtosis value of -0.89 were well-with the parameters of ± 2.0 for skewness and ± 7.0 for kurtosis, thereby satisfying of the assumption of data normality associated with the use of the one sample *t*-test in research question two.

Study participants' mean score perceptions of the effect of accreditation upon the school's operation in the construct of Instruction of 4.20 (SD = 0.60) was statistically significant ($t(24) = 9.99; p < .001$). The magnitude of effect for study participant perceptions of the effect of accreditation upon the school's operation in the construct of Instruction was considered as huge at $d = 2.00$.

Table 9 contains a summary of finding for study participant perceptions of the effect of accreditation upon the school's operation in the construct of Instruction.

Table 9

Summary Table: Response Perceptions of the Effect of Accreditation upon the Construct of Instruction

Construct	<i>M</i>	<i>SD</i>	μ	<i>t</i>	<i>p</i>	<i>d</i>
Instruction	4.20	0.60	3	9.99	< .001	2.00

Note. Degrees of Freedom for the *t*-statistic = 24. *d* represents Cohen's *d*.

Follow-up Ancillary Finding (eleot Data)

A follow-up analysis of an ancillary nature was conducted to evaluate the effect of accreditation upon eleot scores. A *t*-test of Dependent Means (Field, 2017) was used to assess the statistical significance of mean score eleot change from the pre-accreditation period to the post-accreditation period of the study. The assumption of data normality in the follow-up, ancillary analysis was assessed through an inspection of the dependent variable's skew and kurtosis values of the pre/post difference score array. Applying the conventions of data normality through the

data array's skew and kurtosis values proposed by George & Mallery (2019), the skew value of -0.20 and kurtosis value of -0.21 were well-with the parameters of $-/+2.0$ for skewness and $-/+7.0$ for kurtosis, thereby satisfying of the assumption of data normality associated with the use of the *t*-test of Dependent Means in the follow-up, ancillary analysis.

The mean score difference of 0.17 was statistically significant ($t(27) = 2.73; p = .005$).

The magnitude of intervention effect for the variable of accreditation was considered medium at $d = .52$.

Table 10 contains a summary of finding for the effect of accreditation upon eleot scores from the pre-accreditation to post-accreditation periods of evaluation.

Table 10

Summary Table: Effect of Accreditation upon eleot Scores (Pre-Accreditation/Post-Accreditation)

Post-Accreditation		Pre-Accreditation		<i>t</i>	<i>p</i>	<i>d</i>
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
3.07	0.26	2.90	0.29	2.73	.005**	0.52

Note. N = 28. Degrees of Freedom for the *t*-statistic = 27. *d* represents Cohen's *d*. ** $p < .01$

Summary

Chapter 4 contains the findings achieved in the study. Exceptional levels of internal reliability were reflected in the constructs of Leadership Capacity and Instruction. The level of internal reliability reflected in study participant response to all 22 items represented on the research instrument was excellent. Statistically significant intervention effects for the variable of accreditation were reflected in both constructs (Leadership Capacity; Instruction). Moreover, the intervention effects of accreditation for both constructs were considered huge. A follow-up, ancillary analysis focused upon the intervention effect of accreditation for eleot scores was

conducted. The effect of accreditation upon eleot scores was statistically significant, reflecting a medium intervention effect.

Chapter 5 contains a discussion of the findings of the study as reported in Chapter 4.

V. DISCUSSION

This quantitative methods study aimed to determine if there was a correlation between accreditation and school improvement for Christian schools engaged in the League of Christian Schools accreditation process. This chapter reviews the results for this research study, wherein data from surveys, as well as Effective Learning Environments Observation Tool (eleot) scores and student assessments, are compared and analyzed. The data collected for this study included surveys, eleot scores, and student assessment data prior to accreditation and the 5-year accreditation renewal cycle. The reported results of the survey data and eleot scores were central for responding to the research questions below:

1. To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process lead to school improvement in the impact of instruction?
2. To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process lead to school improvement in leadership capacity?

The general premise of this study was to determine if accreditation serves as an effective framework in providing a systemic process for school improvement. The accreditation process followed by the League of Christian Schools (LCS) is systemic and aligned to the systems theory framework as presented by Senge (2006) and others (Carr-Chellman & Carr-Chellman, 2020, 2020; Kim & Senge, 1994; Lyden, 1969). Schools choose to be accredited by applying for

accreditation and paying the required fees. After working to align the school's policy and practice to the framework of accreditation, a school should experience measurable improvement and increased organizational capacity. The results of this study show favorable results were achieved in LCSaccredited schools. The following represents a discussion of the study's findings as reported in chapter 4.

Review of Methodology

This study used multiple methodologies to determine whether accreditation can be used as a framework for school improvement in private Christian schools. A survey created by the researcher was used to capture perceptions of heads of schools. Observation results from the elect were collected from the database for accreditation managed by the LCS. Student assessment data in math and reading were gathered through the accreditation annual reporting and as an option at the end of the survey.

Summary of Results

The survey used by the researcher contained 22 survey items rated on a Likert scale. Twenty-five participant schools ($n = 25$) responded to the survey, which was adequate in providing statistical power for significance testing and for sufficiently addressing research questions one and two. Internal reliability of the study's participant responses to the survey demonstrate that exceptional levels of internal reliability were reflected in participant responses to all 22 items on the research instruments, as well as within the two constructs that represented the focus of the investigation: leadership and instructional impact. These exceptional levels of reliability support the use of the study's research instrument, as data produced by the instrument were both accurate and reliable in addressing the study's overarching construct. Moreover, the exceptional levels of internal reliability achieved through the use of the study's instrument

reinforce the credibility and trustworthiness of findings germane to the research questions posed within the study.

Heads of schools in LCS-accredited schools anonymously responded to a 22-item survey that contained questions focusing on two domains. The leadership domain included 11 questions concerning the principal's perceptions of school improvement in the area of leadership. Leadership was categorized as either governance (executive leadership) or resource management (operational leadership). The instructional domain consisted of 11 questions regarding the perceptions of principals toward the impact accreditation may have on the overall impact of the school's instructional program. Information from the demographic questions was used to make comparisons. Data were analyzed based on two demographic questions and the two domains of the survey. The survey used Likert scale responses that read strongly agree, agree, uncertain, disagree, and strongly disagree. The demographic variables were school size by students (0-150, 151-350, 351-600, 601-1000, >1000), school population context (urban, suburban, rural), and year of last accreditation visit.

The major finding of this research study is the strong belief by heads of schools that their schools improved in the 5 years following the initial accreditation. When analyzing the results for all questions for both domains (leadership and instruction), a strong response ($M = 4.21$) was achieved. This belief was affirmed by principals in large and small schools, as well as schools in rural, suburban, and urban settings.

Heads of schools from accredited schools perceived that leadership capacity is greater after accreditation. The mean responses from schools from all demographics agreed on improvements in leadership capacity. Leadership was categorized in two categories: leadership and resource management. Heads of schools rated leadership higher than resource management.

The accreditation domain views leadership as executive leadership and governance, while resource management refers to the effective use of resources, whether assets, fiscal, or human resources.

Heads of schools from accredited schools also perceived that the impact of instruction improved in the years following accreditation. The survey covers instructional impact from a leadership perspective. The survey focused on professional development, program offerings, focus on student need, and parent involvement. Heads of schools perceived that systems that expanded and focused on these leadership functions were increasing in the years after accreditation.

Learning environments were also more effective after 5 years of accreditation. The Effective Learning Environment Tool (eleot) is an observation tool used by the accreditation team that evaluates the effectiveness of student engagement in the classroom. Scores for the eleot were compared for all accredited schools. The analysis compared eleot scores from the initial accreditation and the eleot scores collected five years later during their accreditation renewal. The analysis showed statistical significance between the scores, affirming the improvement of classroom effectiveness following accreditation.

When asked about census data, 60% of respondents reported their schools as having much higher enrollment, defined in the survey as student growth 25% or greater. An additional 24% of respondents reported their school as having higher enrollment, defined in the survey as 5 % to 24% more students. Combined, 84% of schools surveyed indicated student growth following accreditation. Only four schools reported that student populations were about the same, fewer, or much fewer. No conclusions could be made regarding the school's location (urban, suburban, or rural).

Discussion by Research Question

Leadership

Research Question 1

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process lead to school improvement in the impact of leadership capacity?

The mean score for perceptions regarding the effect accreditation has on leadership capacity was 4.22, which was statistically significant ($t(24) = 11.91; p < .001$) with a huge effect ($d = 2.38$). Eleven of the survey questions focused on leadership capacity. Of 275 responses across the 11 questions, 242 responded that they “agreed” (140 responses, or 50.9%) or “strongly agreed” (102, or 37.1%) that the accreditation process increased leadership capacity. For the purpose of the survey, leadership capacity was categorized as *leadership* relating to organizational leadership and governance, and *resource management*, relating to the planning, collecting, and allocating of assets and resources. The highest rated responses were L5, L3, and R5, as summarized in Figures 1 – 5.

Figure 1

Responses to Leadership Question L5: Since our initial accreditation, my school has developed a more realistic long-term strategy.

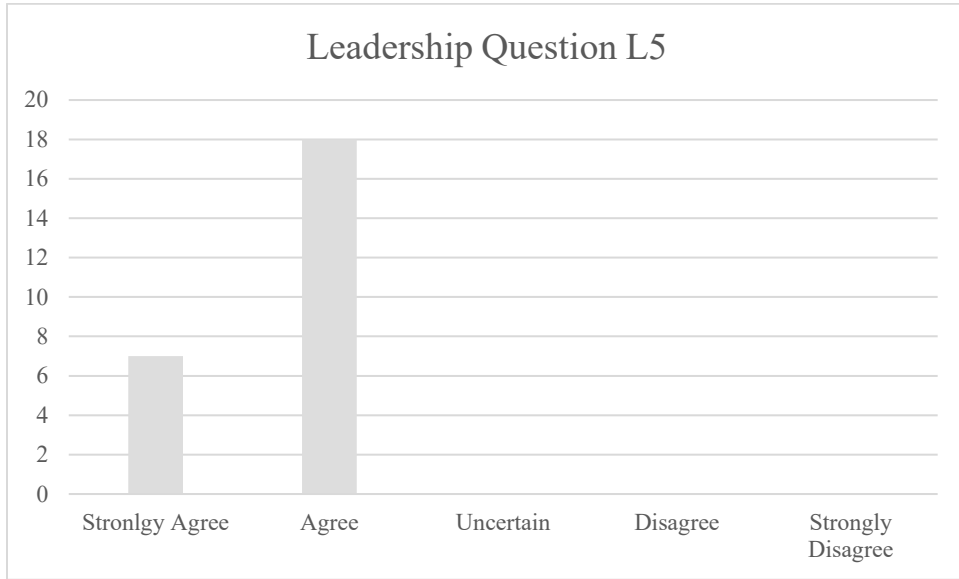


Figure 2

Responses to Leadership Question L3: Since our initial accreditation, the administration of my school is more effective at promoting cohesion in achieving school goals and objectives.

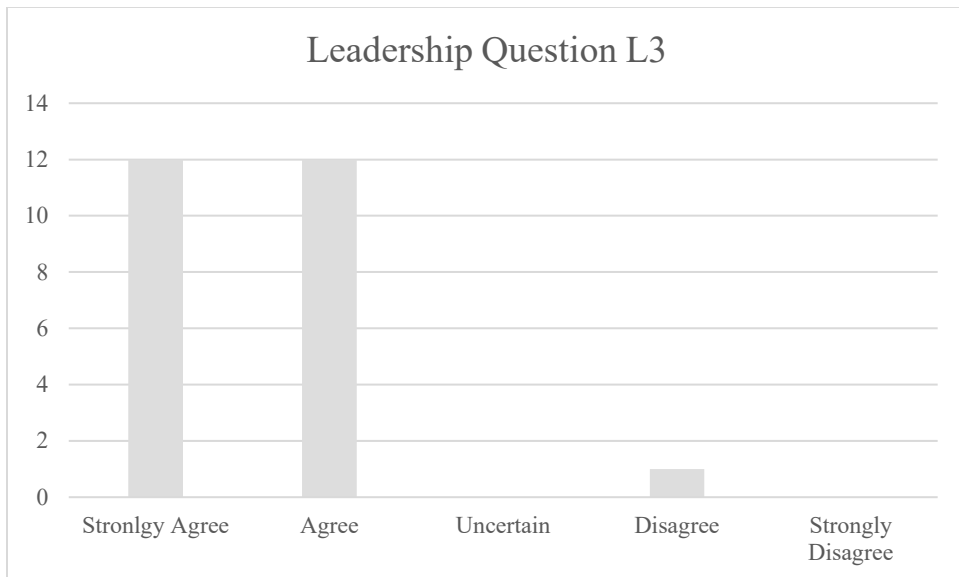
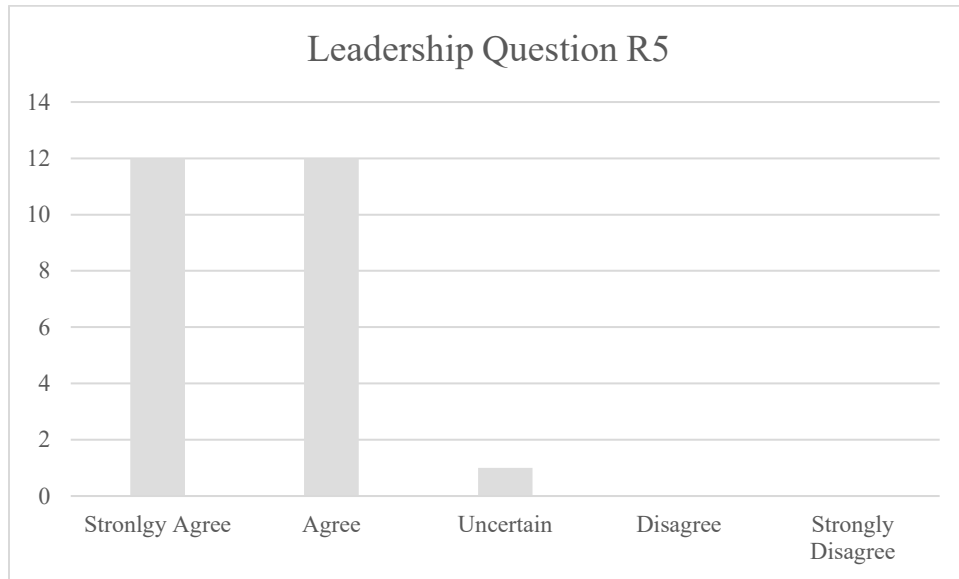


Figure 3

Responses to Leadership Question R5: Since achieving accreditation, my school's safety plan has become systematically updated and integrated into school operations.



The lowest rated responses were questions R2 and R3.

Figure 4

Responses to Leadership Question R2: Since our first accreditation, school finances are better managed with integrity, and the school operates with a surplus.

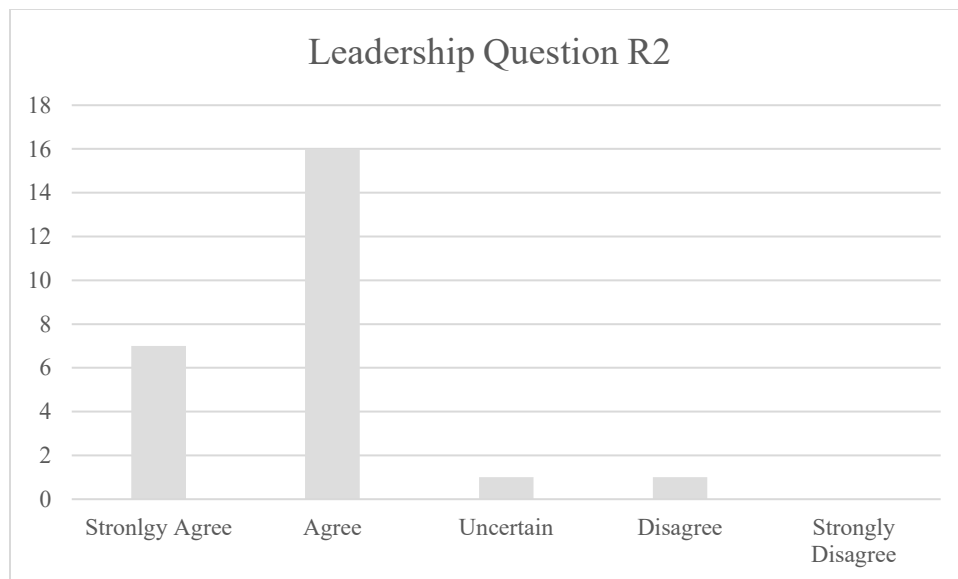
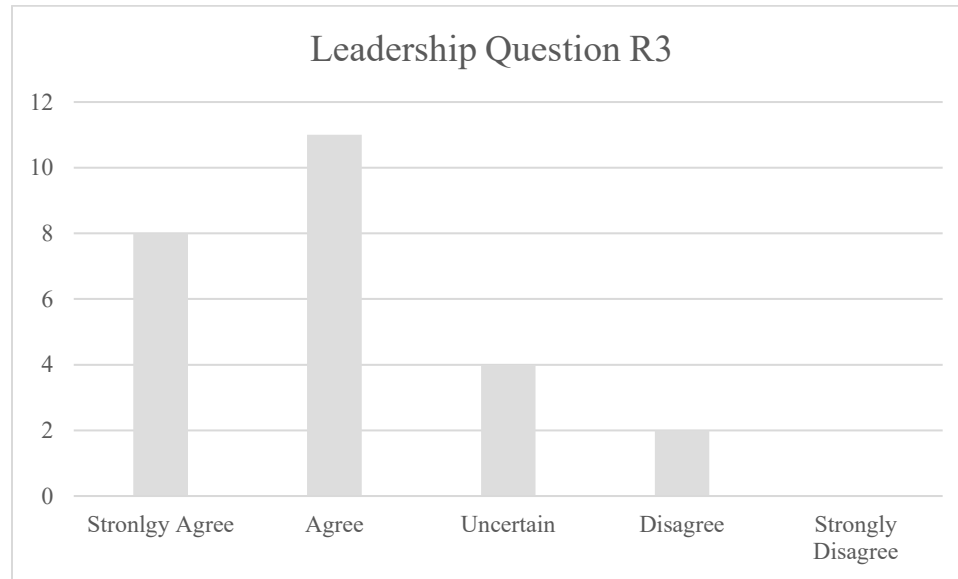


Figure 5

Responses to Leadership Question R3: Since our first accreditation, strategic planning is more evident in the appropriation of school funding.



This study examined the perceptions of heads of schools in LCS-accredited schools as to whether the LCS accreditation process resulted in school improvements regarding increased leadership capacity. An important finding of this study was that heads of schools from LCS-accredited schools perceived that school efforts in the years following initial accreditation resulted in improved leadership capacity. Regarding leadership capacity, 7.2% of responses were uncertain, or disagreed that accreditation improved executive leadership. In contrast, 15.4% of responses were uncertain, or disagreed that accreditation improved resource management.

In a study conducted by Starkovich (2010), the "overwhelming majority" (p. 89) of respondents believed the accreditation process to be necessary for school improvements, affirming that accreditation would yield both long-term and short-term organizational improvements. Starkovich also identified the role of the principal as a strong leader who is not only responsible for encouraging school improvement, but also empowering other stakeholders

to actively participate in school improvement efforts. This conclusion agreed with the importance of a shared vision as outlined in systems theory (Senge, 2006). Starkovich's conclusions also support the findings of this study regarding the increasing of leadership capacity as a factor for school improvement in the accreditation protocol.

Additional support for this study can be found in research conducted by Serafin (2014), who performed qualitative research studying the effect of the accreditation on private schools and the leadership behind school improvements. Serafin's research focused on Christian schools and the accreditation protocol for WASC, one of the large regional accrediting associations. Serafin's overarching conclusion was that accreditation does drive organizational change and has resulted in significant improvements at every school in the research conducted. Serafin also identified three roles that effective school leaders play in advancing improvements: drive the mission and vision of the school, lead the learning environment, and disaggregate data. These roles outline the importance of school leadership in shaping school improvement. Serafin pointed out that an accredited school not experiencing improvements were likely not victim of an ineffective accreditation model, but an ineffective leader (2014).

This finding supports the research conducted by Fleming (2018) who compared school improvement as measured by two different processes: AdvancED accreditation and Michigan Department of Education accreditation. Fleming expected that accredited schools would rate themselves higher on the leadership section of the annual Michigan school survey. Fleming concluded that schools accredited by AdvancED, a private independent accreditor, scored higher in improvement than schools participating in the Michigan state accreditation program, while acknowledging leadership as a limitation, since there was no control of school-level leadership

(2018). The lack of conclusion on leadership underscores the need to understand leadership capacity as presented in this study.

After completion of the gathering of data, it was necessary to search for additional literature that might be supportive of the literature review already completed. The following research was supportive of portions of the data results or related to the research topic. Wozniak (2017) arrived at a conflicting conclusion in his case study of the accreditation of a military school. Wozniak carried out a phenomenological study of a military school going through accreditation to capture the lived experiences of all stakeholders. Wozniak concluded that accreditation was not sufficient in sustaining organizational learning and building organizational capacity. However, to the point of leadership, Wozniak (2017) affirmed that the school observed in the case study was a military school that was entrenched in “strong centralized and hierarchical leadership philosophy” (p. 133). In Wozniak’s conclusion, leadership contributed to effectiveness of accreditation to transform into organizational improvement (2017).

For the purpose of this study, leadership capacity is viewed as the executive role of a leader and the resource management role of a leader. Resource management applies to the allocation of funding and assets to place instructional staff, provide sufficient resources for staff to carry out duties, provide professional development that is targeted, and yields results for learners, and stewardship of the physical plant of the school. Adhanom (2016) affirmed the role of the leader as a resource manager and an executive leader and used grounded theory to create a framework for improvement and sustainability for Christian schools. His model created seven standards identified by descriptive verbs that are associated with the actions needed to fulfill the standard. Adhanom’s identified weaknesses of Christian schools that closely align with the standards of improvement outlined in the LCS accreditation, further affirming the research

behind school improvement. According to Adhanom (2016), Christian school sustainability is linked to “effective leadership, efficient business processes and systems, and transforming school culture to build and sustain organizational performance excellence” (p. 156), and developing necessary resources.

According to Nichols (2006), the number one factor that leads to the closure of evangelical Christian schools is leadership. Nichols conducted a qualitative case study of four school closures trying to determine factors that contribute to school closures. However, Nichols further delineated finances, administrator or staff turnover, competition, political and legal context, and scope and quality of programs as ranked factors impacting school closures. Each of these factors presented by Nichols bears a proportional relationship to resources. Although only one of Nichol’s participants was an accredited school, Nichols strongly recommended that schools seek and maintain accreditation as a factor for not facing closure (2006).

Similar to the findings of Nichols (2006), Fellers (2013) concluded that leadership, finances, and competition are important factors that have led to K12 Christian school closures. Fellers conducted a quantitative study of 30 schools to determine the statistical significance of specific stressors in private schools. Fellers’s findings are consistent with the findings of this study in that school improvement efforts require leadership as it pertains, in part, to resource management (2013).

Ancillary Analysis

Organizational capacity can be understood in terms of customers served. As an organization increases the capacities for instruction, programs offered, services rendered (i.e., for learning specialties), more customers access those services. Therefore, school capacity and school growth in terms of student populations are linked. Such were the conclusions of Johnston

(2021) in his qualitative study on factors that influence K12 Christian school growth. Johnston found that Biblical worldview, sense of community, and quality academic programs were factors that drove parent decisions on schools. Accreditation processes for regional accrediting agencies are largely secular and do not include contextual evaluations for religious ideas. The fact that Johnston ranks Biblical worldview as the primary factor should make that element critical to Christian school leaders (2021). The League of Christian Schools' accreditation protocol adds components to all standards that measure the efficacy of Biblical worldview integration at the organizational level. This ancillary information parallels the conclusions of this research regarding the 84% of schools that have experienced exponential growth in the years following accreditation.

Research Question 2

To what extent do private school principals perceive that the results of accreditation within the LCS Accreditation process lead to school improvement in Instruction?

A one sample *t*-test showed statistical significance ($t(24) = 9.99; p < .001$) of study participant mean score of 4.20 when asked about improved instruction. The effect was huge ($d = 2.00$). Eleven of the survey questions pertained to the impact accreditation had on instructional capacity. For perceptions of the impact of accreditation on the instructional program, 238 (86.5%) of 275 responses rated “agree” (136, or 49.5%), or “strongly agree” (102, or 37.1%) to instructional improvement. Questions I2, I3, and I4 were rated the highest, while I8 and I9 were rated as the lowest. These results are illustrated in Figures 6 – 10.

Figure 6

Responses to Instruction Question I2: Since our first accreditation, teachers reflect an overall stronger commitment to a high level of quality instruction.

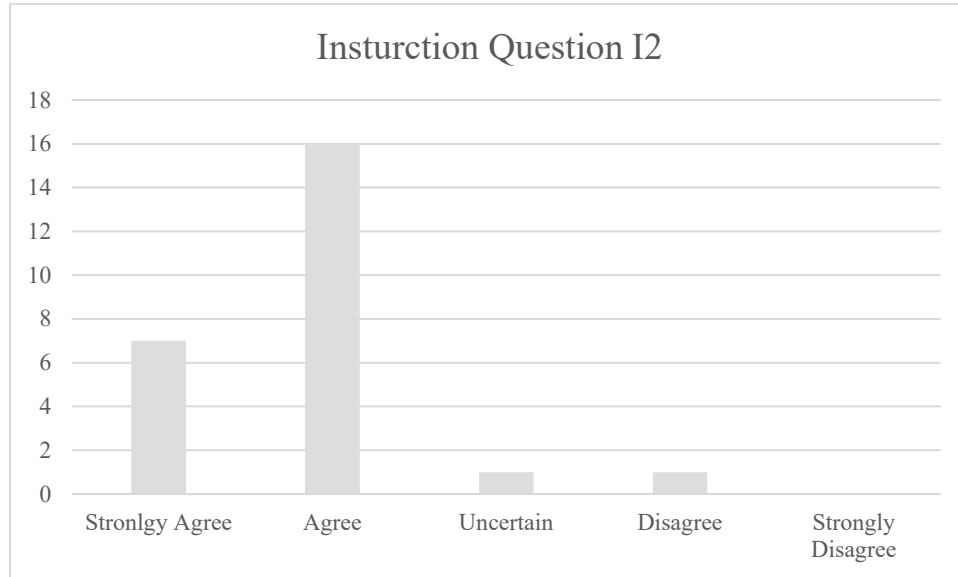


Figure 7

Responses to Instruction Question I3: Since our initial accreditation, we use data from student assessments and other pertinent information more effectively to inform professional development needs.

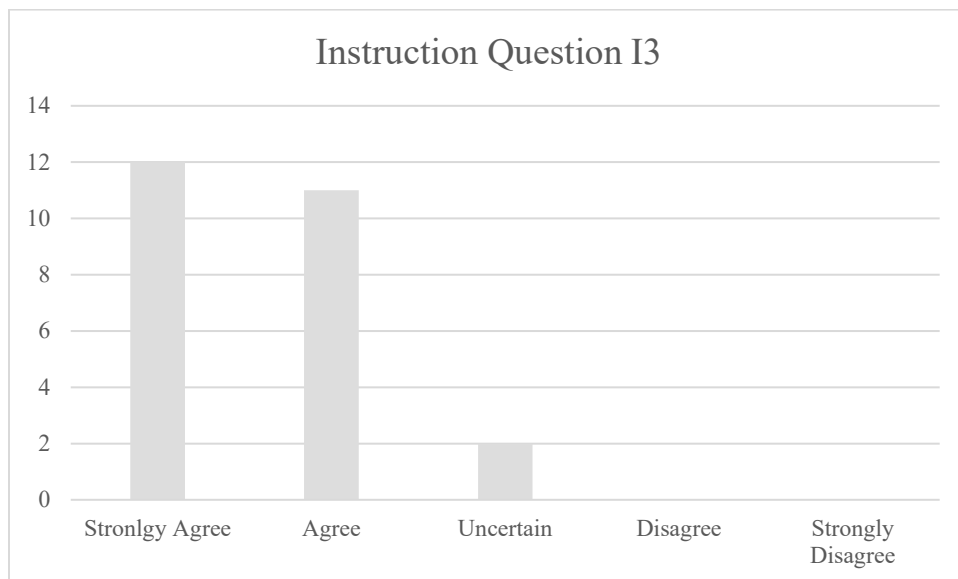


Figure 8

Responses to Instruction Question I4: Since our initial accreditation, curriculum offerings at my school increasingly promote optimal student achievement.

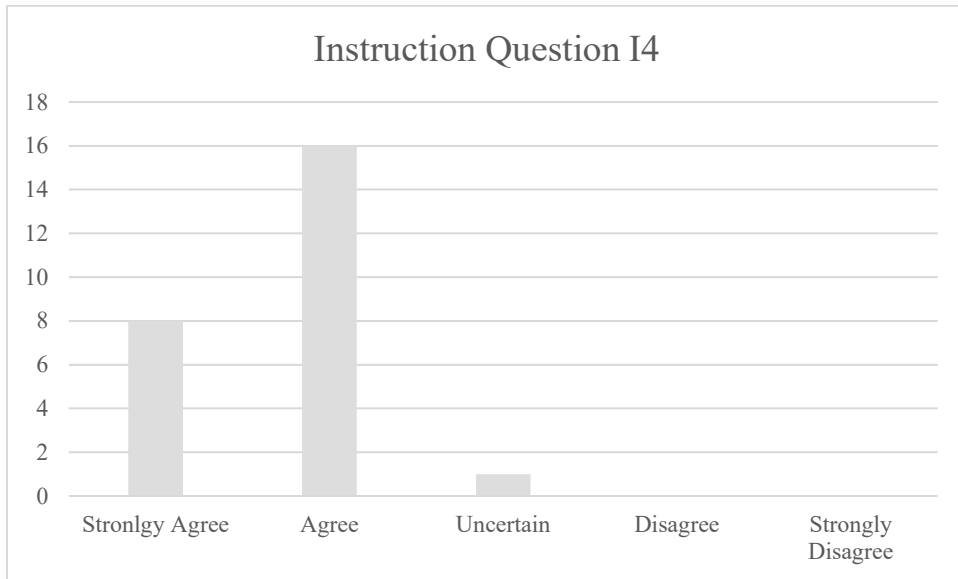


Figure 9

Responses to Instruction Question I8: Since our first accreditation, students at my school are provided expanded opportunities to create unique products through available digital learning tools.

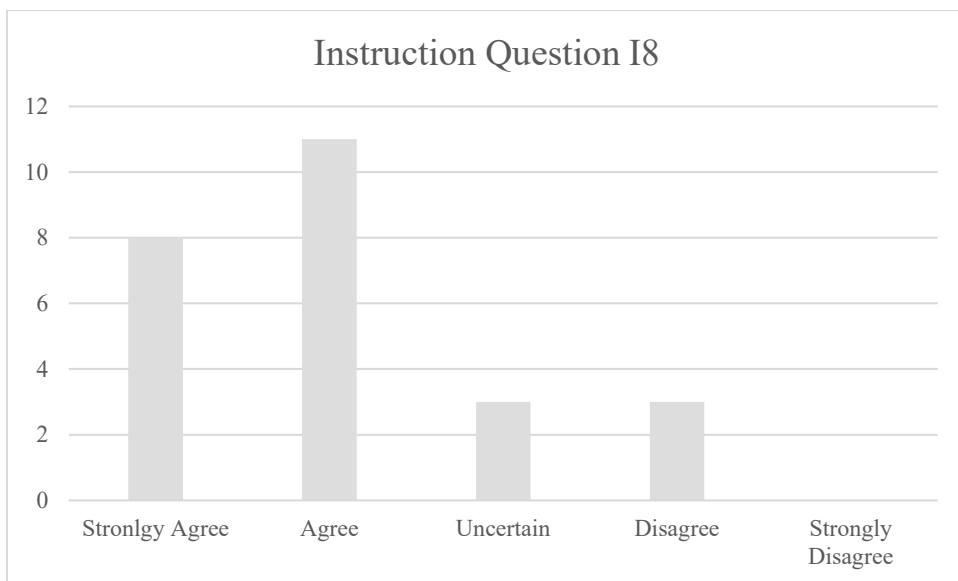
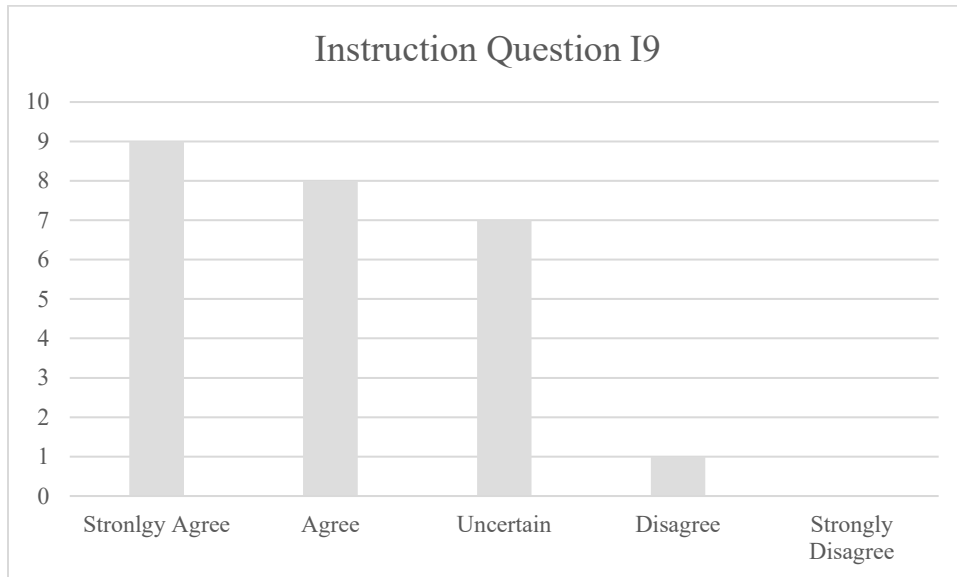


Figure 10

Reponses to Instruction Question I9: Since our initial accreditation, students demonstrate greater opportunities to gather and analyze data with digital learning tools.



Starkovich (2010) also recognized the impact accreditation has on instruction. When asking respondents to identify how the accreditation process impacted the quality of education, respondents ranked the top four – technology; improved instructional strategies; improved collaboration and sense of community; better alignment of curriculum – all which impact instruction and student outcomes (2010).

Fleming (2018) compared the scores of public schools on the Michigan Department of Education rating system called the Top to Bottom list. The Top to Bottom list is a compilation of standardized test scores for all schools. Because Fleming concluded that the difference between state accredited school and AdvancED accredited schools was statistically significant, her findings suggested that this significance is due, in part, to higher student performance in AdvancED accredited schools (2018). Higher student performance in AdvanceED accredited

schools would lead to the assumption that accreditation leads to a strong instructional environment resulting in higher student performance.

However, Stotts (2019) found no statistical significance on student assessments before AdvancED STEM certification and after. STEM certification is a specialized type of accreditation that pertains to STEM-focused programs. STEM accreditation is a limited branch of school accreditation. Stotts analyzed student assessment data for science, math, ELA, and social studies from 20 AdvancED STEM-accredited schools in Georgia. Stotts concluded that no statistical significance existed between the scores of students prior to accreditation and after accreditation. Stotts pre- and post-certification assessment data were two years apart (2015 and 2017 for a school certified in 2016). There are two limitations with this dataset: first, the data assumed that significance would be achieved one year after earning the certification, which Stotts pointed out as a limitation; second, the data do not consider that preparation for certification and accreditation takes several years, during which significant improvements are already made (2019). Had Stotts taken test results from 5 years prior to certification or 5 years following, the results could have been very different. Stotts even recognized that, even though there was no statistical significance, there was a slight increase in achievement scores for math, science, and ELA.

After completion of the gathering of data, it was necessary to search for additional literature that might be supportive of the literature review already completed. The following research was supportive of portions of the data results or related to the research topic. Improved instruction was a finding presented by Fairman et al., (2009). They conducted research in the state of Maine focusing on the accreditation process of the New England Association of Schools and Colleges, the oldest accrediting agency in the United States. The researchers interviewed

principals and superintendents to understand the cost, process, and benefits of accreditation. Their research supported the findings of this study that the accreditation process led to improvements in curricula, assessments, and instruction. They further noted that in schools where staff were resistant to change, the accreditation process encouraged the exploration of new curriculum, instructional strategies, and assessment practices (Fairman et al., 2009).

Research conducted by Eshleman (2016) found that a correlation between accreditation and instructional improvement existed. Her mixed methods research study followed the quantitative design with qualitative interviews. In the interview phase of her research, Eshleman found that respondents attributed success to district initiatives and not accreditation (2016).

Ancillary Analysis

During the accreditation visit by the review team, classroom observations are conducted through a systematic process using a tool called the Effective Learning Environment Observation Tool (eleot). This tool requires observers to complete a certificate training to ensure that the tool is used consistently and with fidelity. The League of Christian Schools collects and maintains eleot data for each accreditation beginning in 2011. This dataset provides the initial eleot scores collected prior to accreditation approval, and then again after 5 years during the re-accreditation visit. The eleot scores were analyzed using a *t*-test of dependent means to determine if statistical significance could be found between pre-accreditation period to the post-accreditation period of the study. The mean score difference of 0.17 was statistically significant ($t(27) = 2.73; p = .005$) with a medium effect ($d = .52$).

Very scant research exists regarding the eleot. However, research conducted by Lehman (2020) analyzed the eleot scores for one specific environment to understand the relationship between the score and end-of-course assessments for sophomore English students in Indiana. The

quantitative study accepted the null hypotheses, finding no effect. This research does not relate directly to this study but shows the growing acceptance of eleot as a valid and reliable measure of student engagement.

Study Limitations

This research study concentrated on the perceptions of heads of schools that were accredited by the League of Christian Schools. The study explored perceptions of school heads regarding the relationship between the LCS accreditation process and continuous improvement efforts following initial accreditation. Additional information about the experiences of schools involved in the accreditation process of similar accrediting associations may add to the understanding of administrator perceptions, providing additional implications for practice. Additionally, only administrator perceptions were analyzed. The survey could benefit from the responses of representatives of other stakeholder groups.

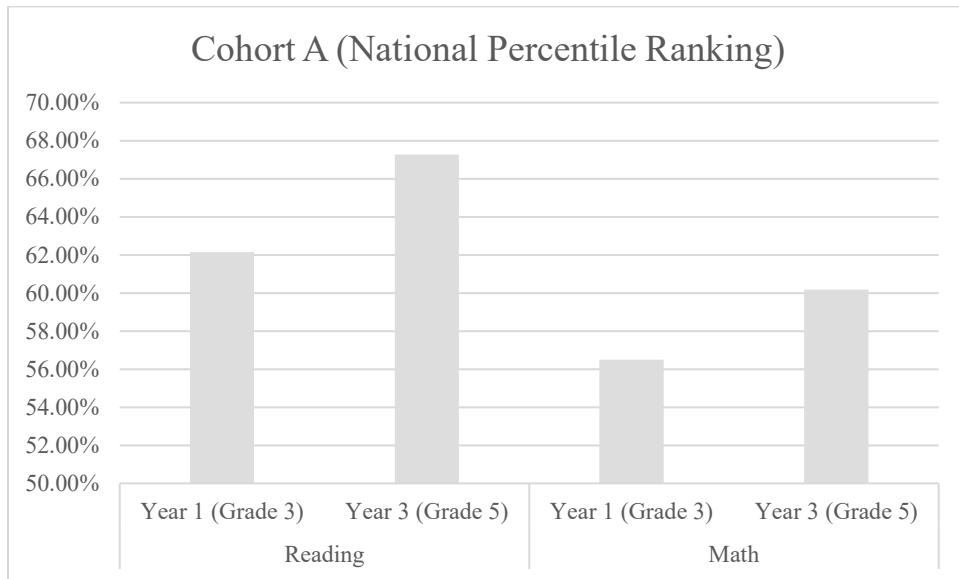
The research design involved anonymous survey responses to perceptions of accreditation. The data collection process only allowed for quantitative analysis, lacking any qualitative methods or analyses. Additionally, due to the anonymous survey, eleot data for each school could not be evaluated for relationships with survey responses.

From the outset of this study, it was intended that perception of accreditation and school improvement be linked to student achievement data. Unfortunately, record keeping issues, switching assessment tools (Stanford Achievement Test 10 to Measure of Academic Performance), and sporadic data maintenance led to incomplete data. Although no statistical analysis could be conducted, evidence between test data for reading (grade 3 averaged 62 percentile) and math (grade 3 averaged 56 percentile), the year of initial accreditation appeared

to be slightly higher in the second year (reading for 5th grade rose to 67 percentile, and math grade 5 rose to 60 percentile), as illustrated in Figure 11.

Figure 11

Student Assessment Data: National Percentile Ranking in Reading and Math for Cohort A.



Implications for Future Practice

This study is the first formal research conducted on the League of Christian Schools accreditation process and the continuous improvement efforts in LCS-accredited schools. The conclusions of this research have significant implications for the League of Christian Schools as the accreditation commission revises and improves accreditation processes and protocols. Additionally, the results of this research study provide direction to League of Christian Schools' administrators and principals seeking to improve their leadership capacity and instructional impact.

Since private school leaders lack the oversight of local and state educational agencies to provide improvement initiatives, many private schools can face stagnation. The accreditation

process allows for an unbiased evaluation of a school measured against criteria developed on best practices for academic organizations. Christian school leadership desiring to improve their academic programs, increase the schools' leadership capacity, or improve instruction could consider engaging an accreditation process that is approved and recognized by the Department of Education of the state in which the school operates. This research demonstrates that such an undertaking has a high probability of resulting in a positive experience for the administrator and yielding positive organizational impact.

Survey and elite data indicated that school improvements are realized in the years following the accreditation visit. The visiting accreditation team has traditionally been viewed as a dreaded and stressful event that creates more fear than optimism. Upon the exit of the team, the recommendations the team provide can be converted into a road map for school improvement. The entire accreditation process should be embraced by administration, faculty, and staff as a positive process that intends to yield only beneficial results at the school level. School administrators could make the accreditation team findings a regular part of orientation for new teachers and professional learning communities, making school personnel view the entire process as a long-term dialogue on how to improve organizational effectiveness. Empowering staff members to interface with the findings to explore creative means of improving in deficient areas could serve as a powerful catalyst for collaboration and innovation.

The highest rated item on the leadership survey was "Since our initial accreditation, my school has developed a more realistic long-term strategy." Many school administrators get caught up in day-to-day operations and often find little time to plan for future expansion and opportunity. The accreditation process clearly helps administrators bring clarity to the long-term plan. An implication for school leaders would be to articulate an executive summary of the

accreditation findings, highlighting the school's long-term strategy for improvement and goals needed to achieve those targets.

From the outset, this study was to capture student performance data for analysis with the eleot data. However, the student assessment data was sporadically maintained and disparate. The LCS accreditation commission, which reviews annual reports about accreditation progress, should include the annual review of assessment data to determine that schools are administering such assessments as required in standards, and that such results are improving over time. In addition, LCS is encouraged to continue surveying administrators on perceptions of improvement, using the data to guide the development of standards and best practices.

One area of leadership weakness noted in the surveys was related to resource management. More specifically, some school leaders perceived that financial management was not improved, and the school does not operate with a surplus. Similarly, school leaders perceive that strategic planning and school funding are not necessarily connected. LCS could consider mentorship or leadership cohorts, or other creative means for connecting with administrators' struggle with resource management. Many resources exist to help inexperienced leaders to strengthen resource management skills. Investing in these resources on behalf of these leaders is a value-added proposition that would go a long way in investing in the long-term sustainability of a local Christian school.

LCS should continue to provide ample opportunities for team member training, ensuring that schools eligible for renewal or entering the accreditation process are represented and sufficiently trained. Though this study could not corroborate the eleot scores for the schools providing lowest ratings on the improvement survey, providing overwhelming support eliminates the concern that school improvement does not yield improvement, as noted by a few

respondents. Similarly, ample opportunity for administrators and educators to participate on multiple accreditation teams is strongly recommended. Not only will administrators get an improved sense of how an accreditation visit should proceed, but participating administrators will also see best practices (and deficiencies) in other schools, allowing the administrators to make important decisions and adoptions for their own school.

The instructional section of the survey indicated that schools still find digital learning tools a challenge. Many schools provide some degree of digital instruction tools to teachers. However, the pandemic revealed a glaring weakness in student use of technology for learning. Nearly $\frac{1}{4}$ of all schools disagreed that students have expanded opportunities to create using digital learning tools. And nearly $\frac{1}{3}$ of respondents felt that students lacked opportunities to gather and analyze data with digital tools. Although access to digital tools is closely connected to resource management and leadership, not only should schools be expanding opportunities for students, but schools should also be better poised to address the impact of a global pandemic, should that become a reality again.

Recommendations for Future Research

Future research studies on accreditation should include schools involved in the accreditation process of similar accrediting associations. Including similar accreditation agencies will add comparative data to determine if other accreditation models yield similar or varying results. In addition to other accrediting agencies, other relationships and correlations could be explored. Since schools must maintain and disaggregate student performance data as a requirement for accreditation, survey data could be analyzed in relation to student academic performance. Student achievement data could be included as an additional variable for future

research studies. Additionally, future surveys could collate survey responses with eleot data to analyze and explore possible relationships between these two variables as well.

Although Christian school administrators from LCS-accredited schools perceived improvements following initial accreditation, further research could be conducted to include the perceptions of parents, governing bodies, teachers and staff, and other community stakeholders. Future research studies could explore administrator perceptions of the relationship between initial accreditation and school effectiveness. For this research, survey data were collected anonymously. Replicating this research for a higher response rate would strengthen the findings. Additionally, this research study could be replicated using a mixed methods study allowing for follow-up interviews for participants, strengthening the qualitative analysis of differences in views and perceptions.

Conclusion

The research in this study was conducted because of personal interest and the desire to determine if the process framework of accreditation in independent Christian schools might be a catalyst for school improvement. There is significance in this study because only limited studies exist where accreditation of K12 private schools is examined in conjunction with a systemic process for school improvement.

The data were collected from administrators in accredited schools and results of class observations conducted by the accreditation team during the initial accreditation and then again at the 5-year renewal period. It is clear from this research that accreditation can serve as a reliable framework for school improvement and may be considered by state legislators as a valid indicator of a school's quality and a determining factor for the distribution of school choice funding.

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Appendix A

Institutional Review Board

SOUTHEASTERN
UNIVERSITY



NOTICE OF APPROVAL FOR HUMAN RESEARCH

DATE: February 02, 2023
TO: Michael Burroughs, Susan Stanley, Thomas Gellery
FROM: SEU IRB
PROTOCOL TITLE: Accreditation as a Framework for School Improvement
FUNDING SOURCE: NONE
PROTOCOL NUMBER: 23 ED 03
APPROVAL PERIOD: Approval Date: February 02, 2023 Expiration Date: February 01, 2024

Dear Investigator(s),

The Institutional Review Board (IRB) for the protection of human subjects has reviewed the protocol entitled, Accreditation as a Framework for School Improvement. The project has been approved for the procedures and subjects described in the protocol.

Any changes require approval before they can be implemented as part of your study. If your study requires any changes, the proposed modifications will need to be submitted in the form of an amendment request to the IRB to include the following:

Description of proposed revisions;
If applicable, any new or revised materials;
If applicable, updated letters of approval from cooperating institutions

If there are any adverse events and/or any unanticipated problems during your study, you must notify the IRB within 24 hours of the event or problem.

At present time, there is no need for further action on your part with the IRB.

This approval is issued under Southeastern University's Federal Wide Assurance 00006943 with the Office for Human Research Protections (OHRP). If you have any questions regarding your obligations under the IRB's Assurance, please do not hesitate to contact us.

Sincerely,

Rustin Lloyd
Chair, Institutional Review Board
irb@seu.edu

Appendix B

Email to Participants for Survey

Dear [recipient]:

Good afternoon! I am conducting research on the effectiveness of accreditation and would appreciate your input in this study. The research involves completing an online survey, and possibly submitting test scores for reading and math for grades 3, 5, and 8. The actual survey is anonymous. Once you complete and return the attached informed consent form to me, I will forward the link to the survey. You can submit that at your earliest convenience. However, it is my hope to have all surveys collected no later than March 21, 2023. Please read, sign and scan the attached Informed Consent Form back to me and I will forward the link to the survey. If there is another person in your school that would respond to the survey, please be so kind as to forward this email to them.

If you have any questions or concerns, please do not hesitate to contact me by replying to this email.

Michael A. Burroughs