PERCEPTIONS OF ASPIRING SCHOOL LEADERS: SCENARIO-BASED SIMULATIONS AND THEIR IMPACT ON SCHOOL PRINCIPAL EFFICACY

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Dedication

I dedicate this dissertation firstly to my parents Charles and Dawn. Thank you for raising me with such a strong foundational focus and commitment to my education. Your love, encouragement, and undying support for my education has led to this terminal degree, and not a day goes by that I don't thank you for all you have done for me in this life. Secondly, to my beautiful Esposa Liz for her loving support and constant sacrifice of our time together to accomplish my dreams. Te amo with all of my heart. Without your love and faith in me, this would not have been possible. You have helped me to become the best version of myself and to complete my dreams, including this dissertation.

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Abstract

Two overlapping trends in the U.S. educational environment have given rise to this study: the changes in the demands placed on school principals over the past decade (Hess & Kelly, 2005; Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; National Association of Secondary School Principals & National Association of Elementary School Principals, 2013; Tucker & Codding, 2002) and the surge in school principals feeling underprepared for these new demands (Farkas, Johnson, & Duffett, 2003; School Leaders Network, 2014). Meanwhile, the standards that govern principal preparation have evolved to provide more realistic expectations for preparing aspiring school principals. Preservice training for principals should include training to meet these more realistic standards (Mitgang & Gill, 2012). Scenario-based simulations offer new ways for training to be offered, with major outcomes being candidates gaining a sense of self-efficacy (confidence in their competence) in more rapidly using the simulator compared to traditional preparation classes and related activities (Christensen, Knezek, Tyler-Wood, & Gibson, 2014; Liaw et al., 2016; Spero, 2012). In this qualitative study of eight aspiring school leaders in a small liberal arts college in the Northeast, data were collected from participants to show perceptions simulations had on their sense of self-efficacy as aspiring principals and their confidence in meeting the Professional Standards for Educational Leadership (PSEL). This study found significant qualitative results highlighting a positive relationship between the use of these simulations and the variables of principal self-efficacy and confidence in the PSEL.

Keywords: principal self-efficacy, principal confidence, aspiring principals, simulations

INTRODUCTION

Scholars in the field of educational leadership have identified school leadership as a key contributing factor to the success and increased student achievement of any school (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; Leithwood, Sun, & Schumacker, 2019; Seashore Louis, Leithwood, Wahlstrom, & Anderson, 2010; Schmidt-Davis & Bottoms, 2011; The Wallace Foundation, 2013). There have also been increases in the demands placed on school principals. Hess and Kelly (2005) described school principals as "the front-line managers, the small business executives, and the battlefield commanders charged with leading their team to new levels of effectiveness" (p. 2). In this era of accountability, where school principals are expected to demonstrate "bottom-line results" and use data to drive decisions, the skill and knowledge of principals matter more than ever (Hess & Kelly, 2005). Adding to the demands on the school principal, Norton (2008) wrote, "Principals are faced with the complex tasks of creating a school-wide vision, being an instructional leader, planning for effective professional development, guiding teachers, handling discipline, attending events, coordinating buses, tending to external priorities such as legislative mandates, and all the other minute details that come with supervising a school" (p. 183). These are just some of the demands that have been added to the role of the principal over the years. With an increase in the demands placed on the already complex role of school principals, it is important to analyze how aspiring principals are being prepared to handle these demands.

The purpose of this study was to shed light on the phenomenon of simulations being implemented during a principal's preservice program and what effects simulations had on (a) the leadership self-efficacy as aspiring principals and (b) self-confidence to implement the

Professional Standards for Educational Leadership (PSEL; National Policy Board for Educational Administration [NPBEA], 2015) as aspiring principals. The researcher used a case study methodology using qualitative methods focusing on aspiring principals enrolled at a small, liberal arts college in the Northeast. According to Gustafsson (2017), a case study can be defined as an intensive study about a person, a group of people, or a unit, that intends to generalize over several units. According to Grol and Eccles (2005), "Case studies are particularly helpful in understanding the internal dynamics of change processes, and changes on organizational variation and an examination of how contextual factors influence implementation" (pp. 248-255). Furthermore, Cousin (2005) stated case studies are not aimed at analyzing cases but offer effective ways to define cases and explore settings to understand them.

Background of the Problem

Each state governs their principal certification programs using frameworks and standards they have adopted to guide their curriculum in their graduate institutions for preparing aspiring principals. In a review of the research (Davis et al., 2005; Farkas, Johnson, & Duffett, 2003; Hess & Kelly, 2005; National Association of Secondary School Principals [NASSP] & National Association of Elementary School Principals [NAESP], 2013; School Leaders Network, 2014; Tucker & Codding, 2002), it was noted school principals feel underprepared to meet the principal certification standards, which exist to prepare aspiring school principals for the field. The standards are specifically related to licensure requirements for school principals, which have historically focused on meeting generic requirements, such as the number of courses taken and previous experience as a teacher, as well as performance outcomes developed from an existing framework adopted by the state. Best (2016) noted:

> States have moved towards performance-based systems for assessing schools. At the same time, principal preparation programs have faced a similar shift to complying with standards that require administrators to demonstrate their knowledge and skills before becoming licensed or receiving license renewal. (p. 26)

The Interstate School Leaders' Licensure Consortium (ISLLC, n.d.) had provided guidance to states to address this emphasis on performance-based principal assessment by creating six standards to inform licensing requirements for school administrators. Currently, 45 states have adopted the ISLLC standards. The Council for the Accreditation of Educator Preparation (CAEP, 2013) has developed similar standards. The two organizations have worked together to create national standards for administrators (National Conference of State Legislatures, 2020). These efforts to clarify the performance assessments needed to determine whether principals are well prepared for the rigors of the role come at a time when many practitioners are in need of receiving adequate preparation.

From a review of the changing standards frameworks, it is clear the educational leadership landscape is dynamic and evolving. The ISLLC (n.d.) standards guided principal preparation programs from 1996 to 2015 and provided more than 40 states with a framework for policy in educational leadership. In 2015, there was a revision to these standards, and the PSEL (NPBEA, 2015) were born. Like the ISLLC (n.d.), the PSEL (NPBEA, 2015) are grounded in research and are designed to prepare school principals to meet current and future demands in educational leadership. According to the NPBEA (2015):

> These revised standards adopt a future-oriented perspective. While they are grounded in the present, they are aspirational, recognizing that the changing world in which educational leaders work today will continue to transform—and the demands and

> expectations for educational leaders along with it. The 2015 Standards envision those future challenges and opportunities so educational leaders can succeed in the future. (p. 4)

The revised standards were created by looking through the lens of the future educational leadership landscape, while retaining the proficiency-based competencies identified in the previous iteration. Like the ISLLC (n.d.) standards, the PSEL (NPBEA, 2015) standards are grounded in empirical research and input from researchers and more than 1,000 school and district leaders through surveys and focus groups. What the PSEL standards address that the ISLLC standards did not is, the day-to-day work of educational leaders and the leadership demands of the future as current practicing school leaders perceive them (NPBEA, 2015, p. 8). The revised standards are a more rigorous, grounded representation of the realistic demands on educational leaders and those who prepare them. A review of the literature indicates principals are not feeling adequately prepared for a more demanding role of school principal (Brown, Squires, Connor-Taros, & Horowitz, 2014; Davis et al., 2005; Farkas et al., 2003; Knapp, Copland, & Talbert, 2003; Levine, 2005). With the PSEL focused on preparing school principals for the future educational leadership landscape, states now have more relevant standards aligned to real-world demands to identify which tools are most adequate in training aspiring leaders.

According to Christensen, Knezek, Tyler-Wood, and Gibson (2011), Liaw et al., (2016), and Spero (2012), many professional fields implement scenario-based simulations to prepare new professionals to make highly complex decisions. According to Spero, scenario-based simulations can be highly effective in populating experience portfolios of any target audience. The experience portfolio is a memory bank filled with past experiences that guide decision making. As school leaders are faced with difficult situations, they actively draw from memory

any relevant experiences that may help in decision making. It is when their experience portfolios are empty or lacking that aspiring school leaders can begin to see individuals making decisions without the benefit of past learning, which can lead to higher stress and poor decision making (Spero, 2012). A review of the research indicates simulations for educational purposes have largely been employed as a means to approach problem-based learning and to hone decision-making skills under critical or challenging conditions (Frederick, 2018; Rieber, 2005; R. Smith, 2010). The fields that are creating unique experiential learning opportunities (e.g., simulations) are being devised to help these professionals not only enter into the field with more confidence but also to become prepared to take on challenging demands of the role.

Statement of the Problem

According to the growing body of knowledge cited in the literature review, the demanding nature of the principal role is not new, but the role has become increasingly demanding over the past two decades. Twenty years ago, Usdan, McCloud, and Podmostki (2000) claimed, principals were more than ever focused on student achievement, while still retaining traditional administrative and building manager duties. In order for principals to keep up with increasing demands, principals typically worked 10-hour days where they had many responsibilities, such as supervision of students, safety, discipline, and curriculum (Usdan et al., 2000). In more recent research, Burch (2014) said:

> Beginning principals perceive most job aspects as more problematic than do experienced principals. Inexperienced principals reported they work longer hours than their experienced colleagues and spend more time on issues of running a school and less time than preferred on personal development. (p. 12)

Recently, Sebastian, Camburn, and Spillane (2017) claimed:

> The work of school principals has become increasingly complex. Principals must spread their time over many responsibilities and must work with a wide array of stakeholders. Dramatic changes in the policy environment of public schools over the past two decades have placed additional demands on principals to address multiple and diverse responsibilities, resulting in significant constraints in how principals spend their workdays. (p. 48)

With research on the changing demands of the role of school principal spanning two decades (Burch, 2014; Usdan et al., 2000), the importance of retaining qualified and experienced school principals is critical. Additionally, with this lack of perceived preparation and confidence of principals currently in the field, there is reason to look more specifically at whether or not principals perceive their preservice training as adequately preparing them to enter into the changing educational leadership landscape.

Principal Turnover

It is equally important for school leaders to be retained in their leadership positions to implement long-term changes and success. School Leaders Network, (2014) suggested, “While highly effective principals create significant changes each year, it takes an average of five years to put a mobilizing vision in place, improve the teaching staff and fully implement policies and practices that positively impact the school’s performance” (p. 3). More recently Terziu, Hasani, and Osmani (2016) claimed:

> The principal in cooperation with teachers, students and parents should make concrete and long-term plans in order to increase the success of students and the quality of education. For the school principal to be successful and influential in increasing students'

> success, s/he should focus on creating a motivation to the staff so that they work effectively. (pp. 104-105)

Not only is principal turnover not conducive to systemic changes within the school, it is also very financially taxing to the school.

A conservative estimate of the cost to develop, hire, and onboard each principal is $75,000 (School Leaders Network, 2014). When analyzing the research, it is clear the school leader plays a key role in not only the success of a school, but in the retention of its teachers (School Leaders Network, 2014). The importance of principal preparation is also much more far reaching than for just the sake of the principal; principal preparation also affects the staff, students, and community.

Principal Preparation

Over the past two decades, there has been a trend in how school principals perceive the preparation they receive before entering their first principalship. School principals have made it clear there are significant problems with their preparation, with only 4% citing their university training as the most valuable source of preparation for their current positions (Farkas et al., 2003). Scholars in the field of educational leadership have voiced concern that there are growing gaps between skills taught in educational leadership programs and new demands on school leaders. In *The Principal Challenge: Leading and Managing Schools in an Era of Accountability*, Tucker and Codding (2002) conveyed, even at elite educational administration programs, “There is typically very little connection between the curriculum taught and the actual demands, conditions, and problems of everyday practice” (p. 13). In addition, they stated, “It is therefore unsurprising when principals who are successful in leading their schools to substantial gains in student achievement are asked to identify some connection between their capacities and

the ways they were initially prepared for the job, many are unable to do so" (Tucker & Codding, 2002, p. 14).

Although the focus of this study is not on the effectiveness of principal preparation programs, to understand principal perceptions of their preparation, a brief review of research on principal program preparation is essential. Hale and Moorman (2003) suggested neither organized district professional development programs nor formal preparation programs based in higher education institutions have adequately prepared those holding these jobs to meet the demands of the 21st century. According to Davis et al. (2005), preparation programs are disconnected from real world complexities, contain a weak and outdated knowledge base, possess curricula that often fail to provide grounding in effective teaching and learning, and, most importantly, require mentorships and internships that often lack depth or opportunities to test leadership skills. Furthermore, preparatory programs lack instructional activities and assessments that focus on problems of practice and stimulate effective problem solving and reflection, which most educators agree are essential for developing effective preservice programs in school leadership situations (Davis et al., 2005). According to Hess and Kelly (2005), "96% of practicing principals reported that on-the-job experiences or guidance from colleagues has been more helpful in preparing them for their current position than their graduate school studies" (p. 3). It is not yet clear whether efforts by principal preparation programs to faithfully implement the new PSEL standards (NPBEA, 2015) will be sufficient to address the need for a more thorough grounding of principals in the most pressing challenges they face.

Based on this growing body of research, there is an intensifying need for more relevant aspiring principal preparation aimed at aligning more consistently with the future educational leadership landscape addressed in the PSEL standards. Although, as noted previously, aspiring

school principals have perceived their preservice training to be inadequately preparing them for the role of school principal, there is progress among some institutions to close this gap. This perceived lack of inadequate preparation is confirmed by Mitgang and Gill (2012), who identified progress is being made at the local level and stated, “It’s too soon to say for sure, but early evidence suggests payoffs for schools might include lower principal turnover and higher student performance” (p. 2). As an example, they stated:

> Some districts, such as Chicago and Denver, have collaborated with willing universities to design better training for aspiring principals. Others, such as New York City, Boston and Gwinnett County, Ga., have formed their own training academies or are working with non-profit training providers to create programs suited to their needs. (Mitgang & Gill, 2012, p. 2)

This quote shows institutions are actively looking to align their programs to meet the changing educational landscape. Finally, Mitgang and Gill (2012) suggested experience and new research on preservice training for principals provide direction for additional efforts to improve training opportunities.

Current Landscape for Principals

The current landscape for aspiring principals is vast and consists of many challenges. Institutions need to focus not only on identifying the right candidates, but on how to help build the skill sets aspiring principals will need. According to Christie, Thompson, and Whitely (2009), “Getting the right people to become school leaders is very important, but so is providing these people with the right set of skills to be effective leaders” (p. 4). Despite the progress of states in adopting leadership standards to tighten their certification and preparation programs, there is still a gap between principals’ perception of preparedness and what is being provided to

them in their principal preparation training. According to the NAASP and NAESP (2013), in a joint article, conclusions are drawn based on a compilation of current research that principal development remains a low priority in most education policy agendas. Furthermore, the two organizations continue to receive reports of principal preparation programs that fail to graduate principals with the skills necessary to lead schools in the 21st century. The NASSP and NAESP represent more than 100,000 principals and assistant principals and serve as a platform to reinforce to stakeholders the importance of the principal's role and the need for more adequate training prior to taking on a principalship. The Wallace Foundation (2013) reinforced the significance of in-depth principal training programs, which links leadership training with learning outcomes that will prepare aspiring principals for the demands and multifaceted roles of the principal role. K. T. Campbell and Parker (2016) declared these programs should be aligned to national standards and contain practical field experiences for aspiring principals to be better prepared to become effective principals in their first year.

As institutions work to align with the new leadership frameworks adopted at the state level, there remains significant variety in how these institutions prepare their aspiring school principals. According to Versland (2009), "Redesigning principal preparation programs alone may not be the answer to producing leaders capable of meeting all the challenges of today's schools" (p. 5). However, Tschannen-Moran and Gareis (2005) suggested "pairing research based principal preparation programs with purposeful experiences targeted at developing principal self-efficacy would seem to hold promise as a two-pronged approach to school leader training" (as cited in Versland, 2009, p. 6). Furthermore, New Leaders (2009), a group that works with charter schools, suggested ways to support new principals. The organization believes a three-pronged approach that includes individualized coaching, a cohort emphasis on group

problem solving, and targeted training for the needs of individual principals is essential to principal development. This focus on a three-pronged approach affords flexibility at the institutional level to address state licensure standards, and supplements a need addressed in the literature for more relevant training for principals. According to R. Smith (2010), “Simulations for training in the military and medical fields have been used for years. The use of games and simulations for educational purposes can be traced as far back to the use of war games in the 1600s” (as cited in DeJong and Grundmeyer, 2018, p. 190). Scenario-based simulations offer an opportunity for institutions to better prepare aspiring school principals for not only meeting the new PSEL, but for also enhancing their confidence in being a principal.

Simulations

According to the literature review, simulations have been used for the past 300 years as a way to improve the strategic planning of military leaders. In the mid- to late-1900s, scenario-based simulations offered new ways for training to be offered at scale to prepare newly qualified professionals to be expert practitioners from the time they meet their first clients or patients, just as airline pilots confidently fly passenger planes after having a combination of class work and flying in flight simulators. Ultimately, simulations allow for student experience to be gained through practice without the negative ramifications and stresses of real-life situations (Ziv, Small, & Wolpe, 2000). In a study in the healthcare field, Liaw et al. (2016) found nurse participants who participated in scenario-based simulations were not only more satisfied with their learning experience but also felt more confident in their abilities when entering into the field as newly hired professionals. According to research by Finkelstein et al. (2005), “Students who used computer simulations in lieu of real equipment performed better on conceptual questions related to simple circuits and developed a greater facility at manipulating real

components" (p. 2). The researchers do not suggest simulations necessarily promote conceptual learning, nor do they ensure facility with real equipment, but rather computer simulations that are properly designed are useful tools for a variety of contexts and can promote student learning (Finkelstein et al., 2005). More recently, the growing body of research of simulations within the field of educational leadership has become an area of interest to scholars. According to DeJong and Grundmeyer (2018):

> Educational simulations have shown to be beneficial for economy and cost savings. Another benefit for the use of educational simulations is to mitigate risk and to enrich different experiences. These simulations allow potential leaders to make mistakes and to learn from the experience in a safe environment. These simulations also give potential leaders a wide range of simulations. (p. 191)

As institutions look to prepare educational leaders using the PSEL as their guiding framework, it is necessary to make sure that, if standards are not being adequately addressed, then we begin exploring promising new ways to address these standards.

Using simulations to address the state and local leadership licensure standards is a critical area of importance for institutions looking to implement scenario-based leadership simulations. According to the University of Pennsylvania Graduate School of Education (Penn GSE, 2013), simulations are rooted in and can easily align to national standards, such as the ISLLC standards, the Educational Leadership Constituents Council (ELCC) Standards for Advanced Programs in Educational Leadership, and VAL-ED Leadership Assessment. Also, leadership simulations developed through Penn GSE have been aligned to directly address the PSEL. Furthermore, to the national standard alignment, simulations have the ability to provide alignment with appropriate local standards (Penn GSE, 2013). The flexibility of these simulations and how they

are rooted in the national standards, if implemented into a school principal's preservice learning experience, could show an impact on an aspiring school principal's confidence in meeting the PSEL, as well as their own self-efficacy as a leader.

Purpose of the Study

The purpose of this study was to shed light on the phenomenon of simulations being implemented during a principal's preservice program and what effects simulations had on (a) leadership self-efficacy as aspiring principals and (b) self-confidence to implement the PSEL standards as aspiring principals.

The researcher collected and analyzed data from participants who were either current students or recently graduated students, who had not yet executed the role of school principal, and who were in a principal preparation program. Each individual participated in a 10-hour professional development seminar, where they engaged in simulations aligned with the PSEL standards. This study explored whether and in what ways the use of simulations within a principal's preservice experience affected aspiring principals' self-efficacy and confidence in meeting the PSEL as school leaders.

Research Questions and Hypotheses

This study was guided by the following research questions:

1. In what ways does participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?
2. In what ways does participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL standards?

Based upon the literature review, research, and promising statistics previously stated regarding online scenario-based simulations, the researcher hypothesized this study would find statistically significant results highlighting a positive relationship between the use of these simulations and the variables of principal self-efficacy and confidence in meeting the PSEL.

Significance of the Study

According to Spero (2012), "Experience is the best teacher" is a widely accepted precept. The challenge is to deploy relevant experiential learning in a scalable manner. Schools need to capitalize on every available asset to address the insufficient grounding of future principals in the complex and daunting challenges of professional practice. Scenario-based leadership simulations represent an approach that might provide principal preparation programs, instructors, and aspiring principals with a significant opportunity to effectively capture experience in a financially efficient way and deploy the process, student experiences, and the simulation program as an "apprenticeship in a box" (Spero, 2012, p. 55). This apprenticeship in a box can provide aspiring leaders with experiences in addition to their internship and coursework and provide a more well-rounded preparation.

Spero (2012) described *scenario-based simulations* as a set of scenarios that take place over time and are linked via a defined set of learning objectives. In scenario-based simulations, training participants typically take on the responsibilities of a worker or manager and are placed in situations where they have to make the same kinds of decisions a person in that role would make in real life. This approach allows for experiences to be built into an aspiring school principal's training to expose the individual to challenging situations they are likely to experience. Christensen et al. (2011) advocated for using a simulated-teaching environment to train preservice teacher candidates, which can easily be applied to aspiring principals. Results of

analyses of two sets of data (i.e., for the areas of pedagogical practices and teaching skills) were used to illustrate changes in preservice educators can be assessed as a direct outcome of activities completed within the simulated environment. Major outcomes indicate teacher candidates gain a sense of instructional self-efficacy (i.e., confidence in their competence) more rapidly using the simulator compared to traditional teacher preparation classes and related activities. This outcome is true for preservice candidates working with simulated students spanning the normal range of personality attributes and sensory abilities and preservice teacher candidates working with simulated students with disabilities (Christensen et al., 2011).

Conceptual Framework

A conceptual framework explains the focus of any study (Miles & Huberman, 1994). The phenomenon of interest for this study was the impact simulations have on aspiring principals' sense of confidence in meeting the PSEL. This study employed cognitive load theory, which provided a comprehensive framework. *Cognitive load* relates to the amount of information working memory can hold at one time. Sweller (1994) said, since working memory has a limited capacity, instructional methods should avoid overloading it with additional activities that don't directly contribute to learning. Cognitive load theory builds on the widely accepted model of human information processing and is shown in Figure 1.

According to MindTools (2020a), the process has three main parts: (a) sensory memory, (b) working memory, and (c) long-term memory. Since 1994, many researchers have added to an understanding of this concept, but the basic model remains the same. MindTools stated cognitive load theory also shows that working memory can be extended in two ways. First, the mind processes visual and auditory information separately. Auditory information in working memory does not compete with visual information in the same way that two visual pieces of information

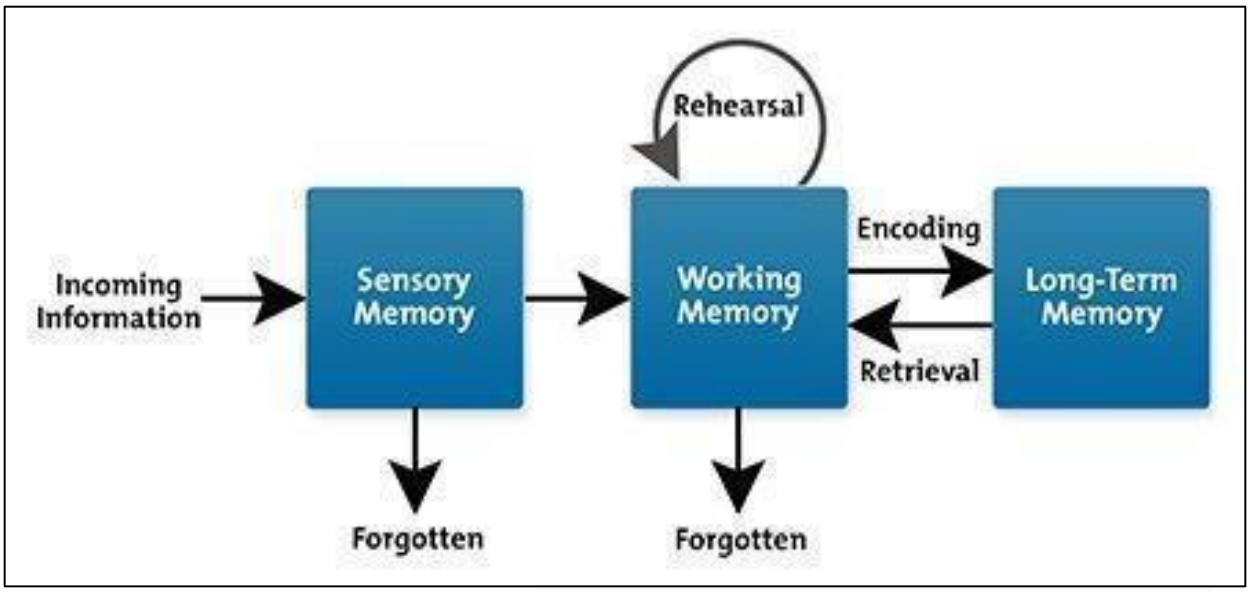

Figure 1. Information processing model. Adapted from "Human Memory: A Proposed System and Its Control Processes," by R. C. Atkinson and R. M. Shiffrin, 1968. In K. W. Spence and J. T. (Eds.), *The psychology of learning and motivation* (pp. 89-195). New York, NY: Academic Press. Retrieved from https://www.mindtools.com/pages/article/cognitive-load-theory.htm

would (e.g., a picture and some text compete with one another). This is known as the *modality effect*. According to Byrne (2017), auditory presentation of verbal material, rather than visual presentation, often leads to superior memory performance. This effect is more robust on tests of immediate memory than on tests of delayed memory. MindTools explained further, stating, explanatory information has less impact on working memory if it is narrated, rather than added to an already complex diagram. Second, working memory can be extended by approaching an established schema as a single item. In addition, a highly practiced "automated" schema barely counts at all.

The cognitive load theory was informed by Benjamin Bloom (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956), who theorized learning takes place within the cognitive domain. He portrayed the cognitive domain as six categories of ascertaining, understanding, and the application of knowledge to deepen the learner's understanding by analyzing the knowledge. This level of deeper learning takes place when the learner is able to synthesize and evaluate what

is learned. It is within this cognitive level that knowledge can be applied to different situations to solve problems in new ways. According to Bravender and Staub (2014):

> The influence of Bloom is evident in a model developed by Edgar Dale (1969) to illustrate theories of learning (see Figure 2). The cone-shaped model starting at the top of the pyramid illustrates a small percentage of what people actually remember when they read. A greater percentage of recall occurs when someone hears information, increasing when a person sees and hears information. As the pyramid expands to include what a person says and writes, so does the amount of the memory. Toward the bottom of the pyramid, Dale theorizes that experience in the forms of role-play, simulations, and direct purposeful experiences have the greatest impact on retention, with direct purposeful experiences being the most beneficial. (pp. 3-4)

By using the cognitive load theory as the framework, simulations can be seen as learning activities that stimulate or expand upon a simulated real experience. This further supports this research study by analyzing whether providing aspiring school principals with varied experience through simulations had an impact on their learning.

Simulations hold the potential for covering all areas of Dale's (1969) pyramid and creating highly engaging learning experience. Using cognitive load theory, pretraining, or teaching people prerequisite skills before introducing a more complex topic will help them establish schemas that extend their working memory. In other words, they can understand and learn more difficult information. This theory provides the framework for this study to design training that reduces the demands on learners' working memory, so they learn more effectively.

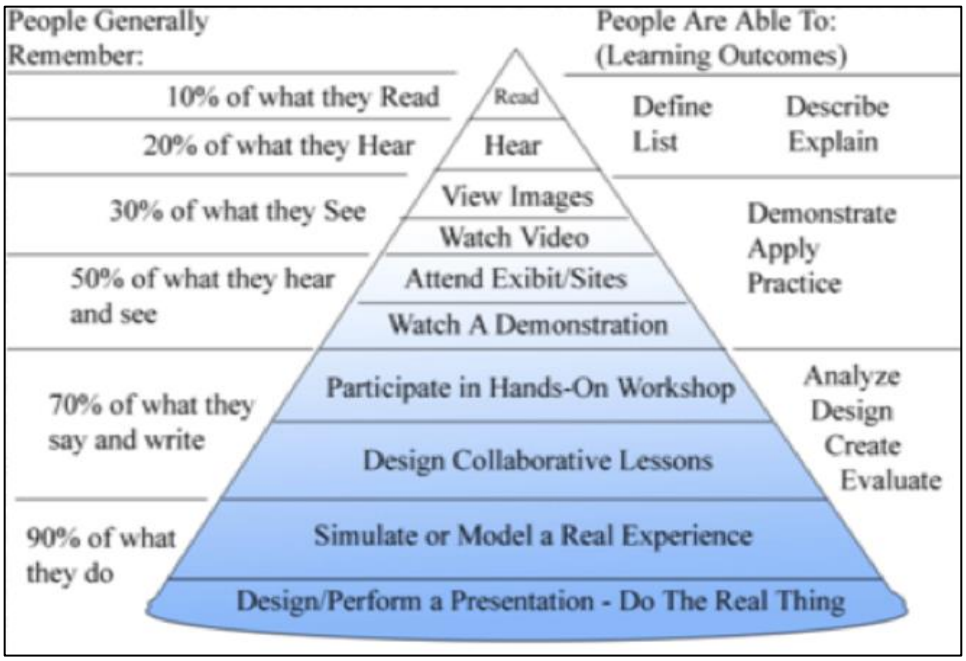

Figure 2. Theories of learning. From *Audio-Visual Methods in Teaching* by E. Dale, 1969. Copyright 1969 by Dryden Press.

LITERATURE REVIEW

The researcher began this literature review by considering how the role of the school principal has changed over time and the added demands that have been placed on the role over time. He then looked at how institutions prepare principals and how they use national standards as a guide for their principal preparation programs. Scenario-based leadership simulations was then explored to provide a greater understanding of how this experiential tool works and promotes preparation for real world demands of the role of principal. Finally, the researcher analyzed the components of leadership self-efficacy and the role it played in this study.

Role of the Principal

The researcher reviewed research spanning the past century and identified changes in demands on the role of principal, especially added responsibilities. Until the 1900s, the role of principal was narrowly defined as a building manager and school disciplinarian (DiPaola & Walther-Thomas, 2003). This description may have worked well in the past, but the job description of the school principal has evolved significantly. Due to emerging research since the 1970s, the principal's role has become one that is understood to contribute significantly to the success of students and, therefore, has taken on more instructional leadership responsibilities (DiPaola & Walther-Thomas, 2003).

Instructional Leadership

In the last 30 years, federal policies such as No Child Left Behind (NCLB; U.S. Department of Education, n.d.-b) and the Every Student Succeeds Act (ESSA; U.S. Department of Education, n.d.-a) have greatly shifted the role of school principal. These policies required principals to become more of instructional leaders, ushering out of the 1900s and into the new

era of high stakes (Hadley, 2010). With the increased accountability in education, the pressure on principals has increased, further requiring them to achieve certain goals related to student achievement to comply with federal initiatives for school improvement (The Wallace Foundation, 2013). These federal initiatives cemented the principal as the primary agent responsible for the academic success of their school (The Wallace Foundation, 2013).

Continued concern by the federal government on the state of public education resulted in the NCLB of 2002 and Race to the Top (RTTT) of 2009 (U.S. Department of Education, n.d.-c). The NCLB was an update to the Elementary and Secondary Education Act of 1965, emerging from concerns that the U.S. education system was not internationally competitive, thus further fueling the role of the principal to being accountable for academic achievement (U.S. Department of Education, n.d.-b). According to Fiori (2018):

> The legislation aimed to improve achievement for all students and created accountability for schools concerning the academic progress of students. Certain subgroups of students, such as special 4 education students, English language learners, economically disadvantaged students, and low-achieving students, received special emphasis. The regulations included in NCLB increased schools' accountability for all students, therefore requiring principals to increase their schools' effectiveness using research-based instructional methods. (p. 4)

Furthermore, RTTT helped to deepen this connection of the school principal role to one of high stakes accountability by providing funding to achieve the results desired from the NCLB (U.S. Department of Education, n.d.-c). According to Fiori (2018), "To obtain the grant, states had to demonstrate that they were developing environments for educational reform and innovation, achieving significant improvement in student outcomes, closing achievement gaps, improving

high school graduation rates, and preparing students for college and careers" (p. 4). Race to the Top prioritized performance evaluations and increased accountability for principals related to student achievement (U.S. Department of Education, n.d.-c).

As schools began focusing more and more on federal initiatives and policies for achievement accountability, the role of school principal shifted even more toward that of an instructional leader, leaving the daily managerial operations of the school with less of a focus. Scholars in the field of educational leadership have identified the impact of a school principal on the schools they lead as being highly correlated to not only the success of its students but also the effectiveness of its teachers (Baker & Cooper, 2005; Brewer, 1993). According to P. Campbell, Chaseling, Boyd, and Shipway (2018), over the last three decades, there has been a movement from the principal as administrator or manager toward a principal focusing more on teacher practice and strong central leadership. Principals have the second largest influence (i.e., second to the teacher) on student learning and achievement (Leithwood, Day, Sammons, Harris, & Hopkins, 2006). According to Day (2017), "No one is better placed to influence teachers' quality directly and indirectly than the school head teacher/principal" (p. 149). Ackerson and Baldwin (2019), who referenced a 6-year study conducted by NASSP and NAESP, supported the claim that leadership is second only to classroom instruction as an influence on student learning, which was based on a preliminary review of research. Furthermore, Massey (2012) stated, "The principal is responsible for collaborating with other school professionals to analyze, interpret, and report student achievement to a variety of stakeholders such as parents, staff, district-and state-level administrators, and the community" (p. 66).

School principals can affect student outcomes through attracting teachers with high standards, making the selection and retention of teachers an important facet of the principal's

role. Additionally, Baker and Cooper (2005) used national data from the Schools and Staffing Survey (National Center for Education Statistics, n.d.) to identify a link between a principal's undergraduate background and a teacher's undergraduate background. What this means is, principals graduating from high-achieving undergraduate programs would often correlate to their teachers having this same achievement level and vice versa.

In addition to the role of the principal being connected to teacher and student quality and outcomes, there are also factors that are compounding this shift toward that of an instructional leader. According to Superville (2014):

> In the second term of the Obama administration, the U.S. Department of Education, under Secretary Arne Duncan, has trained its efforts on principals by rolling out a series of initiatives that build on the growing body of research underscoring the role they play in schools' success. (p. 1)

Such initiatives include the NCLB, RTTT, and ESSA. This focus on principals is a departure from previous administrations that gave principals authority for executing these initiatives successfully in schools (Superville, 2014). Geleta (2015) further emphasized the focus on instructional leadership:

> The need for principals to have the competence to create a shared vision and clear goals for their schools and ensure continuous progress toward achieving the goals; support the implementation of high-quality standards based instruction that results in higher levels of achievement for all students; provide opportunities for all members of the school community to build their capacities and participate in important school decisions, allocate resources and manage school operations to ensure a safe and productive learning environment, and engage parents and community members in the educational process and

> create an environment where community resources support student learning, achievement and well-being. (p. 3)

This suggests the role of instructional leadership is paramount in creating not only a conducive learning environment but also student academic success. In addition to the rise of instructional leadership in the role of the school principal from external demands by government initiatives and school accountability, principals also have to deal with competing internal demands related to the managerial responsibilities and daily operations within their schools, which places principals in the crossfire of both external demands and internal demands from teachers for good working conditions and appropriate support (Hult, Lundström, & Edström, 2016).

Noninstructional Leadership

In addition to principals providing instructional leadership for schools, there has been an influx of noninstructional expectations (e.g., greater professional accountability, increased expectations regarding home-school communication) added to the principal's role over the past 30 years (Drake & Roe, 1999). These noninstructional responsibilities fill the principals' calendars with responsibilities—complying with district-level edicts, addressing personnel issues, ordering supplies, balancing program budgets, keeping hallways and playgrounds safe, putting out fires that threaten tranquil public relations, and making sure busing and meal services are operating smoothly—and take away time from principals’ work days (Institute of Educational Leadership, Task Force on Principalship 2000). These are just a few of the many noninstructional responsibilities required of administrators.

Balyer (2014) reviewed studies by Portin, Alejano, Knapp, and Marzolf (2006), Salazar (2007), and Crow, Hausman, and Parades Scribner (2005) and found, for the past 10 years,

schools have been expected to provide very different social and academic environments from those in the past. Wells (2013) stated:

> Across America, principals are charged with leading schools with diminished resources, increased expectations for student achievement, changing demographics, and increased accountability and connectivity, often referred to as "24/7" access from central office personnel, parents, students and school board members. (p. 335)

Knowing the changing role of school principals to include a higher focus on instructional leadership, the noninstructional leadership demands take away more time. According to Vooren (2018):

> Grissom, Loeb, and Master (2013) found that principals spent an average of 12.7% of their time on instruction-related activities. Brief classroom walkthroughs were the most common activity, accounting for 5.4% of principals' time use; formally evaluating teachers accounted for 1.8% of principals' time; informally coaching teachers to improve their instruction occupied 0.5% of their time; and 2.1% of their time was spent developing the educational program and evaluating the school curriculum. (p. 49)

With the concomitant change in how the role of school principal is defined, there is a growing concern for the rate of principal churn.

Principal Turnover

Johnson (2005) interviewed principals who voluntarily left their principalships after serving a minimum of 2 years to more than 10 years. Reasons principals decided to leave included workload, isolation, and lack of preservice training. According to a survey from the U.S. Department of Education (2013), over 20% of principals left their schools and more than 70% of principals have less than 5 years at their current schools. RAND Education (2012)

researchers found, when principals leave, the school underperforms the next year. School Leaders Network (2014) found half of new principals leave by their third year. Battle and Gruber (2010) conducted the 2008–2009 Principal Attrition and Mobility Survey of 117,140 principals across the nation and found the annual attrition and mobility rate is around 20%. This rate is inclusive of principals who were movers (i.e., moved to another school) and leavers (i.e., left the profession completely). While a 20% turnover might not be considered a high rate for 1 academic school year, if this trend were to continue, along with the departure of 40% of principals who are now within retirement age, this instability in leadership could be catastrophic (Superville, 2019). Three years later, for 2012–2013, this percentage stayed around 20% (Goldring, Taie, & O'Rear, 2018). What is even more alarming, according to Goldring et al.'s (2018) report, is most principals have very little experience: "Almost three quarters (73%) of principals have less than 5 years at their current school (as of 2011–12), and about half (49%) of all principals have less than 5 years at any school" (p. 3). Goldring et al. (2018) noted the attrition and mobility rate percentage has dropped slightly to 18% in 2016–2017. Their report also outlined connections to higher percentages of principals leaving schools with higher percentages of poverty. Another alarming factor from Goldring et al. (2018) was only 43% of the principals surveyed actually planned to stay in the field long term. Others were either seeking retirement at an early age, focused on leaving the profession, or changing schools. This trend displays an alarming need for understanding why principal attrition is so prevalent.

School Leaders Network (2014) claimed, "Twenty-five thousand (one quarter of the country's principals) leave their schools each year, leaving millions of children's lives adversely affected" (p. 1). In addition, they found 50% of new principals quit during their third year in the role, and those who do stay leave challenging leadership positions to lead more affluent schools.

As noted earlier, it is clear the demands on a principal are not only intense, but also dynamic and complex; therefore, principal preparation program should consider how preparation programs are preparing these future leaders to tackle the unexpected.

According to the NASSP and NAESP (2013), principal development remains a low priority in most education policy agendas. Additionally, the NASSP and NEASP continue to receive reports of principal preparation programs that fail to graduate principals with the necessary skills to lead schools in the 21st century. The NASSP and. NEASP stated, with all that is known now about effective leadership, we can no longer make excuses for inadequate preparation and continued professional development.

A new study developed by NASSP and the Learning Policy Institute reviewed existing research from 35 major studies on principal turnover to identify why school leadership matters, and the impacts of principal mobility on student achievement (Levin, Bradley, & Scott, 2019). The top recommendation from this study was to provide high-quality professional learning opportunities—both initial preparation and in-service—to give principals the necessary skills and competencies for school leadership. According to Levin et al. (2019), JoAnn Bartoletti, NASSP Executive Director, stated:

> The research consistently highlights the relationship between principal effectiveness and student success. It also highlights our nation's consistent underinvestment in principal effectiveness. The study reports the national average rate of principal turnover is approximately 18 percent, with turnover being higher in schools with high concentrations of students living in poverty at approximately 21 percent. (p. 3)

With principals having the greatest level of impact on teacher quality and subsequently student learning, this further supports the need to prepare school leaders, so schools are retaining

high quality leaders to lead and build school communities of academic excellence. Additionally, with school principals displaying a high rate of churn, institutions need to begin looking at ways to better prepare aspiring school principals for the challenging situations they could experience in the field, while also helping to reduce the rate of churn from the position of principal by adequately preparing aspiring school principals.

Principal Preparation

For the past two decades, a great deal of research has focused on the need for high quality principal preparation. According to Davis et al. (2005), “In recent years, a number of reports depict the principalship as being in a state of crisis largely precipitated by two troubling factors” (p. 4). The first factor was derived from Knapp et al. (2003), who summarized school districts are struggling to not only attract but also to retain highly qualified candidates for leadership roles. The second factor came from Levine’s (2005) research involving case studies that led the author to the conclusion that principal candidates and existing principals are often ill-prepared and inadequately supported to organize schools to improve learning while managing all other demands of the job. Farkas et al. (2003) reported 67% of principals indicate “typical leadership programs in graduate schools of education are out of touch with the realities of what it takes to run today’s school districts” (p. 39). Hale and Moorman (2003) added, “The general consensus in most quarters is that principal preparation programs (with a few notable exceptions) are too theoretical and totally unrelated to the daily demands on contemporary principals” (p. 5). New Leaders (2012) reported states across the country are taking tremendous chances on turning around the lowest performing schools and on upgrading both the expectations for learning and for teaching. The opposite is true for schools focusing their attention on the crucial role that principals play in making these reform strategies successful and, by extension, improving student

achievement. More precisely New Leaders (2012) stated, “Principals have a multiplier effect. They attract, develop, and retain great teachers. They set the tone for school culture, and they are the catalysts to turn around low-performing schools” (p. 2). Understanding that school principals play an incredibly impactful role in schools, it should be every state’s priority to foster high-quality and relevant principal preparation programs.

The National Governors Association found most states’ principal preparation systems could be improved to better equip elementary school principals to evaluate pre-K through third grade (P–3) teachers, support improvements in teaching and learning, and guide teachers in using curricula and assessments in the earliest grades (as cited in Brown et al., 2014). Recent state policy developments to expand state-funded pre-K educational reform and teacher evaluation have increased the urgency for policy changes (Bueno, Darling-Hammond, & Gonzales, 2010). This current focus remains concurrent with the previous research suggesting the role of the principal has shifted more toward instructional support, while still holding on to the noninstructional responsibilities. According to Hess and Kelly (2005):

> The growing body of research shows that principal preparation programs are not effectively preparing school principals for the challenges of the job. In a survey of fifty-six principal preparation programs just 2 percent of 2,424 course weeks addressed accountability in the context of school management or school improvement, and less than 5 percent included instruction on managing school improvement via data, technology, or empirical research. Of 360 course weeks devoted to personnel management, just 12 weeks mentioned teacher dismissal and nine mentioned teacher compensation. (p. 2)

Hess and Kelly (2005) “raised questions about whether preparation is well matched to the contemporary world of schooling and whether graduates of principal preparation programs are

being equipped for the challenges and opportunities posed by an era of accountability" (p. 1). Hess and Kelly (2007) also noted an array of scholars who have asked whether traditional approaches to preparing and licensing principals are sufficient (see Elmore, 2000; Hess, 2003; Murphy, 2001a; Thomas B. Fordham Foundation, 2003; Tucker, 2003).

Having reviewed the growing body of research, not only are scholars identifying a need for principal preparation programs to more effectively address the challenges of the job but principals in the field are also identifying this same need. According to Farkas et al. (2003):

> All but 4 percent of practicing principals report that on-the-job experiences or guidance from colleagues has been more helpful in preparing them for their current position than their graduate school studies. In fact, 67 percent of principals reported that typical leadership programs in graduate schools of education are out of touch with the realities of what it takes to run today's school districts. (p. 39)

Additionally, Levine (2005) conducted a 4-year study at Columbia University and assessed the quality of educational administration programs. Based on a survey of practicing principals and education school deans, chairs, faculty, and alumni, as well as case studies of 25 school leadership programs, Levine (2005) concluded, "The majority of educational administration programs range from inadequate to appalling, even at some of the country's leading universities" (p. 23).

A more recent publication by The Wallace Foundation (2016) stated, "There is concern that many of the 700 or so university-based programs in the United States may be falling short" (p. 5). The synthesis of the four reports within the publication found five themes: (a) district leaders are largely dissatisfied with the quality of principal preparation programs, and many universities believe their programs have room for improvement; (b) strong university-district

partnerships are essential to high-quality preparation but are far from universal; (c) the course of study at preparation programs does not always reflect principals' real jobs; (d) some university policies and practices can hinder change; and (e) states have authority to play a role in improving principal preparation, but many are not using this power as effectively as possible. In this study, most university-based preparation programs had not adequately prepared principals for today's challenges. The Wallace Foundation (2016) report suggested:

> University-based principal preparation is still, largely, not as effective as it needs to be to produce the leaders our nation's schools and students require. Moreover, when asked to rate the effectiveness of preparation for 15 common school-leader responsibilities instructional leadership, team building, problem solving/decision making, and relationships/collaboration—[were] among the five lowest ranked areas. (p. 7)

Principal programs have been identified by leading scholars and acting superintendents and principals as being out of touch and not addressing the challenges of the job. Therefore, we need to examine the new standards which are driving the certification of school principals, known as Professional Standards for Educational Leaders (PSEL).

Professional Standards for Educational Leaders

According to the North Dakota Council of Educational Leaders (2009), from the research and practice literature, it can be seen what an effective site leadership looks like. This is illustrated through the work of the Interstate School Leadership Licensure Consortium Policy Standards (ISLLC, n.d.), which was originally designed for leadership preparation programs and has now been updated and is being used for all effective leadership practice (North Dakota Council of Educational Leaders, 2009). The NPBEA (2015) stated:

> The field of school leadership in the United States is coalescing around the ISLLC Standards. For example, 35 states have adopted them; the National Council for the Accreditation of Teacher Education (NCATE) used them to develop their standards; tens of thousands of candidates for principal licensure have taken the ISLLC licensing exam; hundreds of preparation programs are revising their curricula aligned with the ISLLC Standards; and other organizations such as the National Association of State Boards of Education (NASBE) have openly, and in writing, recommended the use of the ISLLC Standards by their membership. (para 3)

These standards were recently revised, have been arranged in 10 specific standards as opposed to six, and are now known as the PSEL (NPBEA, 2015; see Table 1). The potential for answering the question—to what extent the PSEL are being accomplished by aspiring leaders—is still uncharted.

According to Rowland (2017), “Strong principals must have opportunities throughout their careers to be trained, developed, and supported in consistent ways that reflect modern, evidence-based standards” (p. 12). Furthermore, “Districts and states might well consider convening stakeholder groups that focus on the alignment of current standards to the PSEL and, more importantly, how their school leadership standards drive systems for recruiting, retaining, and developing principals” (Rowland, 2017, p. 13). These standards take the approach of helping to prepare aspiring school principals in being ready to tackle the real world demands of the role (Bottoms & O'Neil, 2001). With the role of principal having evolved more toward an instructional leader, these standards provide preparation programs with guiding alignment to these demands (Leadership Matters, 2013). Many principals feel their preparation has not prepared them for meeting the real-world demands, despite having these new revised standards.

Table 1

Professional Standards for Educational Leadership

Standard	Description
Standard 1	Mission, Vision, and Core Values Effective educational leaders develop, advocate, and enact a shared mission, vision, and core values of high-quality education and academic success and well-being of each student.
Standard 2	Ethics and Professional Norms Effective educational leaders act ethically and according to professional norms to promote each student's academic success and well-being.
Standard 3	Equity and Cultural Responsiveness Effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote each student's academic success and well-being.
Standard 4	Curriculum, Instruction, and Assessment Effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote each student's academic success and well-being.
Standard 5	Community of Care and Support for Students Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of each student.
Standard 6	Professional Capacity of School Personnel Effective educational leaders develop the professional capacity and practice of school personnel to promote each student's academic success and well-being.
Standard 7	Professional Community for Teachers and Staff Effective educational leaders foster a professional community of teachers and other professional staff to promote each student's academic success and well-being.
Standard 8	Meaningful Engagement of Families and Community Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each student's academic success and well-being.
Standard 9	Operations and Management Effective educational leaders manage school operations and resources to promote each student's academic success and well-being.
Standard 10	School Improvement Effective educational leaders act as agents of continuous improvement to promote each student's academic success and well-being.

Note. From *Professional Standards for Educational Leaders* by National Policy Board for Educational Administration, 2015.

Scenario-Based Leadership Simulations

According to Frederick (2018):

> Leadership Simulations (or Leadership Serious Games) are online applications representing a sequential decision-making exercise structure around a model of a business operation, in which participants assume the role of managing the simulated operation. A simulation is an approach and a tool that makes possible controlled experiments, based on clear rules for the player. The user makes decisions (choices between alternatives) and receives a series of feedback that is conditional upon his/her initial choices. The game proceeds through several series of these interactive, iterative steps. (p. 12)

As Lehrer (2017) explained in *Wired*:

> Pilots were the first profession to realize that many of our most important decisions were inherently emotional and instinctive, which is why it was necessary to practice them in an emotional state. If we want those hours of practice to transfer to the real world—and isn't that the point of practice?—then we have to simulate not just the exterior conditions of the cockpit but the internal mental state of the pilot as well. (p. 1)

Leadership simulations can create this same impact by fostering an experiential learning environment for testing (and in some of the cases for measuring) soft skills and exercising emotional regulation (Vlachopoulos & Makri, 2017).

The use of simulations as a way to prepare leaders dates back to the Roman Empire (R. Smith, 2010). Simulations as tools of warfare have a long history:

> At least as far back as the Roman Empire, commanders used sand tables with abstract icons to represent soldiers and units in battle. These allowed leaders to visualize and

> manipulate a small physical copy of the battlefield. It allowed them to see information in geographic perspective and enabled multiple players to pit their own ideas against one another. Though the visual representation provided the initial value of the practice, creating a playing board upon which multiple options could be compared proved to be even more powerful. (R. Smith, 2010, p. 1)

Over time, simulations and educational games have continued to expand into various realms of training. The medical and business realms are two that, starting in the 1950s, began to incorporate simulations and games as a part of training (Wideman et al., 2007). With the emergence of computer-based simulations, educational simulations were born.

As evidenced in the growing body of research, asking educational leaders to solve problems to which they have never been exposed or had to experience before is setting them up for failure (Darling-Hammond, Flook, Cook-Harvey, Barron, & Osher, 2020). To prepare future school leaders to tackle these new demands and problems, principal preparation program leaders must begin to expose students to the demands they will face daily in their principal preparation programs. According to Spero (2012), in an effort to find new and interesting ways to design and deploy content to a targeted audience (i.e., aspiring principals), there is truth to the adage, “Experience is the best teacher.” Historically, when one needed to develop demonstrable expertise in a profession, they undertook an apprenticeship to learn by doing (Spero, 2012). According to Bravender and Staub (2014):

> Educational simulations have shown to be beneficial for economy and cost savings. Another benefit for the use of educational simulations is to mitigate risk and to enrich different experiences. These simulations allow potential leaders to make mistakes and to

> learn from the experience in a safe environment. These simulations also give potential leaders a wide range of simulations. (p. 191)

If researchers are stating there is no substitute for experience, then we need to look at how we prepare our school leaders for the multitude of challenges they will certainly face daily. According to Spero (2012), simulations, which can be thought of as focused "apprenticeships in a box are designed to provide this experiential learning" (p. 1). The simulations are embedded deep in the research of memory retrieval. Although there is a great deal of research demonstrating the benefits of participating in simulations in various professional fields, the application of simulations for school leaders is relatively new.

Educational Leadership Simulations (ELS) is a pioneer in the application of scenario-based leadership simulations for school leaders (Spero, 2012). They have conducted a number of studies on the effectiveness of such simulations. At present, their studies constitute the majority of the studies conducted on this new approach to leadership preparation. Although they report many positive successes in research regarding simulations (Spero, 2012), there are not yet third-party organizations to assess effectiveness, so ELS's findings should be viewed with some caution. According to Piehler (2019), Jay Doolan, CEO, Foundation for Educational Administration, stated:

> Their Leader to Leader Program for new principals uses the simulations during their peer support meetings. Ed Canzanese, the coordinator, says the feedback is overwhelmingly positive. The mentors who support the new candidates feel they truly stimulate thoughtful discussions. Additionally, David DeJong, Assistant Professor, Education Leadership, University of South Dakota has stated, "I used the simulations to teach a group of 16

teachers taking a graduate level course. It was fascinating to see the differences between how teachers and administrators respond to situations." (para. 4)

On a larger scale, these simulations have been adopted recently by the NAESP and used as a component of their Principal Mentor Program and in other professional learning activities. Carol Riley, the NAESP Professional Learning and Outreach Specialist, states, "NAESP is excited to use ELS simulations to develop administrative skills and build stronger mentoring programs while also developing elementary school specific scenarios and expanding usage of this valuable experiential tool with our members" (NAESP, 2016, para. 3). The NAESP Principal Mentor Program has reported responses from program participants are positive and the deeper conversations focusing on the complexity of the role of the principal and how their response to situations impact all aspects of the school operations provides a new dimension in training and program development (Piehler, 2019).

In addition to Spero (2012), there is research that suggests simulations may provide teachers with a virtual learning environment to practice their skillset (Ericsson 2006; Grossman, 2010). According to Grossman (2010), "Research on expert performance highlights the importance of extensive and targeted practice in developing expertise" (p. 7). Additionally, "Organizing professional education around the development of clinical skill requires multiple opportunities to practice and get feedback throughout a preparation program. Some of this practice can occur productively in designed settings or simulations" (Grossman, 2010, p. 2). Furthermore, a number of teacher education programs are currently experimenting with designed settings for learning to teach, which might include teaching simulations, summer school programs explicitly designed to serve as laboratories for the learning of new teachers, or virtual

classrooms in which technological innovations are used to provide opportunities to interact with practice (Grossman, 2010). According to Kaufman (2016):

> Simulations are becoming more common in pre-service teacher education, allowing practice and feedback for skills such as lesson planning and implementation, classroom management and teaching students with varying learning needs and challenges. Pre-service teachers can move from theory into action, with more practice time and variety than would be available in limited live practicum sessions, without negatively affecting vulnerable students. (p. 2)

Although the application of scenario-based leadership simulations is fairly new, there is evidence this area should receive continued research and focus. With the research showing simulations becoming increasingly common in teacher preparation programs, it is sensical to think the application of simulations could have the same results in educational leadership. The researcher has chosen the simulations created by ELS and endorsed by the NAESP as the simulations to be used in this study. According to the key findings from Thalheimer (2009), "Learners who retrieve information from memory today are better at retrieving the same information from memory at a later time" (p. 5). Furthermore, "the retrieval practice is even more powerful when it utilizes realistic situations that learners will face on the job. When decision-making scenarios simulate future workplace situations, learners are more likely to be reminded of what they previously learned" (Thalheimer, 2009, p. 5). According to Bell, Martin, and Clark (2004), policymakers and organizations need to ask sensible questions in relation to their relevant future(s) so they

> can anticipate problems and possible solutions. Creating strategic scenarios or scenario planning has become an accepted method of engaging with the future by asking such

> questions and using a more discursive approach than traditional forecasting techniques. Scenario planning has been used effectively in diverse situations such as by Shell Oil's attempt to deal with oil prices rises during the 1990s, to stimulate debate on the future of South Africa during the Mont Fleur scenario exercise during the same period, and more recently to identify potential "white spaces" between the old and new economies and old and new industries. Most of the expertise in this field lies not so much in the academic domain but in the large consulting companies. (p. 298)

According to DeJong and Grundmeyer (2018):

> When using simulations as a way to train leaders one can prevent gaps that have occurred through strategies that have taken place previously in leadership training. Supporters of using these simulations have stated that the use of simulations is closely aligned to the educational goals of the facilitator. These strategies of using simulations enhance complex decision-making processes for leaders in the areas of teamwork, fostering higher level thinking, and reflection. (p. 192)

Therefore, if principal preparation programs leaders incorporate even a small exposure to specific scenario-based leadership simulations, then there may be a greater self-perception of preparedness in meeting the increasing demands of the role of school principal. To analyze preparedness, aspiring school leaders must be measured in relation to how they internally feel, which can be measured through self-efficacy as well as other measures of efficacy.

Leadership Self-Efficacy

According to Bandura (1994), *self-efficacy* is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (p. 2). Versland (2015) identified self-efficacy as "vital to principals' success,

because it determines the degree of effort exerted on a particular task as well as the kinds of aspirations and goals that principals will set for themselves" (p. 301). Winter, Rinehart, and Munoz (2002) suggested self-perceptions of principal candidates, in regard to how they perceive their ability to be successful in the principal role, was the strongest predictor of their willingness to even apply for a principal position. With the role of principal being more focused on instructional leadership, it is critical to develop the self-efficacy of aspiring principals early on. According to research compiled by Gilbert, Johnson, and Voelkel (2018), "Over the past two decades a significant body of research has accumulated suggesting a positive relationship between self-efficacy and PIL [Principal Instructional Leadership]" (p. 156). Versland (2015) cited the works of others and argued:

> Although principal preparation programs are expected to help candidates develop technical skills for leadership, the development of principal self-efficacy is less often emphasized even though Tschannen-Moran and Gareis (2007) found that principal self-efficacy is necessary to facilitate group goal attainment. Seashore Louis et al. (2010) reported that self-efficacy also enables a principal to build relationships necessary for high levels of collective performance. (p. 299)

Therefore, Versland (2015) suggested:

> Principal training programs should also include experiences designed to build candidates' sense of self-efficacy if new leaders are to be successful in meeting the challenges of managing complex human systems and improving schools. Lacking self-efficacy about the principalship, school leaders will have a difficult time providing the continuous affirmation and support necessary to build instructional capacity, and innovate and promote higher levels of student achievement. (p. 300)

Tschannen-Moran and Gareis (2005) devised a self-efficacy survey which aimed to measure the perceptions of school principals. That survey will be used as a component of this research.

This research will help better understand in what ways might participating in online leadership simulations during a principal preparation program influence an aspiring principal's sense of self-efficacy as a school leader. In turn, this research will add to the growing body of knowledge about the preparation of aspiring principals. Furthermore, the research uncovered whether there is a connection between participating in online leadership simulations during a principal internship and an aspiring principal's confidence in meeting the PSEL standards. If so, this might warrant more intensive study as a fruitful avenue of subsequent research into promising strategies for enhancing school leadership preparation.

METHODOLOGY

In this study, the researcher used a case study methodology using qualitative methods focusing on aspiring principals enrolled at a small, liberal arts college in the Northeast. According to Gustafsson (2017), a case study can be defined as an intensive study about a person, a group of people, or a unit, that intends to generalize over several units. According to Cosby (2005), "Case studies are particularly helpful in understanding the internal dynamics of change processes, and including multiple cases capitalizes on organizational variation and permits an examination of how contextual factors influence implementation" (pp. 248-255). In addition, Cousin (2005) stated case study is not aimed at analyzing cases, but it is a good way to define cases and to explore a setting to understand it. According to Yin (1994):

> A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident. In other words, you would use the case study method because you deliberately wanted to cover contextual conditions—believing that they might be highly pertinent to your phenomenon of study. . . . The case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest that data points. . . . In this sense, the case study is not either a data collection tactic or merely a design feature alone but a comprehensive research strategy. (p. 13)

Furthermore, Galloway and Sheridan (1994) stated a case study involves collecting in-depth observations in a limited number of cases to focus on fewer "participants" but more "variables" within each participant. Researchers engage in direct observations of selected cases and in-depth interviews with those cases. Regardless of the specific data collection technique used (e.g.,

observation or interview), “the goal is to obtain detailed textual data describing the cases. In this study, the researcher employed the data collection technique of interviews. Case studies can follow one of two major designs: (a) a single case study, where a single subject is examined in-depth or (b) a multiple case study, where several cases or events are studied” (Galloway & Sheridan, 1994, p. 67). In this study, the researcher selected multiple case studies as the design.

According to R. Campbell and Ahrens (1998), “Previously reported case studies have been criticized for allowing investigator bias to permeate the research, not employing methodological rigor in describing procedures, and failing to address reliability and validity” (p. 23). The qualitative methodology literature contains many suggestions for addressing these potential criticisms. R. Campbell and Ahrens (1998) stated, “To address the potential for researcher bias, a strategy using multiple coders to review and analyze textual data can help to ensure objectivity, allow for the computation of inter-rater reliability, and enhance the findings by allowing for the convergence of multiple interpretations” (p. 5).

Research Design

In this case study, the researcher employed a qualitative multiple case study research approach that used data collection from interviews, surveys, and researcher notes to investigate in what ways scenario-based leadership simulations influence an aspiring principal’s self-efficacy and confidence in meeting the PSEL. According to Denzin and Yvonna (2005), qualitative research involves “an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (p. 3). Furthermore, “special consideration is given to the researcher as a person. He or she is not an independent observer in a white coat. . . . Rather, in qualitative research self-reflection about one’s own

attitude and position and role in society is vital" (ATLAS.ti, n.d, para. 9). Supporting this claim, Denzin and Yvonna (2005) wrote, "Behind all research stands the biography of the gendered researcher, who speaks from a particular class, racial, cultural and ethnic community perspective" (p. 21). According to Merriam and Tisdell, (2017), "The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon" (p. 12).

In this study, eight aspiring school leaders in a small liberal arts college in the Northeast shared their experiences while participating in online leadership-based simulations. The stories told provided personal experiences as perceived by each aspiring school leader. All participants participated in or were actively engaged in a principal preparation program at the same small liberal arts college in the Northeast. A narrative of each participant's experiences in the online leadership-based simulations were reported through interviews with the researcher and provided subjective meaning of how these simulations impacted their perceived development as aspiring school leaders.

According to Merriam and Tisdell, (2017), a case study approach "offers insights and illuminates meanings that expand [the] readers' experiences. These insights can be construed as tentative hypotheses that help structure future research; hence, case study plays an important role in advancing a field's knowledge base" (p. 54). This case study explored each participant's thinking about what they experienced in the simulations and their role as aspiring principals. This methodology gave the researcher the best approach for gathering the data to document participant self-efficacy and confidence due to the in-depth qualitative data collection.

Setting

This research study was conducted at a small liberal arts college in the Northeast. The college has a school principal preparation program that has a list of required courses for all principal candidates, which includes three internships consisting of 460 hours in total. It is from these internships the participants were selected. Students in the school principal program are required to complete 460 hours over the course of three internships while under the guidance and supervision of a certified principal and college supervisor. The college's school principal program prepares educators to become certified as a school principal with a Master of Education (MED) degree, Doctor of Education (EdD) degree, or Certificate of Advanced Graduate Study (CAGS). The courses of all programs are aligned with the state certification standards. There is an experiential focus of the program, where students actively engage in applying the concepts they learn in their coursework in three internships. The principal preparation program is a hybrid program that involves online and face-to-face interactions. The standards used in the program are the PSEL and are aligned to coursework, which consists of 52 credits.

Sampling

When designing sampling approaches, a researcher must remember, unlike quantitative research, qualitative research normally studies a few individuals or cases because the purpose of qualitative research is to gain an in-depth picture of each individual or site (Creswell, 2013). The intention is "not to generalize to a population, but to develop an in-depth exploration of a central phenomenon" (Creswell, 2013, p. 206). Sampling approaches between quantitative and qualitative research are different. Quantitative sampling approaches focus mostly on random sampling, selecting representative individuals, and generalizing to a population, while qualitative sampling approaches focus on understanding insights and learning from individuals (Creswell,

2013). This approach ultimately provides insight into possibilities for the larger target group of aspiring school principals and sets the stage for future research in this area. Accordingly, purposeful sampling was used in this study, and the number of participants was small to gain insights in the phenomenon under investigation.

There are two types of sampling: probability and nonprobability (Merriam, 2009). While probability sampling employs randomizing techniques to generalize the results to the larger population, nonprobability sampling employs purposeful sampling techniques to select participants who are “information rich” (Patton, 1990). The sampling technique to use in the study depends on the research problem and questions of the study (Creswell, 2013). Since this study aimed to understand relationship between the experiences of participants completing online, leadership scenario-based simulations and their sense of self-efficacy as a principal and confidence in meeting the PSEL, a nonprobability sampling and purposive sampling were most suitable, allowing the researcher to gain insights and learn about the phenomenon. This sampling was conducted by gathering a list from the institution’s principal preparation program enrollment office and then emailing each individual using the script in Appendix A. If candidates were interested in participating, the researcher scheduled a phone interview with them to determine their eligibility. The criteria for eligibility was, (a) being or having been enrolled in the principal preparation program and (b) not having executed the role of principal. Since the pool of possible candidates was limited, it was clear this type of sampling would yield the best results, while also ensuring the integrity of the research study.

Participants

The population was comprised of eight aspiring school principals in a small liberal arts college in the Northeast. The main criterion for the sampling was individuals had participated in

or were actively engaged in a principal preparation program at the same small liberal arts college in the Northeast. The names of individuals involved in the program were obtained from the program director. This was accomplished by generating a list of all students enrolled in the principal preparation program and then emailing them each individually using the script in Appendix A. The researcher reached out to each possible participant, explained the study, and sought their participation as a volunteer for the study. The researcher learned more about each potential participant through an in-depth initial phone interview, which helped to verify whether the interested participants were in fact eligible for the research study. Table 2 offers an overview of the participants an is followed by their individual profiles. The next section describes the participants more in detail.

Table 2

Participant Overview

Participant	Age	Degree Program	Internship
Nancy	46	EdD	During
Edmund	38	EdD	Prior
Kendra	41	CAGS	During
Christy	52	EdD	Prior
Cindy	54	EdD	Prior
Sandra	39	MED	During
Matt	39	EdD	Prior
Colton	40	EdD	Prior

Nancy

Nancy was 46 years old. She had been in her current position for about two years. She started the principal preparation program in March 2019 and had completed all three of her internships during this study. She entered the principal preparation program through the EdD program. Nancy decided to join the principal preparation program to “keep all her options open” upon graduation. She was recruited through an email sent from the program director of the principal preparation program on behalf of the researcher.

Edmund

Edmund was 38 years old. He had been in his current position for about eight years. Edmund started the principal preparation program in March 2018 and had completed all three internships prior to this study. He entered the principal preparation program through the EdD program. Edmund was interested in gaining his principal certification so he could apply for administration positions after graduating from the EdD program. He was recruited through an email sent from the director of graduate programs in education on behalf of the researcher.

Kendra

Kendra was 41 years old. She had been in her current position for about four years. Kendra started the principal preparation program in January 2019 and completed all three of her internships during this study. She entered the principal preparation program through the CAGS program. Kendra was interested in applying for a curriculum administrator position in the future. She was recruited through an email sent from the Program Director of the principal preparation program on behalf of the researcher.

Christy

Christy was 52 years old. She had been in her current position for about 12 years. Christy started the Principal preparation program in the Summer of 2018 and had completed all three internships prior to this study. She entered the principal preparation program through the EdD program. Christy was very interested in curriculum and wanted to become a curriculum director. She was recruited through an email sent from the Program Director of the principal preparation program on behalf of the researcher.

Cindy

Cindy was 54 years old. She had been in her current position for about one year. She started the principal preparation program in March 2018 and had completed all three internships prior to this study. She entered the principal preparation program through the EdD program. Cindy decided to enter the principal preparation program because she felt one day she may want to move into an administrative role. She was recruited through an email sent from the director of graduate programs in education on behalf of the researcher.

Sandra

Sandra was 39 years old. She had been in her current position for about five years. Sandra started the principal preparation program in the summer of 2019 and completed all three internships during this study. She entered the principal preparation program through the MED program. Sandra was interested in becoming a curriculum coordinator, which is why she entered the program. She was recruited through an email sent from the program director of the principal preparation program on behalf of the researcher.

Matt

Matt was 39 years old. He had been in his current position for about five years. He started the principal preparation program in August 2018 and had completed all three internships prior to this study. He entered the principal preparation program through the EdD program. Matt was interested in gaining his principal certification so he could apply for administration positions after graduating from his EdD program. He was recruited through an email sent from the director of graduate programs in education on behalf of the researcher.

Colton

Colton was 40 years old. He had been in his current position for about four years. Colton started the principal preparation program in August 2018 and had completed all three internships prior to this study. He entered the principal preparation program through the EdD program. Matt was interested in gaining his principal certification so he could apply for administration positions after graduating from his EdD program. He was recruited through an email sent from the director of graduate programs in education on behalf of the researcher.

Participant Selection and Informed Consent

Prior to the study, informed consent was obtained from each participant (see Appendix B). First, approval was received from the Dean of Graduate and Professional Studies Program of the small liberal arts college (see Appendix C). Consent was also gathered from the college supervisor (see Appendix D). Once these approvals were gathered, the researcher was able to begin conducting the sampling outlined in the methodology. Prior to gaining informed consent from potential participants, the researcher called the participants and provided them with an outline of the study (see Appendix A) and asked a series of questions (see Appendix E) to learn more about them. The researcher used this initial phone call to screen candidates to ensure the

potential participant met the study's eligibility requirements. Criteria for individuals to participate were they (a) must be an aspiring principal enrolled in the chosen small liberal arts college in the Northeast in the MED, CAGS, or EdD in educational leadership principal certification program or (b) have recently graduated from one of the previously described programs but not yet be performing in the role of principal. The researcher then gained the informed consent from each participant.

The researcher recognized the importance of explicitly briefing participants on the role of the researcher and how the data would be presented anonymously. For the researcher to establish a trusting relationship with the participants, the researcher, therefore, conducted an initial phone orientation prior to participants joining the simulation seminar. This orientation provided participants with information regarding the study and helped answer questions they had. Additionally, the researcher confirmed each participant had not executed the role of principal prior to participating in the seminar and met the eligibility requirements. In addition, when speaking with participants, the researcher was explicitly candid in his role and conveyed the importance of confidentiality during the study. The researcher briefed all participants in a consistent manner, which helped to provide consistency among participants.

Data Collection

Qualitative data were collected from eight participants from Winter 2018 to Spring 2020 using the following three tools: (a) three sets of interview questions (see Appendix E); (b) the Principal's Sense of Self-Efficacy Assessment (see Appendix F), and (c) the PSEL Confidence Survey (see Appendix G). Participants engaged in 10 hours of online simulations through Education Leadership Simulations. These simulations were all hosted online and designed to virtually simulate experiences collected from current and aspiring school leaders. Each

simulation provided feedback to the participant at the end of the survey, which the participant then reflected on in their interviews with the researcher. Participants accessed the simulations online through emails from the researcher. The list of simulations is available in Appendix H, and the simulation emails from the researcher are available in Appendix I.

The links to the simulations are password protected, as the company requires a subscription to participate. Throughout the study, the researcher presented information in a consistent manner which aimed to create continuity within the study and among participants. In interactions with participants, there were opportunities for researcher bias to enter, such as how the purpose of the study was explained and what words were used in asking their permission to participate. By sticking to the script when introducing participants to the study (see Appendix A) and during the phone interviews (see Appendix E), the researcher was able to minimize the bias. Signed consent forms (see Appendices B, C, and D) were kept in a locked, secured area throughout the project and will be stored for 5 years after the conclusion of the project, at which time they will be shredded.

Data were collected before the project, during the project, and after the project using a variety of tools. After participants completed a simulation, an autogenerated email notification was sent to the researcher to indicate they finished the simulation and were ready to setup their phone conversation (see Appendix I). This email notification was sent after each simulation. The phone conversation used open-ended interview questions (see Appendix E) and varied in length from 15 to 30 minutes. The interviews did not have a set time limit. These conversation questions were piloted with students within a small liberal arts college in the Northeast who were not selected for this study. After reviewing the results of the survey questions, the researcher determined the questions were revealing desired outcomes.

The researcher used a phone application called NoNotes to record all phone interviews for accuracy. During and after the phone interviews, the researcher took notes in his research journal. After each phone interview, the researcher sent an email to the participant with information on the next simulation. This process repeated a total of 12 times for each of the eight participants in the study. After the last phone interview, the researcher scheduled a final phone interview to review the participants' experience throughout the simulation seminar in its entirety.

After each phone interview, the researcher transcribed the data using the online software, Trint. After data were transcribed, the researcher corrected errors in the transcripts by listening to the recordings slowly and repeatedly. In addition, immediately following an interview or conversation, the researcher recorded notes.

At the end of the study, participants completed PSEL Confidence Survey (see Appendix G) which helped the researcher measure the participants' confidence in meeting the PSEL. This survey consisted of a breakdown of the 10 standards by substandard and asked the participant to rate themselves 1-4 in each substandard. Participants also completed the Principal's Sense of Self-Efficacy Assessment (see Appendix F) developed by Tschannen-Moran and Gareis (2004). This assessment was aimed at gauging how confident an aspiring principal felt in their ability to accomplish tasks by self-rating a score of 1–4. This assessment was given only at the completion of each participant's involvement in the study so as not to taint or skew the results. The researcher used a script (see Appendix E) for interviews. This script was developed and tested using a pilot group of three participants from a small liberal arts college in the Northeast to ensure its validity.

Data Analysis

Check and Schutt (2012) indicated documentation is the first formal step in analysis. Contracts, notes, and transcribed audio recordings of interviews with the participants were saved, listened to, and organized. J. A. Smith and Osborn (2003) wrote, "Transcripts should be read a number of times for the researcher to become as familiar as possible with the information provided by the participant" (p. 67). The researcher listened to the audio recordings three times and read the transcriptions three times. After field notes and interviews had been documented, the process of precoding and coding began. Charmaz (2001) described coding as "the critical link between data collection and their explanation of meaning" (as cited in Saldaña, 2016, p. 3). Saldaña (2016) defined a code as

> a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purpose of pattern detection, categorizing, theory building, and other analytical processes. Just as a title represents and captures a book, film or poem's primary content and essence, so does a code represent and capture a datum's primary content and essence. (p. 4)

Coding was completed by attaching meaningful words and phrases to data (Saldaña, 2016). According to Saldaña (2016), a "theme is an outcome of coding, categorization, or analytic reflection" (p. 14).

Participants in this study were given the same simulations in the same order (see Appendix H). Each simulation led to a different experience. The researcher used the software Dedoose to organize and code the data. This software allowed the researcher to easily recall and reference the data collected and identify emerging themes. The researcher uploaded the transcriptions into the software and read through each line to perform general coding. After all

the data had been coded, the researcher went back through the data and formed categories based on the codes. From the categories, the researcher was able to determine themes.

Van Manen (1990) described themes as “interpretative, insightful discoveries—written attempts to get at the notions of data to make sense of them and give them shape” (p. 176). The researcher looked at how themes were different or the same and if there were relationships between themes (Gibson & Brown, 2009). The researcher developed explanations, found patterns, relationships, and connections by using inductive data analysis. Hatch (2002) defined inductive data analysis as “a search for patterns of meaning in data so that general statements about phenomena under investigation can be made” (p. 161). Inductive data analysis condensed the data to help summarize, establish links, and develop a theory about the experiences shared by participants (Thomas, 2006).

Positionality of the Researcher

The researcher, a practicing school district administrator, was a doctoral candidate in an EdD program. He has been interested in this topic since graduating from a principal preparation program, which was at a different small liberal arts college in the Northeast. He felt his own principal preparation program did not provide him with the real-world experiences necessary to be immediately successful when taking on his first principalship. It was hoped this study could provide insight into the impact of participating in online scenario-based leadership simulations on an aspiring principal’s self-efficacy and their ability to meet the standards governing effectiveness as a principal. Holmes (2014) outlined:

> It is essential to note here that a researcher’s positionality not only shapes their research but influences their interpretation, understanding, and ultimately their belief in the “truthfulness” of other’s research that they read or are exposed to open and honest

> disclosure and exposition of positionality should show where and how the researcher believes that they have influenced their research, the reader should then be able to make an informed judgment as to the researcher's influence on the research process and how "truthful" they feel the research is. (p. 14)

The researcher entered this qualitative study understanding his biases and being open about them with the reader. He structured this study not around his own story, but around the stories of eight participants to show the projected outcomes outlined previously. Although he hypothesized the online scenario-based simulations will show positive relationships with the variables of principal self-efficacy and confidence in meeting the PSEL, he was open about this perspective and informed the reader.

Limitations of the Study

This study contained limited foreseeable risks. The data in the study were collected on an individual basis and the researcher eliminated any identifying information. Participants were quoted, sometimes at length, but all identifying information was removed. During the member check process, participants had the opportunity to make certain they were comfortable with how their anonymity and confidentiality was ensured. This communicated participant anonymity eliminated the chance for harm to a participant's career or reputation. In addition, the seminar was not graded, thus eliminating the earning of a grade as a risk. It was communicated to participants ahead of time that (a) they were expected to complete all simulations, (b) simulations would not be graded, and (c) a professional development certificate for completing the 10-hour seminar would be awarded upon completion of all modules. The following safeguards were used to protect and ensure the rights of participants: (a) the study was presented to and approved by the New England College Institutional Review Board (IRB) prior to

contacting prospective participants or beginning research (see Appendix J); (b) participants were presented with a written consent form that explained the expectations of participants and the voluntary nature of their participation and written consent was obtained from each participant prior to participation (see Appendices B, C, and D); (c) all transcriptions, consent forms, and related data were monitored and safeguarded to ensure the safety of participants; (d) the participants' rights, interests, and wishes were considered first when choices are made regarding reporting of the data; (e) the final decision regarding participants' privacy rested with the participant; and (f) participants knew they were able to terminate participation in the any time, for any reason, without any penalty.

Sample

Another limitation of this study was that it was a small, purposeful sample that took place at one institution. Due to these factors, it is harder for the results of this study to be generalized to other institutions or populations. The overall population of the study was limited to eight participants to fully capture their experiences. The researcher understands this limited population size makes it harder to generalize, however, it allowed for the researcher to gain a deeper understanding of each participants' experiences. Other factors impacted participation in the research: The majority of the participants came from the EdD program within the same institution, which may have had an impact on how they experienced the simulation seminar based on their deeper level of educational leadership knowledge-base; and the simulations were completed after or during their regular principal preparation program coursework and internship.

Surveys

The surveys could be viewed as a limitation. The researcher only administered one survey for both the PSEL Confidence Survey (see Appendix G) and the Principal's Sense of

Self-Efficacy Assessment (see Appendix F) at the end of the study, which was after the simulations, internships, and coursework were completed. Due to only having one data point at the end, it was challenging to measure growth over time. Although the study provided observable positive impact of the simulations on aspiring principals, the surveys could have also been given in the beginning to measure growth. However, this would then present other researcher bias issues. Future research could mitigate this limitation, but the researcher would need to address bias by exposing participants to the survey early on.

RESULTS

In this study, eight aspiring school leaders—three men and five women—shared their experiences while participating in online leadership-based simulations in the same small liberal arts college in the Northeast. It should be noted, all eight participants had completed their 460 internship hours (i.e., through three internship experiences) either during or prior to the study. Of the participants, one was in the Certificate of Advanced Graduate Study (CAGS) program, one was in the Master of Education degree (MED) program, and six were in the Doctor of Education degree (EdD) program. Three students had recently graduated. The stories told provided personal experiences as perceived by each aspiring school leader who was a participant in the study. A narrative of each participant's experiences in the online leadership-based simulations provided subjective meaning of how these simulations impacted their perceived development as aspiring school leaders.

The purpose of this chapter is to present findings related to the two research questions:

1. In what ways might participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?
2. In what ways might participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL?

The findings are demonstrated in emergent common themes from all participants in the study. This organizing method is a systematic way to help reveal personal insights in each aspiring school leaders' experiences in the simulation seminar. Table 3 outlines the three key themes that evolved from the analysis of the data: (a) Linking Theory to Applied Knowledge, (b)

Critical Reflection, and (c) Critical Thinking. It is important to note, the themes are a result of the participants' coursework, internships, and simulations. Only the participants in this study were exposed to the simulations, as the principal preparation program does not use simulations within its program.

Table 3

Key Themes, Categories, and Example Codes

Example Codes	Category	Theme
Made me imagine myself as a principal, made me think what I would do as a principal, helped me feel more confident in being a principal.	Preparation for Being a Principal	Linking Theory to Applied Knowledge
Lack of experiential knowledge, simulations increased experiential knowledge	Experience Is the Best Teacher	
Decisional reflection, reflective feedback loop	Self-Efficacy	Critical Reflection
Relevant, realistic, real life, interesting, good questions, eye-opening,	Engagement	
Complex problem solving, sparked deeper thinking, balancing stakeholders	Problem Solving	Critical Thinking

Simulation Effectiveness

Participants attested consistently throughout the study to their satisfaction, enjoyment, and engagement in the simulation experiences. They unanimously reported from all post simulation phone interviews that the simulation experiences helped prepare them as aspiring school leaders. Edmund found the simulations would have been very helpful if they were included along with his internship experiences. He answered both research questions indirectly, stating, "I think that having a simulation program really would have added to the effectiveness and also my confidence as an administrator" (Poststudy Interview – Question 1). Colton

confirmed this but then explicitly expanded on how he felt the standards were brought into practice more intentionally. He stated:

> So, I think that these simulations did focus on a lot of the key things that are necessary to be a good administrator and to be a good leader, which are better than how we currently practice the standards in our program. (Poststudy Interview – Question 1)

Nancy spoke directly to the simulations being not only helpful, but effective in building her confidence as an aspiring school principal. Nancy said:

> And so, I definitely thought that they were helpful because it made me think about things that didn't come up in my classes. I was like, “Oh yeah, that's really good. I should be thinking about what you do here.” And when I get to the end and they were like, “Oh, you did well,” like, you know, “That's great.” So, they really were very helpful in building my confidence. (Poststudy Interview – Question 1)

Additionally, all participants felt the simulations were highly effective, especially due to how they related to possible scenarios with which they would be faced. Christy said:

> Here you go. Here is the situation. How did you do? How would you have responded? Definitely reflect on your performance because, you know, these scenarios, it's life. You know, there's not necessarily a right answer. How did you make your decision? What were you considering? And then what was the outcome? You may not have changed your answer. You know your actions. But you might not have considered all the important factors, so even going back and being like, “Well, I wouldn't change what I did, but I didn't even think about this component with the teachers’ union or whatever.” Yeah, I think it's a really good learning tool. (Phone Interview – Question 1)

Kendra and Sandra both talked specifically to the level of realism in the simulations and how they brought the PSEL to life when answering poststudy interview Question 2. Kendra said:

> Well, so I am not really 100% sure that I even know the standards, but you know, having seen them at the end of the simulations and say, "Oh, you know, this is this standard, and it is connected to this simulation." I just felt that it helped me to see their real-life application. (Phone Interview – Question 2)

Sandra responded by saying, "These are just simply fun! I mean, they feel real, and I get to make choices that I would not normally feel comfortable making, and I see the relation to the leadership standards for sure" (Poststudy Interview – Question 3). All participants had a positive experience and found the simulations to be effective and highly engaging.

Themes

Check and Schutt (2012) indicated documentation is the first formal step in analysis. Contracts, notes, and transcribed audio recordings of interviews with the participants were saved, listened to, and organized. J. A. Smith and Osborn (2003) wrote transcripts should be read a number of times in order for the researcher to become as familiar as possible with the information provided by the participant (p. 67). The researcher listened to the audio recordings three times and read the transcriptions three times. After field notes and interviews were documented, the process of precoding and coding began. Charmaz (2001) described coding as "the critical link between data collection and their explanation of meaning" (as cited in Saldaña, 2013, p. 3). Saldaña (2013) defined a code as

> a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purposed of pattern detection, categorizing, theory building, and other analytical processes. Just as a title represents and captures a book,

> film or poem's primary content and essence, so does a code represent and capture a datum's primary content and essence. (p. 4)

Coding was therefore done by attaching meaningful words and phrases to data (Saldaña, 2013). According to Saldaña (2013), a "theme is an outcome of coding, categorization, or analytic reflection" (p. 14).

The participants of this study were exposed to 12 online scenario-based simulations that were geared toward presenting aspiring school leaders with realistic situations to work through, based on real world scenarios aligned to the PSEL. As a result of the coding process and taking into account the research questions, three themes emerged from this study from this inductive analysis of participants' narratives: (a) Linking Theory to Applied Knowledge, (b) Critical Reflection, and (c) Critical Thinking.

Table 3 shows the categories, themes, and example codes. For the theme Linking Theory to Applied Knowledge, two categories emerged from the data: Preparation for Being a Principal and Experience Is the Best Teacher. Two categories emerged connected to the theme of Critical Reflection: Self-Efficacy and Engagement. Connected to the theme of Critical Thinking was the category of Problem Solving.

Theme 1: Linking Theory to Applied Knowledge

For the first theme, Linking Theory to Applied Knowledge, two categories emerged from the information shared by the participants. An analysis of the results of the interviews revealed the following categories that connected their ideas to the theme of Linking Theory to Applied Knowledge: Preparation for Being a Principal and Experience Is the Best Teacher.

Preparation for Being a Principal. All participants in this study produced data that formed the category of Preparation for Being a Principal and, ultimately, the theme of Linking

Theory to Applied Knowledge. This category is connected to the research question that investigates the impact simulations had on the self-efficacy of aspiring school principals. Some results of this are displayed in Table 4.

Table 4

Preparation for Being a Principal

Example Code	Subcodes
It made me think about what I would do as a principal.	Helpful to have to consider balancing the competing demands and impact of decisions on all stakeholders when handling a situation
	Practiced thinking in the moment, through the eyes of a principal.
	Presented with current trending issues and worked through what I would do to address them.
	It made me consider the importance of relationships.
	Practice making decisions as a principal.
	It made me think about what other choices I could make as principal.
Helped me feel more confident in being a principal.	Practiced working through scenarios with a lack of real-world experience.
	Emphasized the importance of handling situations carefully.
	Emphasized the importance of clear communication with stakeholders.
	It was good to be faced with a stressful situation and determine how to respond.
	Focused on the importance of handling the many competing demands of being a principal.
	Practiced situations with instructional leadership and teacher evaluation.
	Practiced application of the PSEL within the simulations.
	Identified connections from simulation experiences to PSEL.

Throughout the study, participants made references to how being exposed to situations where they must make decisions through the eyes of a principal helped them to develop their confidence in decision making. These responses were gained from asking the interview questions after each simulation (see Appendix B). Edmund experienced this firsthand:

> I think the simulation does its best just to simulate what the job might be like and providing those experiences. Could give the admin, you know, the new admin the pursuit of confidence or at least the resources to approach that situation, because there is quite a spectrum of situations. (Phone Interview – Question 1)

Colton confirmed this impact of making decisions but also began to reflect on a higher level of other decisions that could have been made: “I think, like, after you do the simulation, I think it's good to reflect upon about how might you go about it differently or what things would be good strategies and could be good to follow up with” (Phone Interview – Question 1).

All participants were inexperienced in the role of administrator, other than their internships, and spoke to this throughout the interviews. However, they stated participating in these simulations helped them to feel more confident in their abilities as aspiring principals. Kendra identified this clearly when she said:

> I think nothing really beats kind of being put into those situations, but having a simulation kind of makes you, kind of gives you some forethought into how you might react to it and what you might do if you ever were in that situation. I think it definitely will give me more competence than I would have had if I had not been in one of these situations. You know, going into an administrative situation without being put in those situations, I don't think I would be as competent. Like I said, I don't think anything will

> prepare you like being put in these situations themselves as they're happening, which is why the simulations seem to accomplish that. (Poststudy Interview – Question 3)

Edmund spoke to the importance of responding to stressful situations, particularly when you lack experience:

> How do you handle that in emergency situations? There's quite a variety of ways, and I know that you can't make a simulation for everything that's going to happen as an event, but I certainly do feel like the variety of the simulations provides a better repertory system for the individual. (Phone Interview – Question 1)

When analyzing the research question, in what ways might participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL, all participants reported the simulations allowed for a deeper understanding of the real-world application of the PSEL. Nancy, Matt, Edmond, and Christy all spoke directly to how the simulations provided an opportunity to use the learning from their coursework, relate to the standards, and put standards into application. Nancy said:

> So, the simulations really gave you the opportunity to actually put into practice things that you are learning in some of the classes, and then, of course, all of those are related to the standards that you have to meet for a principal certification. (Poststudy Interview – Question 2)

Kendra further elaborated on the connection of the PSEL to the simulations when she said, “I found that the standards aligned very well with the simulations. I know some more heavily than others, but I really like the ones that kind of told you after the fact, which standards were practiced” (Poststudy Interview – Question 2). Sandra also confirmed this when she said, “I feel

like it definitely gave me opportunities to experience, you know, situations that the standards are directly correlated to" (Poststudy Interview – Question 2).

In addition to seeing the connection of the PSEL in the simulations, Edmund, Christy, Colton, and Matt discussed in detail how the simulations worked as a platform for the PSEL to come alive and be seen with more applicable intent and understanding in the sense of the job. Matt said:

> I think like with all of these simulations, they've all met the standards, but they've given it so much more depth and meaning, and I mean, at least for me, there's a conceptual understanding, and then there's the real understanding, you know? I think that when you're becoming a pro on your road to principal, you get a really good conceptual understanding because you want to do a good job, but there's still this big, gap between what your understanding is and what the reality of the situation is, and these simulations bridge that. The funny thing is, like, you think about the professional standards and you read them, and you go, "Yeah, I guess they kinda make sense." But now, when you do the simulation, you can actually tie it into reality, and you're like, "Oh, that really does make sense now. It really does create your understanding of what those standards are and how they and wider reaching." (Poststudy Interview – Question 2)

Colton further supported this when he said:

> They are good guidelines. If you're, like, a new administrator or nobody who has tried to lead any kind of change, I don't think that you just looking at the standards and going through them and having done coursework that plays into those is one thing, but trying to think about a real-life scenario brings forward the issues that you might not necessarily anticipate just by looking at the list on paper or having written about them or read about

> them. I think there's a clear connection between the standards and the simulations, and real-life scenarios are gonna make it more authentic for the person who's going to become an administrator. (Poststudy Interview – Question 2)

Christy also supported this when she stated, “I think it helped me understand what the standards looked like. You know, it's one thing to give standards. It's another thing to see what they actually look like in practice” (Phone Interview – Question 2).

Even though all participants had an understanding of what the standards were, they were not all consistently referencing the same standards. There were many instances where participants would state how they were not familiar with the standards. Cindy stated, “I am not sure if I am even talking about the right standards because it has been a while since I really looked at them” (Phone Interview – Question 3). Furthermore, both Nancy and Sandra were able to reference the standards consistently, but they were not the PSEL. Edmund and Matt were completely unaware of the standards. Edmund said:

> And I think, you know, here's what it comes down to: I feel like I really should know what they are and I'm sure that I read through them in my admin preparation program, but I feel like when it's tied with a simulation, you can really say, “Look, these are the key job descriptions—the key parts of being an administrator—and this is how the simulations do it,” whether it's the learning and evaluation or communicating with the community. I think, if nothing else, it will highlight the value of those and educate the admin students on what they are. (Phone Interview – Question 3)

However, going through the simulations helped all participants to see how these simulations connect to real world situations as well as the principal standards. Cindy eloquently said, “The

courses were helpful—well, only for understanding like the basic knowledge of what a principal needs. I really wish it would have talked more about specific situations" (Prestudy Interview – Question 2). Sandra then went on to elaborate, "I just felt that I was expected to know everything. I mean, I really don't know what I am doing!" (Prestudy Interview – Question 3).

Experience Is the Best Teacher. All participants in this study reported on the theme of Linking Theory to Applied Knowledge through the category of Experience Is the Best Teacher. The results of this are seen in Table 5. Participants all wanted more experience. Although Colton, Edmund, and Kendra reported they wished the multiple-choice questions had exposed them to other options for choice, Nancy reported this was one of the strengths of the simulations. She said:

> Because I felt like the issues were a bit more realistic than the other one. And again, we'd like the multiple choice as someone who's not currently an administrator to just come up with this paragraph. I mean obviously, in life, I'm not just going to be given a multiple choice, you know, if I'm the leader of a school—they're not. "Would you want to do A, B, or C?" But in learning about those things, some of the choices were really close together, are like, you had to think about, "Okay what really would make the most sense here?" And so, I thought that was good. (Phone Interview – Question 2)

The realism of making choices was seen to help participants relate better to the PSEL in real time. Christy stated:

> Well, I was actually able to see a great deal of the leadership standards come forward in this one. Really, look at school management, operations, and also with the equity and integrity of staff. I felt these choices I was making were in real time and feeling very real. (Phone Interview – Question 3)

Table 5

Category: Experience Is the Best Teacher

Example Code	Subcodes
Lack of experiential knowledge	Needing to work alongside an experienced individual.
	Lack of experience in a leadership role.
	I have the knowledge but lack the experience to apply it to.
	Principal preparation focused too heavily on theory and not application.
	Exposure to a variety of situations I have not encountered.
	Multiple choice provided helpful starting points, as I was not experienced in some situations.
	Not used to being the decision maker.
	Lack of experience in handling staff supervision.
Simulations increased experiential knowledge	Simulations were challenging at first but become increasingly easier
	Felt that by working through situations in a simulated environment, increased my confidence in being prepared for a leadership. role.
	Practicing decision making in a simulation explored new outcomes only seen by going through a simulation.
	Exposure to the competing demands of being a Principal
	Provided resources for training me to be prepared for a Principal position.

Edmund countered this, stating:

> I feel that I would have made other choices that were not present. I don't know; I just feel that maybe the multiple-choice style was a little restricting, but then again, I don't know how else it would be accomplished. (Phone Interview – Question 2)

Understanding that the multiple-choice framework did provide Nancy with a selection of choices that complemented her lack of experience, it is essential to note other participants were thinking well beyond the choices further in the study. Colton reported, “I found myself thinking

beyond the choices presented. I thought, ‘If I was in this situation, the option I would most likely choose is not here’” (Phone Interview – Question 2). This evolution of deeper thinking did not occur until later in the simulations. As participants moved through the simulations, they reported a progression in their confidence and ease of handling the simulations. Nancy said:

> So, for some of them, I was like, “Wow, I didn't know this.” But, I think after I got past the first two, it was like, “You know, I could really figure it out.” And by the last one or two, I was like, “Oh yeah, I know what I would do here.” And because, you know, I had also been further down the line in my program as well. So, I think together, the progression of the building of confidence is good. (Poststudy Interview – Question 1)

A contributing factor to this increase in confidence in the simulations can be seen in the conversations from participants on being exposed to new and different situations they had not yet had the chance to encounter before. Kendra stated:

> In today's world, we never know what kind of situations we will be put in, so, you know, it is very helpful to be put in kind of all those situations in a simulation. We have to make decisions on how you would respond and how you would handle those situations. (Phone Interview – Question 2)

Christy then went on to say:

> They offered scenarios that I wouldn't normally get here in New Hampshire necessarily. It also offered scenarios at different age levels. I've got my experiences in elementary school and so, it gave me a little bit of a view into the upper grades as well. (Poststudy Interview – Question 1)

Participants did report positively about their internships; however, their exposure was limited to the walls of their school. Nancy responded to this, saying:

> And yeah, just some of the situations are really realistic and relevant for things that are happening today in society. I think there were only one or two situations like that in New Hampshire. I'm not sure that these types of things are going on, but I'm also in a tiny district, so I may just not be aware of things that are happening in other places too. (Poststudy Interview – Question 3)

Both Sandra and Cindy exemplified this idea by speaking on how helpful the simulations had been in their exposure to other situations. Cindy said, “Yeah, well, I mean, like, many of the others that did give me the opportunity to virtually experience possible situations and possible outcomes, which in my mind has always been helpful” (Poststudy Interview – Question 1). Sandra said, “But I think it was useful because it presented me with scenarios that I definitely would not have been prepared for off the top of my head” (Phone Interview – Question 2).

Speaking to the helpfulness and the connection of these simulations to the PSEL, Colton stated:

> And I felt—I mean absolutely—that the simulations were connected to the standards, even though I can’t recall them all right now and don't remember exactly what each standard was; but I know it felt like the simulations were hitting them within each simulation. (Poststudy Interview – Question 2)

Theme 2: Critical Reflection

The data demonstrate the simulations provided participants with practice in the area of critical reflection. Critical reflection is a reasoning process to make meaning of an experience (University of Tennessee, Chattanooga, 2020). Critical reflection is descriptive, analytical, and critical, and can be articulated in several ways, such as in written form, orally, or as an artistic expression (University of Tennessee, Chattanooga, 2020). In short, this process adds depth and

breadth to an experience and builds connections between course content and the experience (University of Tennessee, Chattanooga, 2020). Data for this theme produced two categories of critical reflection: (a) Principal Self-Efficacy and (b) Engagement.

Principal Self-Efficacy. As discussed in Chapter 2, *self-efficacy* is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 2). Additionally, Versland (2015) identified self-efficacy as "vital to principals' success, because it determines the degree of effort exerted on a particular task as well as the kinds of aspirations and goals that principals will set for themselves" (p. 301).

All participants in this study produced data that formed the category of Principal Self-Efficacy and ultimately the theme Critical Reflection. Results of this are illustrated in Table 6.

Two subcategories emerged from the data: (a) Decisional Reflection and (b) Reflective Feedback Loop. When building upon the exposure to new and different situations, there was a high amount of decisional thinking and reflection in regard to intrinsic considerations participants experienced in the simulations. Participants then received substantial feedback after making decisions in these simulations. Both Sandra and Cindy spoke to this consistently throughout the study. Sandra said, "It just sort of helped me realize that you know there's just a lot to take into consideration when making big decisions like we were asked to make in this simulation" (Phone Interview – Question 2). Cindy supported this, saying:

> And so, I liked the simulation because it helps you become a better decision maker because you're really thinking about all the stakeholders. You have to, because no one is going to tell you to do this and what will happen. Oh yeah. So now this happened. So now you have to tackle this situation and, which can be done, but, it just, is a great

Table 6

Category: Principal Self-Efficacy

Example Code	Subcodes
Decisional Reflection	Multiple choice provided support in making decisions.
	I was able to practice reflecting on how my decisions would impact stakeholders.
	Prompted me to have a deep reflection on the choices I had made.
	Felt more confident in taking risks with my decisions because it was only a simulation.
	Multiple-choice questions were good.
	Practiced thinking each choice through and prioritizing my approach.
	Reflected on staffing decisions related to supervision and evaluation.
Reflective Feedback Loop	Feedback tailored to the choices I made was very helpful.
	Provided a deep explanation of rationales.
	Prompted me to reflect on other choices I could have made.
	Feedback linked to the stakeholders impacted by the decisions I made.
	Feedback helped me to link the simulation to the PSEL.
	Deeper thinking around the PSEL as I reflected on each situation.

> experience to be able to practice that without real life, you know? So, that's what I like best about all the simulations, and some of the things that could happen may not have been necessarily realistic, in my opinion, but definitely possible, and maybe more realistic than I thought. (Phone Interview – Question 2)

Along this same theme, participants began to report the exposure to new situations, compounded by the decisional reflection and feedback, began to increase their confidence in feeling prepared for the job of principal. Kendra spoke to this, saying:

> But at the same time, being able to kind of think through the process of some of these situations and kind of being able to have that option and looking through the simulation over and go out of a different way to really kind of give you the opportunity to have trial and error. So, you know, live and learn, and make those mistakes without actually being in a situation where making mistakes in a real situation could cost you a lot. (Phone Interview – Question 2)

This idea of feeling more comfortable in taking risks allowed for participants to learn through failure, which the research supports is an indicator of experiential knowledge. Edmund responded on this same theme, saying:

> I think that having simulations in my preparation program really would have added to the effectiveness and also my confidence as an administrator because having gone through a program that didn't have a simulation, I look at some of the situations and say, “This is a really realistic situation and I need to be thoughtful about what I do.” And I have the luxury of time—the luxury of knowing that it was a simulation—when I consider what I would do. And in some cases, it was kind of a situation where I would say, “Well, let's see what happens if I do this and that can certainly be good.” (Poststudy Interview – Question 3)

As they were trying to make different decisions, the participants were able to better understand where those choices might lead them. In real life, participants felt less willing to take these same risks in situations for which they have never been confronted, but in these simulated environments, they felt much more comfortable failing. Matt responded to feedback playing a critical role in risk-taking decisions:

> The simulation, I mean, brought me about probably as close to actually being in the situation as I would ever be, so I like that I could be in the situation without actually being in the situation and then that was really nice because then you get the feedback, so you can reflect on how you worked through it. I mean, you can read about them all day but to actually feel and see them and like almost immediately see the outcome? You're not going to see that immediate outcome in real life. But then, to be explained why it was that way, it helped draw so many more connections. (Phone Interview – Question 2)

Nancy, Kendra, and Sandra all felt the same benefits of making decisions and then getting feedback on the outcomes. Nancy stated:

> They dealt with a good variety of issues, and they thought the ones that had more multiple choice questions like more multiple choice responses rather than open ended responses were a bit more effective because afterward, they would give you feedback on your responses, whereas if you had to write something up, it just showed you what you said. And I was like, “Well, I know what I said.” The multiple choice of the feedback were really helpful. (Phone Interview Question 2)

Kendra added to this further, saying:

> It was helpful at the end to have feedback where you know you answer this way and you know this was a better outcome, or which answer may have been a better choice, and this is why. So, it kind of broke down things for you after the fact. It went over how you handled the situation. “What do you think you could have done differently?” The options you could have chosen and what you did choose and why that might have been the better a better choice. It's definitely made me really analyze my decisions. (Phone Interview – Question 2)

Sandra enjoyed the ability to make decisions and then correct them by starting over to make new choices that would lead to other outcomes. She reported:

> You know, I found this one to be very interesting and useful. I honestly liked the format of it or just the way it functions because it was somewhat brief, but it let you redo something from certain points where it was kind of telling you, like, “Nope, that's not the right answer. It's not a good turnout. Well, try again.” You know? And so, yeah, I found that to be interesting because, you know, I was trying to weigh my options at first and then would ultimately make a choice. (Phone Interview – Question 2)

Edmund also felt a very deep reflection on the choices he had made, which ultimately provided him with a valuable tool for analyzing his self-efficacy. He stated:

> And I think what this simulation does is, it really does put you in some select situations. This happens. What do you do? And I think the reflection process is, “What do you do? What did you do? What were the choices that you made?” And simulations kind of identified certain areas, whether it was communication or selecting a mission or budgetary purposes, whatever it was, and was able to provide some reflection. I think that as a tool, the simulation is good. (Phone Interview – Question 2)

Christy also supported this from her learning:

> I feel as if the choices I made are real. I mean, they just feel to be really making an impact on the stakeholders when I decide what I am going to do. It, you know, helps me to feel more confident in my decision-making ability, or at least, in this simulated experience. (Phone Interview – Question 2)

As participants reported a “real” experience in the simulations, the PSEL were brought to life, capitalizing on engagement. Nancy said:

> Well, what I like is what they did in this simulation is, they lifted the standards that, at the end of it, that it hit him right off the top of their list and, like, so, I thought that that was what it looked and the professional standards that they were attempting to address. (Phone Interview – Question 3)

Engagement. One of the critical elements of reflection is the level of impact or engagement on person reflecting. The participants' ability to enter into a training with the feeling of making real life decisions has an impact on the learning they will have in developing their experiential knowledge. All of the participants in this study produced data that formed the category of Engagement and ultimately the theme Critical Reflection. The results of this are illustrated in Table 7.

Table 7

Category: Engagement

Example Code	Subcodes
Realistic Scenarios	Scenarios felt highly connected to real world issues school principals are facing.
	Simulations were highly relevant.
	Felt like I was making real decisions.
	The impact of my choices felt genuine human reactions from stakeholders.
	Conversational dialog seemed very realistic.
	The behavior of stakeholders in simulation was very real.
	I could envision this happening within my school.
Engaging Scenarios	Exposed me to challenges that were new to me.
	Some scenarios invoked a feeling of stress in me.
	The structure of the simulation was very engaging.
	It made me think about how I would approach situations in the future, thinking deeply on the PSEL.

All participants felt the simulations were highly engaging and realistic. This also led them to make higher connections to the PSEL and real-world demands of being a principal. Edmund stated:

> I think that what this simulation does is, it truly puts the potential administrator in a situation where it's real life. It's not necessarily right or wrong, but what do you do in this situation? And having them think back and reflect. Thinking that I got to include all the stakeholders—you know, get feedback from a team, you know, notify the superintendent, going through that process—it's almost like a final evaluation. (Phone Interview – Question 2)

This level of realism was evident in both Cindy and Christy's experiences as well. They both indicated the simulations gave them a feeling of stress. Cindy said, "I just feel stressed taking this simulation because it feels like this could happen to me" (Phone Interview – Question 2). Their feelings of stress were induced by the simulation and allowed for them to feel this was a real situation. Christy said, “Seriously, this was intense. The fact that my choices were impacting people emotionally, actually gave me a feeling of regret and dread” (Phone Interview – Question 2). All participants reported the simulations were engaging, interesting, and sometimes eye-opening. Colton, Kendra, and Christy all mentioned the same theme of a Feeling of Making Real Choices. This connected with the codes from Matt, Cindy, and Nancy around “made me think deeper about my choices because they had real impact, in the simulation.” Sometimes, based on the situation, participants would report the simulations were not realistic. Cindy stated:

> I feel like this simulation was not real, you know? It just did not feel like it was something that could actually happen in a school. Then again, I mean, it could, I just have not seen it for myself. (Phone Interview – Question 2)

Theme 3: Critical Thinking

The data demonstrates the simulations provided participants with practice in the area of critical thinking. Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Foundation for Critical Thinking, 2020). The data indicated critical thinking was augmented in two ways, through Problem Solving and Deeper Thinking.

Problem Solving. A fundamental part of every manager's role is finding ways to solve problems (MindTools, 2020b). Being a confident problem solver is essential to an individual's success (MindTools, 2020b). Much of that confidence comes from having a good process to use when approaching a problem (MindTools, 2020b). With a good process, school leaders can solve problems quickly and effectively. Without one, the solutions may be ineffective, or school leaders will get stuck and do nothing, with sometimes painful consequences (MindTools, 2020b). All participants in this study produced data that formed the category of Problem Solving and ultimately the theme Critical Thinking. The results of this are illustrated in Table 8.

Throughout the simulations, all participants engaged in making decisions and solving complex problems. Engagement was enhanced by participants feeling as if their decisions were having a real impact on the stakeholders. This feeling of real-world implications caused them to tread more carefully, while still making more risk-taking decisions. This was possible because

Table 8

Category: Problem Solving

Example Code	Subcodes
Complex Problem Solving	Prioritize my thoughts.
	Make timely decisions.
	Balance stakeholders in decision making.
	Make hard decisions.
	I understand why I am making a decision.
	The importance of relationships in decision making.
	Practice making decisions under stress.
	Consider the situation from multiple viewpoints.
Sparked Deeper Thinking	Thought of the options not listed that I could do.
	Deep thinking on the implications of my decisions.
	Deep thinking about approaching issues of equity and diversity through the PSEL.
	Deep thinking about staff evaluation through the PSEL.
	Deep thinking about school/district budgeting through the PSEL.
	Deep thinking around communication through the PSEL.
	Deep thinking around curriculum and instruction through the PSEL.
	Deep thinking about community connections through the PSEL.

participants reported feeling comfort knowing the situations were simulated experiences. Although all participants produced data forming the theme of Critical Thinking, some notable excerpts concerned the process of their thinking around solving complex problems. Matt stated:

> You know, I really can't have imagined going through these situations by just reading it in a book. I mean, the way the simulations pull you into the world creates this feeling of, like, immediacy in my choices. When I actually found it to be helpful because it made me

> think about all the possible angles. Sometimes they are easy; sometimes, they are not. But having the chance to practice how I would respond gave me the practice in how I prioritize my responses, but also, you know, my organizational thinking. (Phone Interview – Question 2)

Colton also spoke to this when he said, “This one, specifically, helped with the idea of what do you do on the spot when something is brought to you during the day-to-day operations within school” (Phone Interview – Question 2). It is sometimes a problem that is given to you with little notice and you are forced to act on it. Sandra stated, “It just definitely helped me to think a little bit about all the different components that are involved in any big decisions” (Phone Interview – Question 2).

Being able to look beyond the choices in front of a participant to examine each impact was another common thread throughout this study. Cindy stated:

> I think that when someone new comes in, they start to think that they're out to get them. And so, it was interesting to see, you know, the different ways that you could try to phrase things or try to address the situation to make the point clearer. That it wasn't that she was a horrible teacher, [it] was just that there were some areas of growth that were possible. (Phone Interview – Question 2)

This approach of analyzing the implications of choices allowed participants to dive deeply into their thinking. Christy stated:

> And so, I think it was interesting to figure out how to try to address someone who has set in their mind that you're out to get them because they think there is a lot of that mentality with teachers, specifically with teachers who have been around for a really long time and then around longer than the administrators. (Phone Interview – Question 2)

Throughout the simulations, participants reported two facets of their experiences with deeper thinking: their experience as an aspiring school principal and their reflection on the PSEL as they related to each simulation. Edmond talked about this overall when he stated:

> Then you look at it, it's really, really hard. But if you go to school culture or management or community, integrity and ethics, social and cultural context, you're really learning how to use those standards in simulated real life. Each scenario seems to have many standards embedded and really it just pushes them into my thinking without much need for me to refer back to the . . . because I really don't know, half of them. (Phone Interview – Question 3)

Simulation and Professional Standards for Educational Leadership Alignment

Simulations were aligned by a team at ESL to be connected with the PSEL. The simulations were aligned to the PSEL and some standards were the primary focus of the simulations and some standards were cursory, marked by "F" and "c" respectively (see Table 9).

Based on the data in Table 9, the researcher indicated the standards receiving the most focus within the simulations were Standards 7, 8, and 9. These standards were clearly receiving the most amount of focus through the simulations. However, Standards 2, 5, and 6 all showed an equal amount of focus and were considered to have a relatively high level of focus when compared to the rest but not to the extent of Standards 7, 8 and 9. Standards 1, 3, and 4 received the least amount of attention from the simulations. These standards are explained in greater detail in Table 10.

Table 9

Ed Leadership Simulations and Professional Standards for Educational Leadership Alignment

Simulation	Sim 1	Sim 2	Sim 3	Sim 4	Sim 6	Sim 7	Sim 8	Sim 9	Sim 10	Sim 11	Sim 12	Sim 13
Standard 1					c					c	c	
Standard 2	c	c	c				c	c	F			
Standard 3								c	c		F	
Standard 4				c	c						c	
Standard 5			c	c			F		c		c	c
Standard 6			c	c	c	F					c	c
Standard 7	F	c	F	F		F	c			c		c
Standard 8		F			c		c	c	c	F	c	F
Standard 9	c		c		F	c		F	c	c		c
Standard 10	c				c					c		

Note. “F” means that the standard was the primary focus of the simulation. “c” means the standard was cursory in focus.

Professional Standards for Educational Leadership Confidence Survey Results

At the completion of the research study, each participant completed the PSEL Standards Confidence-Based Self-Assessment (see Appendix G). This assessment revealed more about each participant's leadership profile after participating in the simulations. As a result of analyzing the results of each participant’s PSEL Confidence Survey scores, it can be observed the participants reported feeling confident in their ability to meet the PSEL and attributed some of this feeling to the combination of simulation, coursework, and their internship. However, throughout the study, participants reported through phone interviews that all simulations had connections to the PSEL. Table 10 displays a breakdown of the results by substandard within the

PSEL. The numbers represent how many participants selected 1–4 on the scoring system (1 = *little extent*, 2 = *some extent*, 3 = *sufficient extent*, and 4 = *exemplary extent*).

Table 10

Professional Standards for Educational Leadership Breakdown by Standard

Standard	Sim	Mean	1	2	3	4
Standard 1: Effective educational leaders develop, advocate, and enact a shared mission, vision, and core values of high-quality education and academic success and well-being of each student.	3	2.92		9	40	7
Standard 2: Effective educational leaders act ethically and according to professional norms to promote each student's academic success and well-being.	7	3.16		3	41	12
Standard 3: Effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote each students' academic success and well-being.	4	2.98	1	14	33	15
Standard 4: Effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote each	3	2.89		11	40	5
Standard 5: Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of each student.	7	2.92	1	8	33	6
Standard 6: Effective educational leaders develop professional capacity and practice of the school personnel to promote each students' academic success and well-being.	7	2.92	1	17	41	13
Standard 7: Effective educational leaders foster a professional community of teachers and other professional staff to promote each students' academic success and well-being.	12	3.39		14	40	10
Standard 8: Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each students' academic success and well-being.	11	2.91		22	43	15
Standard 9: Effective educational leaders manage school operations and resources to promote each student's academic success and well-being.	10	2.70	5	29	52	10
Standard 10: Effective educational leaders act as agents of continuous improvement to promote each students' academic success and well-being.	3	2.73		29	44	7

When reviewing the scores for each substandard, the researcher noticed every participant was feeling confident in their ability to meet the PSEL with 507 of 671 substandard scores being either a 3 (*sufficient extent*) or 4 (*exemplary extent*). These scores are a result of using the simulations in addition to the participants' regular coursework and internships in the principal preparation program. It is important to note all eight participants felt a level of confidence at the completion of the simulations, which also coincided with completing the internships and coursework. It is also important to note the researcher observed these higher levels of self-confidence with simulations in addition to the regular coursework and internship. The simulations were not taken as a standalone mechanism but in addition to their work within their principal preparation program.

The researcher then explored with which substandards the eight participants felt most confident. The researcher tallied the number of times each participant reflectively listed a score within the substandard of each PSEL. The numbers represent how many participants selected 1–4 on the scoring system (1 = *little extent*, 2 = *some extent*, 3 = *sufficient extent*, and 4 = *exemplary extent*). The survey allowed the researcher to look at how participants evaluated themselves based on standard and substandards. Table 11 displays the substandards that stood out as having the highest level of confidence as reported by each participant.

The researcher observed through the PSEL Standards Confidence-Based Self-Assessment (see Appendix I) that participants felt good overall in their confidence in the standards, with some being higher than others. The researcher created mean scores to show two scores above 3. The other eight scores were below 3. As the researcher reviewed the scores, he observed Standard 7 had the highest mean and the highest simulation score. Standard 8 had the second highest simulation score and the sixth highest mean. Standard 9 had the third highest simulation

score and the lowest mean. Figure 3 shows the number of times a participant self-scored their PSEL confidence based on their mean score from standard's substandards.

Table 11

PSEL Breakdown by Substandards With Reported High Confidence

Standard 1: Effective educational leaders develop, advocate, and enact a shared mission, vision, and core values of high-quality education and academic success and well-being of each student.
• Articulate, advocate, and cultivate core values that define the school's culture and stress the imperative of child-centered education; high expectations and student support; equity, inclusiveness, and social justice; openness, caring, and trust; and continuous improvement. • Strategically develop, implement, and evaluate actions to achieve the vision for the school.
Standard 2: Effective educational leaders act ethically and according to professional norms to promote each student's academic success and well-being.
• Act ethically and professionally in personal conduct, relationships with others, decision- making, stewardship of the school's resources, and all aspects of school leadership. • Act according to and promote the professional norms of integrity, fairness, transparency, trust, collaboration, perseverance, learning, and continuous improvement. • Articulate, advocate, and cultivate core values that define the school's culture and stress the imperative of child-centered education; high expectations and student support; equity, inclusiveness, and social justice; openness, caring, and trust; and continuous improvement. • Safeguard and promote the values of democracy, individual freedom and responsibility, equity, social justice, community, and diversity. • Lead with interpersonal and communication skill, social-emotional insight, and understanding of all students' and staff members' backgrounds and cultures.
Standard 3: Effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote each students' academic success and well-being.
• Ensure each student is treated fairly, respectfully, and with an understanding of each student's culture and context. • Recognize, respect, and employ each student's strengths, diversity, and culture as assets for teaching and learning. • Promote the preparation of students to live productively in and contribute to the diverse cultural contexts of a global society.

(continued)

Table 11 continued

PSEL Breakdown by Substandards With Reported High Confidence

Standard 4: Effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote each Standard 5: Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of each student.

- Implement coherent systems of curriculum, instruction, and assessment that promote the mission, vision, and core values of the school, embody high expectations for student learning, align with academic standards, and are culturally responsive.
- Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student.
- Ensure instructional practice that is intellectually challenging, authentic to student experiences, recognizes student strengths, and is differentiated and personalized.
- Promote the effective use of technology in the service of teaching and learning.

Standard 5: Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of each student.

- Build and maintain a safe, caring, and healthy school environment that meets the academic, social, emotional, and physical needs of each student.
- Create and sustain a school environment in which each student is known, accepted and valued, trusted and respected, cared for, and encouraged to be an active and responsible member of the school community.
- Promote adult-student, student-peer, and school-community relationships that value and support academic learning and positive social and emotional development.
- Cultivate and reinforce student engagement in school and positive student conduct.

Standard 6: Effective educational leaders develop professional capacity and practice of the school personnel to promote each students' academic success and well-being.

- Develop teachers' and staff members' professional knowledge, skills, and practice through differentiated opportunities for learning and growth, guided by understanding of professional and adult learning and development.
- Empower and motivate teachers and staff to the highest levels of professional practice and to continuous learning and improvement.
- Promote the personal and professional health, well-being, and work-life balance of faculty and staff.
- Tend to their own learning and effectiveness through reflection, study, and improvement, maintaining a healthy work-life balance.

(continued)

Table 11 continued

PSEL Breakdown by Substandards With Reported High Confidence

Standard 7: Effective educational leaders foster a professional community of teachers and other professional staff to promote each students' academic success and well-being.
• Establish and sustain a professional culture of engagement and commitment to shared vision, goals, and objectives pertaining to the education of the whole child; high expectations for professional work; ethical and equitable practice; trust and open communication; collaboration, collective efficacy, and continuous individual and organizational learning and improvement. • Develop and support open, productive, caring, and trusting working relationships among leaders, faculty, and staff to promote professional capacity and the improvement of practice. • Provide opportunities for collaborative examination of practice, collegial feedback, and collective learning.
Standard 8: Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each students' academic success and well-being.
• Are approachable, accessible, and welcoming to families and members of the community. • Engage in regular and open two-way communication with families and the community about the school, students, needs, problems, and accomplishments.
Standard 10: Effective educational leaders act as agents of continuous improvement to promote each students' academic success and well-being.
• Use methods of continuous improvement to achieve the vision, fulfill the mission, and promote the core values of the school

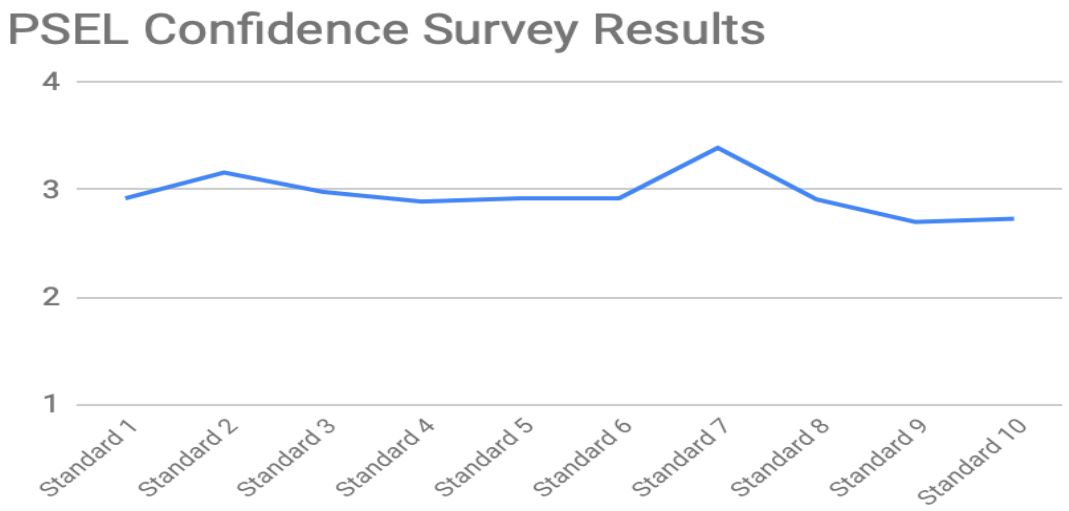

Figure 3. PSEL Confidence Survey results.

Standard 7 has the highest connection to the simulation and had the highest PSEL score. Standard 8 had the second highest simulation connection and had the seventh highest PSEL score. Standard 9 had the third highest simulation connection and the lowest PSEL score. There were three standards at the second level of simulation connections. Standard 2 had the second highest PSEL score and Standards 5 and 6 tied for fourth highest PSEL scores. This connection answers the first research question: In what ways does participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL standards? To answer the second research question (i.e., In what ways does participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?), the researcher used another survey to measure each participant's self-efficacy as an aspiring school principal.

Principal Self-Efficacy

At the end of the study, participants were asked to complete the Principal Self-Efficacy Survey (see Appendix I). The results are illustrated in Table 12 and the numbers represent how many participants selected (1–4) on the scoring system (1 = *little extent*, 2 = *some extent*, 3 = *sufficient extent*, and 4 = *exemplary extent*). The researcher observed that within the Aspiring Principal Self-Efficacy Survey Results, the eight participants all felt very confident in their ability as an aspiring school principal as they scored at a 3 (*sufficient extent*) or higher. This survey helps to further answer the second research question: In what ways does participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal? These results show the combination of simulations with coursework and internships helped the respondents feel more confident in their abilities as aspiring school principals.

Table 12 shows participants were feeling much more confident in particular areas according to their responses in the Principal Self-Efficacy Survey. These responses were then connected to the PSEL standards. The survey responses from Table 12 with the highest level of reported confidence (i.e., mean scores above 3) by participants are listed in Table 13.

When reviewing the data from the PSEL Confidence Survey and the Principal Self-Efficacy Survey, the researcher drew connections between the simulations targeting standards when compared to the data produced from both surveys. The standards that appeared to be triangulated among all three data sources—simulation focus, PSEL Confidence Survey, and Aspiring Principals Self-Efficacy Survey—were Standards 7 and 8. These two standards were clearly triangulated across the three data sources, which leads to the researcher concluding it is a result of the simulations being implemented in combination with the regular coursework and internship of the principal preparation program.

The researcher observed participants were more engaged in talking about how the simulations impacted their self-efficacy as an aspiring school principal when compared to their confidence in meeting the PSEL. With the results of the PSEL surveys showing fairly high levels of reported confidence in meeting the PSEL, the actual raw data from conversations show participants were highly engaged by the simulations in how they impacted their self-efficacy as an aspiring principal. Through the simulation interviews, the researcher noted participants referenced all simulations helped them to understand the PSEL 888 times. Participants also referenced simulations helped prepare them to be a principal 1778 times.

Table 12

Principal Self-Efficacy Survey Breakdown

In the role of principal, to what extent can you see...	Standard Met	1	2	3	4	Mean
1. Facilitate student learning in your school?	1, 4		1	5	2	3.13
2. Generate enthusiasm for a shared vision for the school?	7, 8			6	2	3.25
3. Handle the time demands of the job?	9		2	5	1	2.88
4. Manage change in your school?	10	1		7		2.75
5. Promote school spirit among the large majority of the student population?	5		1	7		2.87
6. Create a positive learning environment in your school?	5, 7, 8			8		3.00
7. Raise student achievement on standardized tests?	4.		6	2		2.25
8. Promote a positive image of your school with the media?	8	1	3	4		2.38
9. Motivate teachers?	6, 7	1	2	4	1	2.63
10. Promote the prevailing values of the community in your school?	8		3	5		2.62
11. Maintain control of your own daily schedule?	9		4	3	1	2.62
12. Shape the operational policies and procedures that are necessary to manage your school?	1, 10	1	5	2		2.13
13. Handle effectively the discipline of students in your school?	5		3	5		2.62
14. Promote acceptable behavior among students	5		1	7		2.87
15. Handle the paperwork required of the job?	9		2	5	1	2.87
16. Promote ethical behavior among school personnel?	2, 7		2	5	1	2.87
17. Cope with the stress of the job?	9		3	5		2.62
18. Prioritize among the competing demands for the job?	9		2	6		2.75

Table 13

Principal Self-Efficacy Survey High Confidence Areas

In the role of principal, to what extent can you see...	Mean	Standard Met
Generate enthusiasm for a shared vision for the school?	3.25	7, 8
Facilitate student learning in your school?	3.13	1, 4
Create a positive learning environment in your school?	3.00	5, 7, 8

DISCUSSION

This research study aimed to explore the stories of eight aspiring school leaders while participating in online leadership-based simulations in a small liberal arts college in the Northeast. Specifically, this researcher sought to understand the perspectives of participants exposed to simulations and the impact these simulations had on them. The main research questions were:

1. In what ways might participating in scenario-based leadership simulations during a principal's preservice program influence an aspiring principal's sense of self-efficacy as a school principal?
2. In what ways might participating in online leadership simulations during a principal's pre-service program influence an aspiring principal's confidence in meeting the PSEL standards?

Participants' stories provided evidence of the positive connections between simulations and the research questions. Data from the participants showed they were feeling more confident in not only their ability to meet the Professional Standards for Educational Leadership (PSEL) but also in their self-efficacy as an aspiring school principal. This chapter summarizes the study and highlights the literature review, the methodology, findings, and limitations of the study, and provides recommendations for future research and practice.

Summary of Findings

Three key themes with five subthemes emerged from this research study from the eight participants:

- Key Theme 1: Linking Theory to Applied Knowledge
  - Subtheme 1: Preparation for Being a Principal
  - Subtheme 2: Experience Is the Best Teacher
- Key Theme 2: Critical Reflection
  - Subtheme 1: Principal Self-Efficacy
  - Subtheme 2: Engagement
- Key Theme 3: Critical Thinking
  - Subtheme 1: Problem Solving

The researcher observed participants had experienced observable increases in their confidence in their preparation for being a principal through participating in these simulations in addition to their preservice program internship and coursework. The themes that arose were coded through the consistent reflection and deep critical thinking participants reported during their interviews. Confidence and self-efficacy were additionally observed through participants' surveys where additional positive connections were observed from the simulations and their impact on each participant. The evidence to support these key themes came directly from stories told by the eight participants about their experiences in the simulations. Conclusions were linked to the conceptual framework, theories, and research that informed this study. These themes were connected to outcomes for both the study's research questions and expand upon the current body of research.

Theme 1: Linking Theory to Applied Knowledge

The stories of the participants demonstrated the simulations provided participants with practice in linking theory to applied knowledge. The creation of the theme was derived from the extensive interviews, researcher notes, and surveys. Prepares for Being a Principal and

Experience Is the Best Teacher were two of the categories that were created inductively through the analysis of the research data. The simulations were designed to explore both of these areas, which inherently led to the creation of these two categories as the stories of participants unfolded. These categories were not formed deductively, they were tied to the literature review as two pivotal areas that led to the statement of the problem outlining the basis for this research study. According to The Wallace Foundation (2016), "A significant element in the preparation of aspiring school leaders is applying theories and principles in ways to show their relevance to principal preparation" (p. 7). In the category of Experience Is the Best Teacher, the researcher was able to observe perceived growth in each participant as they began to gain experience in situations they had not yet had the chance to encounter in their training. This "lack of experiential knowledge" is highlighted in the literature review as a focal point in helping to prepare aspiring school leaders. Furthermore, both of these categories were outlined in the literature review as the foundation for developing confidence in meeting the demands of the role of principal. Within this theme surfaced a reported increase in each participant's confidence in not only their preparation for the role of school principal but also in meeting the PSEL.

Increased perceived confidence in self-efficacy and PSEL from simulations. Prior to the study, the researcher hypothesized participants exposed to simulations would have a positive impact on both their perception of self-efficacy as an aspiring principal and their confidence in meeting the PSEL. All eight participants reported in their phone interviews positive impacts from taking the simulations. Specific comments to support included:

> I think nothing really beats kind of being put into those situations, but having a simulation kind of makes you—kind of gives you some forethought into how you might react to it and what you might do if you ever were in that situation. I think it definitely

> will give me more competence than I would have had if I had not been in one of these situations. You know, going into an administrative situation without being put in those situations, I don't think I would be as competent. Like I said, I don't think anything will prepare you like being put in these situations themselves as they're happening, which is why the simulations seem to accomplish that.

Another participant reflected on the impact on their confidence in meeting the PSEL:

> So, the simulations really gave you the opportunity to actually put into practice things that you are learning in some of the classes, and then, of course, all of those are related to the standards that you have to meet for a principal certification.

Another participant added, “I feel like it definitely gave me opportunities to experience, you know, situations that the standards are directly correlated to.”

Participants in this study described how the simulations helped them by allowing a safe place to deal with difficult simulated situations. One participant relayed:

> I think the simulation does its best just to simulate what the job might be like and providing those experiences. Could give the admin, you know, the new admin the pursuit of confidence or at least the resources to approach that situation, because there is quite a spectrum of situations.

Another participant spoke of “making mistakes in a safe environment” when they said:

> But at the same time, being able to kind of think through the process of some of these situations and kind of being able to have that option and looking through the simulation over and go out of a different way to really kind of give you the opportunity to have trial and error. So, you know, live and learn, and make those mistakes without actually being in a situation where making mistakes in a real situation could cost you a lot.

According to Bravender and Staub (2014):

> The use of educational simulations is to mitigate risk and to enrich different experiences. These simulations allow potential leaders to make mistakes and to learn from the experience in a safe environment. These simulations also give potential leaders a wide range of simulations. (p. 192)

All eight participants reported positive impacts of the simulations from their experiences. Participants reported positive impacts on their self-efficacy and confidence in meeting PSEL as principals. One participant said, “I think that having a simulation program really would have added to the effectiveness and also my confidence as an administrator.” Another said:

> And so, I definitely thought that they were helpful because it made me think about things that didn't come up in my classes. I was like, “Oh yeah, that's really good. I should be thinking about what you do here.” And when I get to the end and they were like, “Oh, you did well,” like, you know, “That's great.” So, they really were very helpful in building my confidence.

It can be observed these data critically indicate principal preparation programs should strongly consider adding simulations to the experiences of their students.

The perceptions and experiences of the participants in this study were in accord with Kaufman (2016), who said:

> Simulations are becoming more common in pre-service teacher education, allowing practice and feedback for skills such as lesson planning and implementation, classroom management and teaching students with varying learning needs and challenges). Pre-service teachers can move from theory into action, with more practice time and variety

> than would be available in limited live practicum sessions, without negatively affecting vulnerable students. (p. 2)

In fact, one of the largest organizations representing educational leadership has adopted these simulations as a component of their Principal Mentor Program and in other professional learning activities (NAESP, 2016).

Scenario-based leadership simulations represent an approach that might provide aspiring principals with significant opportunities to effectively capture experience in a financially efficient way and to deploy it as an "apprenticeship in a box" (Spero, 2012, p. 55). This apprenticeship in a box gave these eight aspiring school principals sufficient virtual experiences to have a positive impact on their sense of perceived efficacy in being a principal and feeling more prepared to enter into the role of principal.

Theme 2: Critical Reflection

The findings/results demonstrate simulations provided participants with practice in critical reflection. Critical reflection is a reasoning process to make meaning of an experience (University of Tennessee, Chattanooga, 2020). Critical reflection is descriptive, analytical, and critical and can be articulated in several ways, such as in written form, orally, or as an artistic expression (University of Tennessee, Chattanooga, 2020). In short, this process adds depth and breadth to an experience and builds connections between course content and the experience (University of Tennessee, Chattanooga, 2020). Self-Efficacy and Engagement were two categories created inductively through analyzing the data. These two categories were tied to the literature review as two pivotal areas that led to the statement of the problem and outlined the basis for this research study, which derived from the stories of participants. One participant said,

"It gives me more confidence and a little bit of a picture of things that I normally wouldn't have thought about that are real." Another said:

> The simulation really gave you the opportunity to actually put into practice things that you are learning in some of the classes. And then, of course, those are related to the standards that you have to meet for principal certification.

Increased perceived confidence in self-efficacy through simulations. According to Bandura (1994), "Self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (p. 2). Versland (2015) identified "self-efficacy [as] vital to principals' success, because it determines the degree of effort exerted on a particular task as well as the kinds of aspirations and goals that principals will set for themselves" (p. 301). Winter et al. (2002) suggested self-perceptions of principal candidates, in regard to how they perceive their ability to be successful in the principal role, was the strongest predictor of their willingness to even apply for a principal position. Versland (2015) further indicated:

> Although principal preparation programs are expected to help candidates develop technical skills for leadership, the development of principal self-efficacy is less often emphasized even though Tschannen-Moran and Gareis (2007) found that principal self-efficacy is necessary to facilitate group goal attainment. Louis et al. (2010) reported that self-efficacy also enables a principal to build relationships necessary for high levels of collective performance. (p. 299)

In this study, participants demonstrated development in self-efficacy through their progression through the simulations. During these simulations, all participants reported exposure to situations that required them to make reflective decisions, which the researcher coded as Decisional

Reflection. The researcher observed participants perceived positive reflection in self-efficacy and decisional reflection, as they reflectively evaluated the simulations in which they participated.

One participant stated, “And, so I liked the simulation because it helps you become a better decision maker because you're really thinking about all the stakeholders.” All eight participants very deeply reflected on the choices they made, as evident through the reporting of their self-efficacy. One participant stated:

> And I think what this simulation does is, it really does put you in some select situations. This happens. What do you do? And I think the reflection process is, “What do you do? What did you do? What were the choices that you made?” And simulations kind of identified certain areas, whether it was communication or selecting a mission or budgetary purposes, whatever it was, and was able to provide some reflection. I think that as a tool, the simulation is good.

The simulations themselves served as a vehicle for allowing this deep decisional reflection to take place and for a higher level of development of perceived self-efficacy in each participant. According to Bravender and Staub (2014):

> The influence of Bloom is evident in figure 2 in chapter 2. The cone-shaped model starting at the top of the pyramid illustrates a small percentage of what people actually remember when they read. A greater percentage of recall occurs when someone hears information, increasing when a person sees and hears information. As the pyramid expands to include what a person says and writes, so does the amount of the memory. Toward the bottom of the pyramid, Dale theorizes that experience in the forms of role-play, simulations, and direct purposeful experiences have the greatest impact on retention, with direct purposeful experiences being the most beneficial. (pp. 3-4)

By using the cognitive load theory as the framework, simulations could be seen as learning activities that stimulated or expanded upon a simulated real experience. The researcher observed this impact on participants through their reported high levels of positive engagement in the simulations. All eight participants felt the simulations were highly engaging and realistic, which led them perceive higher connections to the PSEL and real world demands of being a principal. One participant stated:

> I think that what this simulation does is, it truly puts the potential administrator in a situation where it's real life. It's not necessarily right or wrong, but what do you do in this situation? And having them think back and reflect. Thinking that I got to include all the stakeholders—you know, get feedback from a team, you know, notify the superintendent, going through that process—it's almost like a final evaluation.

Another contributing factor in determining the simulations evoked engagement was the emotional reactions of the participants. One participant stated, “I just feel stressed taking this simulation because it feels like this could happen to me.” These feelings of stress were induced by the simulation and allowed them to feel as though it were a real situation. Another participant added, “Seriously, this was intense. The fact that my choices were impacting people emotionally, actually gave me a feeling of regret and dread.”

Theme 3: Critical Thinking

The stories of the participants demonstrated the simulations provided participants with practice in the area of critical thinking. Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Foundation for Critical Thinking, 2020). The

creation of the theme was derived from the extensive interviews, researcher notes, and surveys. The Problem Solving category was created inductively through data analysis and was tied to the literature review as one pivotal area that led to the statement of the problem outlining the basis for this research study.

Participants felt the simulations required them to think deeper about how they would potentially respond to these situations as a principal, thereby requiring them to weigh and balance the consequences of their choices. One student noted:

> You know, I really can't have imagined going through these situations by just reading it in a book. I mean, the way the simulations pull you into the world, creates this feeling of like immediacy in my choices. When I actually found it to be helpful because it made me think about all the possible angles. Sometimes they are easy; sometimes, they are not. But having the chance to practice how I would respond gave me the practice in how I prioritize my responses, but also, you know my organizational thinking.

This feeling of deeper thinking was enhanced by the previous theme Critical Reflection, by fostering high levels of engagement. This feeling of real-world implications caused the participants to tread more carefully while still making more risk-taking decisions. This was possible because participants reportedly felt comfort knowing the situations were simulated experiences. Another student spoke to this, saying, “The simulation put me in the driver's seat, and I was forced to think quickly, but at the same time, had to think about all stakeholders, and it felt almost real.”

Data from this research study show participants were challenged to think critically about the simulations and reflect on their own perceived self-efficacy as an aspiring principal. The practice of critical thinking helped participants reflect on their own deficits and results in their

self-perceived growth in their self-efficacy. Critical thinking is also supportive of the conceptual framework discussed in the second theme.

Overall, this study found the eight participants exposed to the 12 simulations found them to be highly effective and engaging, while at the same time increasing their perceived sense of self-efficacy as an aspiring principal and confidence in meeting the PSEL. This was demonstrated through the following:

- Almost all participants rated their score in their PSEL Confidence as a 3 or 4;
- Participants reported the simulations helped them feel confident in meeting the PSEL 888 times;
- Participants reported the Simulations helped prepare them to become a principal were 1778 times; and
- Standards 7 and 8 were triangulated from three data sources: simulation alignment to standards, PSEL Confidence Survey, and Principal Self-Efficacy Survey to be of reportedly high confidence scores from participants.

At the end of the study, participants reported very positive impacts on this experience as it relates to their development as aspiring school principals. One participant stated:

> Overall, the simulations you had me go through were, hands down, the most helpful and effective piece of training I have experienced for the principalship, and I only wish that I would have had this in my principal preparation program.

Comments like this sum up the overall data from participants and confirm educational simulations are a great instructional tool to prepare aspiring principals and school leaders.

The researcher observed a connection between the Principal Self-Efficacy Survey and the PSEL Confidence Survey on the standards in which participants were feeling the most confident.

Participants felt a high level of confidence in Standards 7 and 8, illustrating participation in the simulations, in addition to the participants' regular preservice program, results in a positive increase in confidence for meeting the PSEL.

Recommendations for Future Research

Current and future researchers may expand on this research with larger or different populations and different principal preparation programs. The study did demonstrate patterns as a result of the surveys administered at the end of the study for PSEL Confidence and Principal Self-Efficacy. However, the researcher indicated a limitation was the small sample size and the lack of a preassessment. For future research, it is recommended to address these limitations to provide a deeper and more quantitatively significant answer to the connection between simulations and aspiring principal self-efficacy and confidence in their PSEL. Another recommendation would be for future researchers to have participants self-rate using the PSEL standards after each simulation. This recommendation could demonstrate which standards were consistently met and which ones needed more focus, while analyzing whether self-efficacy changes with time.

The researcher observed perceived connections between simulations and their impact on an aspiring principals' senses of self-efficacy and their confidence in meeting the PSEL. The results were qualitatively observed through the three themes produced from this research. With many organizations adopting simulations and the need for more realistic principal preparation programs, the researcher recommends more research be conducted on the impact of simulations on aspiring school principals. By conducting a study that looks at a larger population or by using more quantitative research techniques, further research may provide additional guidance to the field on the use of simulations for aspiring principals. There is potential research for exploring

the use of simulations throughout the entirety of a principal preparation program and not just the preservice internship. Based on the stories from participants in this study, research exploring how simulations connect to coursework is an area that could produce interesting results. Another area of future research could focus on ensuring each PSEL standard had the same (equal) level of focus to ensure participants were receiving a well-rounded experience of exposure to the PSEL. Additionally, programs could adopt these simulations and specifically attach them to the internships in connection to the topics they are addressing in the PSEL at that time in a participant's preservice journey.

Recommendations for Future Practice

The simulations presented to the participants are one way to link theory to practice, as this method can help to present students with aspects of real-life scenarios, so they can apply and integrate knowledge, skills, theories, and experiences. Because simulations showed a positive impact on participants' perceptions of self-efficacy and confidence in meeting the PSEL, simulations are recommended for preservice training of aspiring school principals. According to Thompson et al. (2019):

> Interactive simulations allow pre-service teachers to connect education theory and pedagogy in scaffolded environments. We created digital simulations with scenarios from in-person simulations and used them to prepare novice teachers for conversations with parents. Using a design-based approach we implemented the simulations in an education class, gathered data through surveys and observations, and incorporated feedback into subsequent designs. Novice teachers perceived the simulation as authentic and practiced maintaining composure and articulating pedagogical approaches. Recordings of novice teachers' responses produced by the simulation enabled self-reflection and peer and

> instructor feedback. Results suggest that these digital simulations hold promise as low-cost, flexible tools for novice teachers to engage in targeted practice in a low-stakes setting. (p. 1)

The researcher answered the following research questions:

1. In what ways does participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?
2. In what ways does participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL standards?

Educational leadership simulations do help prepare school leaders by engaging them in real life scenarios and building their confidence as aspiring school principals. The simulations also helped to develop a perceived sense of confidence in meeting the PSEL. Simulations were used as one strategy for principal preparation. What cannot be said is whether the simulations alone had an impact on the participants' efficacy, since all of the participants had completed their coursework including their internships. Therefore, it is recommended the simulations be used as a complement to coursework and internships to connect learning of the PSEL. Simulations in combination with existing coursework and internship experiences would make a valuable addition to instructional tools for principal preparation programs. Simulations could be provided as online instructional modules in tandem with internships in principal preparation programs. A multifaceted approach to principal preparation could have lasting impacts on not only the educational leadership landscape but also on the tenure and success of school principals.

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APPENDICES

Appendix A

Script

Introducing the Researcher
I will introduce myself by emailing the potential participants and giving them a brief introduction about myself. In this email, I will not be describing the research study in anyway but rather having this be an invite to a conversation with myself over the phone to learn more about the research study and answer questions they may have. The following is the template I plan to use in the email:

Hi,

I am a student in the doctoral program doing research on aspiring principals. I was given your name as someone who might have some insight into that experience. I would love to briefly chat with you about my study in hope that you would be willing to participate. Here is my number if you would like to call or I would be delighted to reach-out to you if you provide your number.

Sincerely,
Ben White
Doctoral Candidate

Describe the Purposes of the Study
I would like to invite you to participate in a dissertation research study which I will be conducting, as a student in New England College's doctoral program in educational leadership, under the supervision of faculty chairperson Dr. Debra Nitschke-Shaw. The purpose of this study is to learn both from your insights about simulations which the College's principal preparation program is piloting, as well as from your hopes and insights as you prepare to become a school principal.

I will be asking participants to participate in 10 simulations (approximately one hour each), offered during Spring 1, Spring II and Summer I, followed by a conversation with the researcher after each simulation, helping me to understand your experiences with the simulations as well as your evolving hopes, concerns and ideas as you prepare to become a school principal. I hope very much that you might kindly choose to participate.

Your identity will be held in strictest confidence and, while I would hope to quote from your insights, all identifying information will be removed. I would like your permission to record our brief conversations, but only to ensure I render faithfully what you share. No one else will have access to the recordings. Also, toward the end of the study I will share with you a near-final draft of the findings so that you can decide if any information should be modified or deleted. The aim here is to render as faithfully as possible the important insights that you and other aspiring principals have about ways in which others can best support you on your path to becoming a school leader.

Permission to Record Participants
So that I can concentrate on listening carefully to participant insights, I plan to record phone conversations so that I can most accurately represent the data gathered from participants protecting the essence of their meaning. I plan to inform them with this script: *"With your permission, I would like to record this interview so that I can make an accurate transcript. The recording will be destroyed as soon as the transcript is completed."*

Member Check
I will give the participants an exclusive look at a draft report to make sure you have rendered their insights faithfully and accurately and that their anonymity has been protected. I understand it is possible for the researcher interpretation of the data collected from participants could potentially deviate from the essence. To ensure reliability of the research data analysis the researcher will perform a member check. Member checking thus operates on the assumption that the extent to which members recognize their experiences in research products dictates the reliability of research claims. Participants will have the opportunity to review a draft of their data as analyzed with the option to have their information redacted completely or partially.

CONFIRMATION LETTER

Dear Participant,

Thank you so much for agreeing to participate in a dissertation research study which I will be conducting, as a student in New England College's doctoral program in educational leadership, under the supervision of faculty chairperson Dr. Debra Nitschke-Shaw. The purpose of this study, as you know, is to learn both from your insights about simulations that are being piloted in the College's principal preparation program, as well as from your hopes and insights as you prepare to become a school principal.

As we discussed, I will be asking participants to participate in 10 simulations (approximately one hour each) offered during Spring I, II and Summer I, to participate in a series of brief conversations after each simulation, helping me to understand your experiences with the simulations as well as your evolving hopes, concerns and ideas as you prepare to become a school principal.

Your identity will be held in strictest confidence and, while I would hope to quote from your insights, all identifying information will be removed. As you know, I would like your permission to record our brief conversations, but only to ensure I render faithfully what you share. No one else will have access to the recordings. Also, toward the end of the study I will share with you a near-final draft of the findings so that you can decide if any information should be modified or deleted. The aim here is to render as faithfully as possible the important insights that you and other aspiring principals have about ways in which others can best support you on your path to becoming a school leader.

Might you please sign and return to me the attached standard consent form used by New England College? Deepest thanks for kindly making such a valuable contribution to this dissertation study. Please don't hesitate to contact me now or at any point should you have any concerns, suggestions or questions.

Sincerely,

Benjamin White
K-12 Doctoral Student
88 Holland Lane Apt. 301
Williston, VT 05495.
Email Address: xxxxx@nec.edu
Phone: (802) XXX-XXXX

Appendix B

Participant Consent Form

Study Title: Perceptions of Aspiring School Leaders: Scenario-Based Simulations and Their Impact on School Principal Self-Efficacy.

Principal Investigator: Benjamin White

Dear Participant,

I would like to invite you to participate in a dissertation research study which I will be conducting, as a student in New England College's doctoral program in educational leadership, under the supervision of faculty chairperson Dr. Debra Nitschke-Shaw. You have been selected for this study because you meet the criteria of either being currently enrolled in your school's principal preparation program or recently graduated and not yet performing the role of school principal. The purpose of this study is to learn both from your insights about simulations which the College's principal preparation program is piloting, as well as from your hopes and insights as you prepare to become a school principal. This form has important information about the reason for doing this study, what we will ask participants to do if they decide to be in this study, and the way we would like to use information about participants if they choose to be in the study.

Overview of the Study

The purpose of this study is to shed light on the phenomenon of simulations being implemented within a principal program's preservice experience and what relationship this has with the aspiring principals' confidence in meeting the PSEL standards in ways that might enhance their efficacy as a leader. This will be accomplished by collecting and analyzing data from participants who are either current students or recently graduated students who have not yet executed the role of school principal in New England College's principal preparation program. Each individual will participate in a 10-hour professional development seminar where they will engage in simulations aligned with the PSEL standards. This study will then shed light on whether and in what ways the use of simulations within a principal's preservice experience might show promise as a vehicle for enhancing their self-efficacy as a school leader or their confidence in meeting the PSEL standards. Specific questions of interest are:

- In what ways might participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?

- In what ways might participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL standards?

Participant Selection

A small liberal arts college in the northeast is where this research study will be conducted. The college has a school principal internship program as a component of its school leadership program, from which the participants will be selected. Students completing the school leadership program complete 460 hours of an internship under the guidance and supervision of a principal who holds current, valid licensure and a college supervisor. It is through this program that the researcher will select participants both currently enrolled and who have recently graduated from the program but who do not have their first principalship.

How will the data be used?

Contracts, notes, student work, and transcribed audio recordings of interviews with the participants will be saved, listened to, and organized. The researcher will listen to the audio recordings several times and read the transcriptions multiple times. After field notes and interviews had been documented, the process of precoding and coding will begin. Coding will therefore be done by attaching meaningful words and phrases to data. The researcher will look at how themes are different or the same and if there are relationships between themes. The researcher will develop explanations, find patterns, relationships, and connections by using inductive data analysis.

Data collection procedures

In this study, participants will be engaged in 10-hours of professional development consisting of online simulations. Participants will access the simulations online, ideally through Blackboard. Prior to data collection, the researcher will meet with the Dean of Graduate and Professional Studies to obtain her consent. The researcher will also meet with the principal internship college supervisor to obtain her consent as well. The researcher will then meet with participants in person to discuss the project, outline expectations, and obtain their consent. As stated previously, the researcher will present all information in a consistent manner which aims to create continuity within the study and among participants.

Data will be collected pre-project, during the project, and post-project using a variety of tools. After a participant completes a simulation an auto generated email notification will be sent to the researcher to indicate they have finished the simulation and are ready to setup their phone conversation. This will be done after each and every simulation. The phone conversation will use open-ended interview questions and will not have a set limit of time. However, an interview should not take more than 30 minutes unless the participant chooses to speak longer. These conversation questions will be piloted with students within a small liberal arts college in the northeast who have not been selected for this study. The researcher will be using an app on their phone which records all phone interviews for accuracy. After each phone interview, the researcher will then transcribe the data. In addition, immediately following an interview or conversation the researcher will take time to record his notes and thoughts.

Participants will complete a PSEL Standards Confidence-Based Self-Assessment which will work to measure the participant confidence in meeting the PSEL standards. Participants will also complete a post-assessment at the end of the study after the member check using the Principal's Sense of Self-Efficacy Assessment developed by Tschannen-Moran and Gareis (2004). This assessment will only be given at the completion of each participant's involvement in the study to not taint or skew the results of the study. The researcher will obtain other artifacts from the participants through their college internship supervisor. These artifacts are to include but are not limited to, reflections, self-assessments, professional growth portfolio, and other assignments for the internship course. The researcher will also be using a script to show a detailed layout of how the researcher plans to present this study to participants.

This study consists of self-efficacy assessments, interviews/conversations, participation in simulations, and collecting artifacts such as those from the internship courses.

Study time

Study participation will take approximately 18 hours:

- Initial research study orientation (15 Minutes).
- Professional development seminar consisting of online simulations (10 hours)
- 14 interview/phone conversations after each simulation (7 hours).
- Poststudy assessment interview (30 minutes).

Study location
All study procedures will take place at either at a small liberal arts college in the northeast, online, or through phone where the participant will be in their own comfortable environment.

Consent to audio record
I would like to audio record phone conversation/interviews to make sure that I remember accurately all the information you provide. I will keep these recording locked in an external hard drive and they will only be used by Benjamin White during this study. If you prefer not to be audio-recorded, I will take notes instead.

What are the possible risks or discomforts?
The following safeguards and procedures will be implemented to protect and ensure the rights of participants:

- The research has been approved by the New England College Institutional Review Board for the protection of human subjects in research.
- All participants will be given a copy of a written consent form explaining the voluntary nature of this study.
- The results of this project will be coded in such a way that the student's identity will not be attached to the final form of this study.
- Participants' rights will be considered first when choices are made about reporting the data.
- Upon completion of the study, all information matching up individual respondents with their answers will be destroyed.
- Your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Participation in this study poses no more than risk than the risks associated with everyday participation in the principal internship courses. As with all research, there is a chance that confidentiality of the information we collect from you could be breached – we will take steps to minimize this risk, as discussed in more detail in this form.

How will you protect the information you collect about me, and how will that information be shared?
Results of this study may be used in publications and presentations. Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. I may quote your remarks in presentations or articles resulting from this work. A pseudonym will be used to protect your identity, unless you specifically request that you be identified by your true name.

We may share the data we collect from you for use in future research studies or with other researchers—if we share the data that we collect about you, we will remove any information that could identify you before we share it. The signed consent forms will be kept in a locked, secured area throughout the project and for 5 years after the conclusion of the project at which time they will be shredded.

What are the possible benefits for me or others?
Participants will receive credit for 10 hours in professional development. Additionally, you may personally or professionally experience some benefits from taking part in these online simulations.

Financial Information
Participation in this study will involve no cost to you. You will not be paid for participating in this study, but participants will receive 10 hours of professional development.

What are my rights as a research participant?

Participation in this study is voluntary. You do not have to answer any question you do not want to answer. If at any time and for any reason, you would prefer not to participate in this study, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You may withdraw from this study at any time, and you will not be penalized in any way for deciding to stop participation.

You may choose not to participate or to stop participating in this research at any time. This will not affect your class standing, grades, employment, or any other aspects of your relationship with New England College.

Who can I contact if I have questions or concerns about this research study?

If you have questions, you are free to ask them now. If you have questions later, you may contact the researchers at:

Benjamin White
88 Holland Lane Apt. 301
Williston, VT 05495
Phone: (802) XXX-XXXX
Email: xxxxx@nec.edu

Debra Nitshcke-Shaw, PhD
New England College
98 Bridge Street Box 22
Henniker, NH 03242
Email: dnitschke@nec.edu

Consent

I have read and understand this consent form and understand what is being requested as a participant in this study. I freely consent to participate and understand the extent of my participation. I understand the researcher will also audio record conversations/interviews for the purpose of this research study. I have been given satisfactory answers to my questions. The researcher provided me with a copy of this form. I understand consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

_____ _____
Printed Name Participant Date

_____ _____
Signature of Participant Date

_____ _____
Printed Name of Researcher Date

_____ _____
Signature of Researcher Date

Appendix C

Consent Form: Dean of Graduate and Professional Studies

Study Title: Perceptions of Aspiring School Leaders: Scenario-Based Simulations and their Impact on School Principal Self-Efficacy.
Principal Investigator: Benjamin White

Dear Dean of Graduate and Professional Studies,

I am a student at New England College, in the Graduate and Professional Studies Doctor of Education program under the supervision of faculty chairperson Dr. Debra Nitschke-Shaw. This form has important information about the reason for doing this study, what we will ask participants to do if they decide to be in this study, and the way we would like to use information about participants if they choose to be in the study.

Overview of the Study
The purpose of this study is to shed light on the phenomenon of simulations being implemented within a principal program's preservice experience and what relationship this has with the aspiring principals' confidence in meeting the PSEL standards in ways that might enhance their efficacy as a leader. This will be accomplished by collecting and analyzing data from participants who are either current students or recently graduated students who have not yet executed the role of school principal in New England College's principal preparation program. Each individual will participate in a 10-hour professional development seminar where they will engage in simulations aligned with the PSEL standards. This study will then shed light on whether and in what ways the use of simulations within a principal's preservice experience might show promise as a vehicle for enhancing their self-efficacy as a school leader, or their confidence in meeting the PSEL standards. Specific questions of interest are:

- In what ways might participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?
- In what ways might participating in online leadership simulations during a principal's preservice program influence an aspiring principal's confidence in meeting the PSEL standards?

Participant Selection
A small liberal arts college in the northeast is where this research study will be conducted. The college has a school principal internship program as a component of its school leadership program, from which the participants will be selected. Students completing the school leadership program complete 460 hours of an internship under the guidance and supervision of a principal who holds current, valid licensure and a college supervisor. It is through this program that the researcher will select participant students, both currently enrolled and who have recently graduated from the program but who do not have their first principalship, and their internship college supervisors.

How will the data be used?
Contracts, notes, and transcribed audio recordings of interviews with the participants will be saved, listened to, and organized. The researcher will listen to the audio recordings several times and read the transcriptions multiple times. After field notes and interviews had been documented, the process of precoding and coding will begin. Coding will be done by attaching meaningful words and phrases to data. The researcher will look at how themes are different or the same and if there are relationships between themes. The researcher will develop explanations, find patterns, relationships, and connections by using inductive data analysis.

Data collection procedures

In this study, participants (principal interns) will be engaged in 10 hours of professional development consisting of online simulations. Participants will access the simulations online, ideally through Blackboard. Prior to data collection, the researcher will meet with the Dean of the Graduate and Professional Studies Program to obtain her consent. The researcher will also meet with the college supervisor to obtain her consent as well. The researcher will then meet with participants in person to discuss the project, outline expectations, and obtain their consent. As stated previously, the researcher will present all information in a consistent manner which aims to create continuity within the study and among participants.

Data will be collected pre-project, during the project, and post-project using a variety of tools. After a participant completes a simulation an auto generated email notification will be sent to the researcher to indicate they have finished the simulation and are ready to setup their phone conversation. This will be done after each and every simulation. The phone conversation will use open-ended interview questions and will not have a set limit of time. However, an interview should not take more than 30 minutes unless the participant chooses to speak longer. These conversation questions will be piloted with students within a small liberal arts college in the northeast who have not been selected for this study. The researcher will be using an app on their phone which records all phone interviews for accuracy. After each phone interview, the researcher will then transcribe the data. In addition, immediately following an interview or conversation the researcher will take time to record his notes and thoughts.

Participants will complete a PSEL Standards Confidence-Based Self-Assessment which will work to measure the participant confidence in meeting the PSEL standards. Participants will also complete a post-assessment at the end of the study after the member check using the Principal's Sense of Self-Efficacy Assessment developed by Tschannen-Moran and Gareis (2004). This assessment will only be given at the completion of each participant's involvement in the study to not taint or skew the results of the study. The researcher will obtain other artifacts from the participants through their college internship supervisor. These artifacts are to include but are not limited to, reflections, self-assessments, professional growth portfolio, and other assignments for the internship course. The researcher will also be using a script to show a detailed layout of how the researcher plans to present this study to participants.

The college supervisor will be asked to share student work such as journals, professional growth plans, and evaluations with the researcher.

This study consists of self-efficacy assessments, interviews/conversations, participation in simulations, and collecting artifacts such as those from the internship courses.

Study time

Study participation will take approximately 18 hours:

- Initial research study orientation (15 Minutes).
- Professional development seminar consisting of online simulations (10 hours)
- 14 Interview/phone conversations after each simulation (7 hours).
- Poststudy assessment interview (30 minutes).

Study location

All study procedures will take place at either s small liberal arts college in the northeast, online, or through phone where the participant will be in their own comfortable environment.

Consent to Audio Record

I would like to audio-record phone conversation/interviews to make sure that I remember accurately all the information provided. I will keep these recording locked in an external hard drive and they will only be used by Benjamin White during this study. If you prefer not to be audio-recorded, I will take notes instead.

What are the possible risks or discomforts?

The following safeguards and procedures will be implemented to protect and ensure the rights of participants:

- The research has been approved by the New England College Institutional Review Board for the protection of human subjects in research.
- All participants will be given a copy of a written consent form explaining the voluntary nature of this study.
- The results of this project will be coded in such a way that the student's identity will not be attached to the final form of this study.
- Participants' rights will be considered first when choices are made about reporting the data.
- Upon completion of the study, all information matching up individual respondents with their answers will be destroyed.
- Your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Participation in this study poses no more than minimal risks beyond the risks associated with everyday participation in the principal internship courses. As with all research, there is a chance that confidentiality of the information we collect from you could be breached – we will take steps to minimize this risk, as discussed in more detail in this form.

How will you protect the information you collect about me, and how will that information be shared?

Results of this study may be used in publications and presentations. Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. I may quote your remarks in presentations or articles resulting from this work. A pseudonym will be used to protect your identity, unless you specifically request that you be identified by your true name.

We may share the data we collect from you for use in future research studies or with other researchers—if we share the data that we collect about you, we will remove any information that could identify you before we share it. The signed consent forms will be kept in a locked, secured area throughout the project and for 5 years after the conclusion of the project at which time they will be shredded.

What are the possible benefits for me or others?

Participants may receive credit for 10 hours of professional development. A certificate for these hours will be provided by the Director of the Graduate Education Programs. Additionally, participants may personally or professionally experience some benefits from taking part in these online simulations.

Financial Information

Participation in this study will involve no cost to you. You will not be paid for participating in this study but participants will receive credit for 10 hours of professional development.

What are my rights as a research participant?
Participation in this study is voluntary. Participants do not have to answer any question they do not want to answer. If at any time and for any reason, a participant would prefer not to participate in this study, they are free not to. If at any time a participant would like to stop participating, they can take a break, stop, and continue at a later date, or stop altogether. Participants may withdraw from this study at any time and will not be penalized in any way for deciding to stop participation.

If a participant chooses not to participate or to stop participating in this research at any time. This will not affect the participant's class standing, grades, employment, or any other aspects of your relationship with New England College.

Who can I contact if I have questions or concerns about this research study?
If you have questions, you are free to ask them now. If you have questions later, you may contact the researcher at:

Benjamin White
88 Holland Lane Apt. 301
Williston, VT 05495
Phone: (802) XXX-XXXX
Email: xxxxx@nec.edu

Debra Nitshcke-Shaw, PhD
New England College
98 Bridge Street Box 22
Henniker, NH 03242
Email: dnitschke@nec.edu

Consent
I have read and understand this consent form and understand what is being requested of the students and college supervisors as participants in this study. I freely consent to allow our students and their NEC supervisors to participate and understand the extent of NEC's participation. I understand the researcher will also audio record conversations/interviews for the purpose of this research study. I have been given satisfactory answers to my questions. The researcher provided me with a copy of this form. I understand consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

_____
Name of College (printed)

_____ _____
Printed Name of Dean of Graduate and Professional Studies Date

_____ _____
Signature of Dean of Graduate and Professional Studies Date

_____ _____
Printed Name of Researcher Date

_____ _____
Signature of Researcher Date

Appendix D

Consent Form: College Supervisors

Study Title: Perceptions of Aspiring School Leaders: Scenario-Based Simulations and their Impact on School Principal Self-Efficacy.
Principal Investigator: Benjamin White

Dear College Supervisor,

I am a student at New England College, in the Graduate and Professional Studies Doctor of Education program. I am planning to conduct a research study under the supervision of faculty chairperson Dr. Debra Nitschke-Shaw. This form has important information about the reason for doing this study, what participants will be asked to do if they decide to be in this study, and the way I would like to use information about participants if they choose to be in the study.

Overview of the Study
The purpose of this study is to shed light on the phenomenon of simulations being implemented within a principal program's preservice experience and what relationship this has with the aspiring principals' confidence in meeting the PSEL standards in ways that might enhance their efficacy as a leader. This will be accomplished by collecting and analyzing data from participants who are either current students or recently graduated students who have not yet executed the role of school principal in New England College's principal preparation program. Each individual will participate in a 10-hour professional development seminar where they will engage in simulations aligned with the PSEL standards. This study will then shed light on whether and in what ways the use of simulations within a principal's preservice experience might show promise as a vehicle for enhancing their self-efficacy as a school leader or their confidence in meeting the PSEL standards. Specific questions of interest are:

- In what ways might participating in scenario-based leadership simulations during a principal internship influence an aspiring principal's sense of self-efficacy as a school principal?
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Participant Selection
A small liberal arts college in the northeast is where this research study will be conducted. The college has a school principal internship program as a component of its school leadership program, from which the participants will be selected. Students completing the school leadership program complete 460 hours of an internship under the guidance and supervision of a principal who holds current, valid licensure and a college supervisor. It is through this program that the researcher will select participants, principal interns, both currently enrolled and who have recently graduated from the program but who do not have their first principalship, and their college supervisor.

How will the data be used?
Contracts, notes, and transcribed audio recordings of interviews with the participants will be saved, listened to, and organized. The researcher will listen to the audio recordings several times and read the transcriptions multiple times. After field notes and interviews had been documented, the process of precoding and coding will begin. Coding will be done by attaching meaningful words and phrases to data. The researcher will look at how themes are different or the same and if there are relationships between themes. The researcher will develop explanations, find patterns, relationships, and connections by using inductive data analysis.

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Participants will complete a PSEL Standards Confidence-Based Self-Assessment Tool which will work to measure the participant confidence in meeting the PSEL standards. Participants will also complete a post-assessment at the end of the study after the member check using the Principal's Sense of Self-Efficacy Assessment developed by Tschannen-Moran and Gareis (2004). This assessment will only be given at the completion of each participant's involvement in the study to not taint or skew the results of the study. The researcher will obtain other artifacts from the participants through their college internship supervisor. These artifacts are to include but are not limited to, reflections, self-assessments, professional growth portfolio, and other assignments for the internship course. The researcher will also be using a script to show a detailed layout of how the researcher plans to present this study to participants.

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Consent to audio record

I would like to audio record phone conversation/interviews to make sure that I remember accurately all the information participants provide. I will keep these recording locked in an external hard drive and they

will only be used by Benjamin White during this study. If you prefer not to be audio recorded, I will take notes instead.

What are the possible risks or discomforts?

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- The results of this project will be coded in such a way that the student's identity will not be attached to the final form of this study.
- Participants' rights will be considered first when choices are made about reporting the data.
- Upon completion of the study, all information matching up individual respondents with their answers will be destroyed.
- Your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Participation in this study poses no more risks than those associated with everyday participation in the principal internship courses. As with all research, there is a chance that confidentiality of the information we collect from you could be breached—we will take steps to minimize this risk, as discussed in more detail in this form.

How will you protect the information you collect about me, and how will that information be shared?

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We may share the data we collect from you for use in future research studies or with other researchers—if we share the data that we collect about you, we will remove any information that could identify you before we share it. The signed consent forms will be kept in a locked, secured area throughout the project and for 5 years after the conclusion of the project at which time they will be shredded.

What are the possible benefits for me or others?

Participants will receive credit for 10 hours of professional development. Additionally, you may personally or professional experience some benefits from taking part in these online simulations.

Financial Information

Participation in this study will involve no cost to you. You will not be paid for participating in this study.

What are my rights as a research participant?

Participation in this study is voluntary. You do not have to answer any question you do not want to answer. If at any time and for any reason, you would prefer not to participate in this study, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop, and continue at a later date, or stop altogether. You may withdraw from this study at any time, and you will not be penalized in any way for deciding to stop participation.

You may choose not to participate or to stop participating in this research at any time. The same is true for students who participate. If a student stops participating his/her class standing, grade, employment, or any other aspects of their relationship with New England College with not be impacted.

Who can I contact if I have questions or concerns about this research study?
If you have questions, you are free to ask them now. If you have questions later, you may contact the researcher at:

Benjamin White
88 Holland Lane Apt. 301
Williston, VT 05495
Phone: (802) XXX-XXXX
Email: xxxxx@nec.edu

Debra Nitshcke-Shaw, PhD
New England College
98 Bridge Street Box 22
Henniker, NH 03242
Email: dnitschke@nec.edu

Consent
I have read and understand this consent form and understand what is being requested as a participant in this study. I freely consent to participate and understand the extent of my participation. I understand the researcher will also audio record conversations/interviews for the purpose of this research study. I have been given satisfactory answers to my questions. The researcher provided me with a copy of this form. I understand consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand nothing in this consent form is intended to replace any applicable federal, state, or local laws.

_____
Name of College (printed)

_____ _____
Printed Name of College Supervisor Date

_____ _____
Signature of College Supervisor Date

_____ _____
Printed Name of Researcher Date

_____ _____
Signature of Researcher Date

Appendix E

Interview Questions

The researcher will be using the following open-ended interview questions for before the study.

1. Can you tell me about your principal preparation program?
2. How have the classes been in terms of preparing you to be a principal?
3. How is the internship going in terms of helping prepare you for your first principal job?
4. What do you know about PSEL? How are these standards connected to your program?

The researcher will use the following interview questions during the phone conversations.

1. Do you (name of participant) agree to have this interview recorded and record the response?
2. How effective was this simulation in terms of helping to prepare you to become a principal?
3. How do you see the connections between this simulation and PSEL?

The researcher will use the following interview questions during the final phone interview.

1. How effective were the simulations in terms of helping to prepare you to become a principal?
2. How effective were the simulations in helping you to be able to meet the PSEL standards?
3. What effects did the simulations have on your confidence to face the real challenges of being a principal.

Appendix F

Principal's Sense of Self-Efficacy Assessment

Principal Questionnaire

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for principals in their school activities.

Directions: Please indicate your opinion about each of the questions below by marking one of the nine responses in the columns on the right side. The scale of responses ranges from "None at all" (1) to "A Great Deal" (9), with "Some Degree" (5) representing the mid-point between these low and high extremes. You may choose any of the nine possible responses, since each represents a degree on the continuum. Your answers are confidential.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

"In your current role as principal, to what extent can you…"		**None at All**		**Very Little**		**Some Degree**		**Quite a Bit**		**A Great Deal**
1.	facilitate student learning in your school?	1	2	3	4	5	6	7	8	9
2.	generate enthusiasm for a shared vision for the school?	1	2	3	4	5	6	7	8	9
3.	handle the time demands of the job?	1	2	3	4	5	6	7	8	9
4.	manage change in your school?	1	2	3	4	5	6	7	8	9
5.	promote school spirit among a large majority of the student population?	1	2	3	4	5	6	7	8	9
6.	create a positive learning environment in your school?	1	2	3	4	5	6	7	8	9
7.	raise student achievement on standardized tests?	1	2	3	4	5	6	7	8	9
8.	promote a positive image of your school with the media?	1	2	3	4	5	6	7	8	9
9.	motivate teachers?	1	2	3	4	5	6	7	8	9
10.	promote the prevailing values of the community in your school?	1	2	3	4	5	6	7	8	9
11.	maintain control of your own daily schedule?	1	2	3	4	5	6	7	8	9
12.	shape the operational policies and procedures that are necessary to manage your school?	1	2	3	4	5	6	7	8	9
13.	handle effectively the discipline of students in your school?	1	2	3	4	5	6	7	8	9
14.	promote acceptable behavior among students?	1	2	3	4	5	6	7	8	9
15.	handle the paperwork required of the job?	1	2	3	4	5	6	7	8	9
16.	promote ethical behavior among school personnel?	1	2	3	4	5	6	7	8	9
17.	cope with the stress of the job?	1	2	3	4	5	6	7	8	9
18.	prioritize among competing demands of the job?	1	2	3	4	5	6	7	8	9

Appendix G

PSEL Confidence Survey

Developing Your School Leadership Profile

Purposes:
To provide school leaders with the opportunity to examine their own school leadership practices with respect to the knowledge, dispositions, and performances contained within the PSEL Standards for School Leaders.

This self-examination should lead to greater familiarity with the standards and provide a starting point to assist you in identifying potential areas of focus for professional development planning.

Directions:

1. Complete the self-assessment rating scale.
2. Check the box under the rating that applies. Be sure to check only one response/number for each item.
3. After completion, go back and add the ratings under each standard (1 through 6). To do so, add the scores within each standard, and divide by the total number of items within each standard. Fill in the average rating in the space provided at the end of each standard.
4. Complete a written reflection, indicating areas of needed emphasis, growth, and improvement, in the space provided at the end of this self-assessment.
5. In the space provided at the end of this self-assessment, generate four self-improvement goals to be undertaken during this degree program. Each goal is to include the following:
    - A goal statement and its relationship to one or more of the ISLLC Standards
    - Anticipated activities that will lead to the accomplishment of the goal
    - Evidence that will demonstrate attainment of the goal
    - Targeted date of completion for the goal

Instructions: This self-assessment is designed to provide a personal profile of your school leadership assets based on the ISLLC Standards for School Leaders. The ISLLC Self-Assessment Tool consists of 182 statements that describe the knowledge, dispositions, and performances contained within the ISLLC Standards for School Leaders. You are asked to respond to each statement by reflecting on what you have learned, what you believe and value, and what you are accomplishing as a school leader.

Read each knowledge, disposition, or performance statement carefully. Then check the box that indicates the extent to which the statement represents your practices during the past 10–12 months. In responding to each item:

1 represents **Little** extent
2 represents **Some** extent
3 represents **Sufficient** extent
4 represents **Exemplary** extent

Standard 1: Effective educational leaders develop, advocate, and enact a shared mission, vision, and core values of high-quality education and academic success and well-being of *each* student.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Develop an educational mission for the school to promote the academic success and well-being of each student.				
In collaboration with members of the school and the community and using relevant data, develop and promote a vision for the school on the successful learning and development of each child and on instructional and organizational practices that promote such success.				
Articulate, advocate, and cultivate core values that define the school's culture and stress the imperative of child-centered education; high expectations and student support; equity, inclusiveness, and social justice; openness, caring, and trust; and continuous improvement.				
Strategically develop, implement, and evaluate actions to achieve the vision for the school.				
Review the school's mission and vision and adjust them to changing expectations and opportunities for the school and changing needs and situations of students.				
Develop shared understanding of and commitment to mission, vision, and core values within the school and the community.				
Model and pursue the school's mission, vision, and core values in all aspects of leadership.				

Standard 2: Effective educational leaders act ethically and according to professional norms to promote *each* student's academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Act ethically and professionally in personal conduct, relationships with others, decision making, stewardship of the school's resources, and all aspects of school leadership.				
Act according to and promote the professional norms of integrity, fairness, transparency, trust, collaboration, perseverance, learning, and continuous improvement.				
Articulate, advocate, and cultivate core values that define the school's culture and stress the imperative of child-centered education; high expectations and student support; equity, inclusiveness, and social justice; openness, caring, and trust; and continuous improvement.				
Place children at the center of education and accept responsibility for each student's academic success and well-being.				
Safeguard and promote the values of democracy, individual freedom and responsibility, equity, social justice, community, and diversity.				
Lead with interpersonal and communication skill, social-emotional insight, and understanding of all students' and staff members' backgrounds and cultures.				
Provide moral direction for the school and promote ethical and professional behavior among faculty and staff.				

Standard 3: Effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Ensure that each student is treated fairly, respectfully, and with an understanding of each student's culture and context.				
Recognize, respect, and employ each student's strengths, diversity, and culture as assets for teaching and learning.				
Ensure that each student has equitable access to effective teachers, learning opportunities, academic and social support, and other resources necessary for success.				
Develop student policies and address student misconduct in a positive, fair, and unbiased manner.				
Confront and alter institutional biases of student marginalization, data-based schooling, and low expectations associated with race, class, culture and language, gender and sexual orientation, and disability or special status.				
Promote the preparation of students to live productively in and contribute to the diverse cultural contexts of a global society.				
Act with cultural competence and responsiveness in their interactions, decision making, and practice.				
Address matters of equity and cultural responsiveness in all aspects of leadership.				

Standard 4: Effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Implement coherent systems of curriculum, instruction, and assessment that promote the mission, vision, and core values of the school, embody high expectations for student learning, align with academic standards, and are culturally responsive.				
Align and focus systems of curriculum, instruction, and assessment within and across grade levels to promote student academic success, love of learning, the identities and habits of learners, and healthy sense of self.				
Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student.				
Ensure instructional practice that is intellectually challenging, authentic to student experiences, recognizes student strengths, and is differentiated and personalized.				
Promote the effective use of technology in the service of teaching and learning.				
Employ valid assessments that are consistent with knowledge of child learning and development and technical standards of measurement.				
Use assessment data appropriately and within technical limitations to monitor student progress and improve instruction.				

Standard 5: Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of each student.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Build and maintain a safe, caring, and healthy school environment that meets the academic, social, emotional, and physical needs of each student.				
Create and sustain a school environment in which each student is known, accepted and valued, trusted and respected, cared for, and encouraged to be an active and responsible member of the school community.				
Provide coherent systems of academic and social supports, services, extracurricular activities, and accommodations to meet the range of learning needs of each student.				
Promote adult-student, student-peer, and school-community relationships that value and support academic learning and positive social and emotional development.				
Cultivate and reinforce student engagement in school and positive student conduct.				
Infuse the school's learning environment with the cultures and languages of the school's community.				

Standard 6: Effective educational leaders develop professional capacity and practice of the school personnel to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Recruit, hire, support, develop, and retain effective and caring teachers and other professional staff and form them into an educationally effective faculty.				
Plan for and manage staff turnover and succession, providing opportunities for effective induction and mentoring of new personnel.				
Develop teachers' and staff members' professional knowledge, skills, and practice through differentiated opportunities for learning and growth, guided by understanding of professional and adult learning and development.				
Foster continuous improvement of individual and collective instructional capacity to achieve outcomes envisioned for each student.				
Deliver actionable feedback about instruction and other professional practice through valid, research-anchored systems of supervision and evaluation to support the development of teachers' and staff members' knowledge, skills, and practice.				
Empower and motivate teachers and staff to the highest levels of professional practice and to continuous learning and improvement.				
Develop the capacity, opportunities, and support for teacher leadership and leadership from other members of the school community.				
Promote the personal and professional health, well-being, and work-life balance of faculty and staff.				
Tend to their own learning and effectiveness through reflection, study, and improvement, maintaining a healthy work-life balance.				

Standard 7: Effective educational leaders foster a professional community of teachers and other professional staff to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Develop workplace conditions for teachers and other professional staff that promote effective professional development, practice, and student learning.				
Empower and entrust teachers and staff with collective responsibility for meeting the academic, social, emotional, and physical needs of each student, pursuant to the mission, vision, and core values of the school.				
Establish and sustain a professional culture of engagement and commitment to shared vision, goals, and objectives pertaining to the education of the whole child; high expectations for professional work; ethical and equitable practice; trust and open communication; collaboration, collective efficacy, and continuous individual and organizational learning and improvement.				
Promote mutual accountability among teachers and other professional staff for each student's success and the effectiveness of the school as a whole.				
Develop and support open, productive, caring, and trusting working relationships among leaders, faculty, and staff to promote professional capacity and the improvement of practice.				
Design and implement job-embedded and other opportunities for professional learning collaboratively with faculty and staff.				
Provide opportunities for collaborative examination of practice, collegial feedback, and collective learning.				
Encourage faculty-initiated improvement of programs and practices.				

Standard 8: Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Are approachable, accessible, and welcoming to families and members of the community.				
Create and sustain positive, collaborative, and productive relationships with families and the community for the benefit of students.				
Engage in regular and open two-way communication with families and the community about the school, students, needs, problems, and accomplishments.				
Maintain a presence in the community to understand its strengths and needs, develop productive relationships, and engage its resources for the school.				
Create means for the school community to partner with families to support student learning in and out of school.				
Understand, value, and employ the community's cultural, social, intellectual, and political resources to promote student learning and school improvement.				
Develop and provide the school as a resource for families and the community.				
Advocate for the school and district, and for the importance of education and student needs and priorities to families and the community.				
Advocate publicly for the needs and priorities of students, families, and the community.				
Build and sustain productive partnerships with public and private sectors to promote school improvement and student learning.				

Standard 9: Effective educational leaders manage school operations and resources to promote each student's academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Institute, manage, and monitor operations and administrative systems that promote the mission and vision of the school.				
Strategically manage staff resources, assigning and scheduling teachers and staff to roles and responsibilities that optimize their professional capacity to address each student's learning needs.				
Seek, acquire, and manage fiscal, physical, and other resources to support curriculum, instruction, and assessment; student learning community; professional capacity and community; family and community engagement.				
Are responsible, ethical, and accountable stewards of the schools monetary and non-monetary resources, engaging I effective budgeting and accounting practices.				
Protect teachers and other staff members work and learning from disruption.				
Employ technology to improve the quality and efficiency of operations and management.				
Develop and maintain data and communication systems to deliver actionable information for classroom and school improvement.				
Know, comply with, and help the school community understand local, state, and federal laws, rights, policies, and regulations to promote student success.				
Develop and manage relationships with feeder and connecting schools for enrollment management and curricular and instructional articulation.				
Develop and manage productive relationships with the central office and school board.				
Develop and administer systems for fair and equitable management of conflict among students, faculty and staff, leaders, families, and community.				
Manage governance processes and internal and external politics toward achieving the school's mission and vision.				

Standard 10: Effective educational leaders act as agents of continuous improvement to promote each students' academic success and well-being.

To what extent do I have a **CURRENT PERSONAL MASTERY** of the following indicators?

	Little (1)	**Some (2)**	**Sufficient (3)**	**Exemplary (4)**
Seek to make school more effective fort each student, teachers and staff, families, and the community.				
Use methods of continuous improvement to achieve the vision, fulfill the mission, and promote the core values of the school				
Prepare the school and the community for improvement, promoting reediness, an imperative for improvement, instilling mutual commitment and accountability, and developing the knowledge, skills, and motivation to succeed in improvement.				
Engage others in an ongoing process of evidence-based inquiry, learning, strategic goal setting, planning, implementation, and evaluation for continuous school and classroom improvement.				
Employ situationally appropriate strategies for improvement, including transformational and incremental, adaptive approaches and attention to different phases of implementation.				
Assess and develop the capacity of staff to assess the value and applicability of emerging educational trends and the findings of research for the school and its improvement.				
Develop technically appropriate systems of data collection, management, analysis, and use, connecting as needed to the district and external partners for support in planning, implementation, monitoring, feedback, and evaluation.				
Adopt a systems perspective and promote coherence among improvement efforts and all aspects of school organization, programs, and services.				
Manage uncertainty, risk, competing initiatives, and politics of change with courage and perseverance, providing support and encouragement, and openly communicating the need for, process for, and outcomes of improvement efforts.				
Develop and promote leadership among teachers and staff for inquiry, experimentation and innovation, and initiating and implementing improvement.				

Appendix H

List of Simulations

Simulation 1	**Administrator First Week on the Job** In this simulation, your role is an Administrator in the first week on the job. You will be faced with the need to manage various stakeholder groups, working to gain the trust and confidence of community members and district employees. You'll have to balance strategic direction with the shifting demands of daily issues. And you'll need to determine when to delegate and when to take ownership and anticipating the broader impact of your actions.
Simulation 2	**Community Partnerships** In this simulation, co-authored with the National Parent-Teacher Association, you will be addressing communication strategies as they relate to Community Partnerships, one of the seven gears within the Future Ready Framework. In the role of superintendent, you will work with your leadership team and community members to optimize the roll-out of technology to your district. In an era of connectivity and connectivity gaps, being strategic about how you meet families and the community where they are becomes critical to the inclusive learning community you strive to create.
Simulation 3	**Difficult Conversations (Race)** This simulation considers just how complex the issue of race is–in the classroom, in the community, and in the broader societal landscape. Playing the role of Principal at a suburban, racially and socioeconomically diverse high school, you will address sensitive issues such as conversations about race with students, and how teaching professionals and district staff can support those conversations.
Simulation 4	**Difficult Teacher Conversation** As the leader of an elementary school, concerns from staff have been raised regarding the clothing being worn by one of your teachers. In this simulation, you will need to decide how you address those concerns and balance those concerns with other issues that have arisen regarding the same teacher.
Simulation 5	**Middle School Budget Challenge** This simulation involves a middle school principal responding to a request from the Superintendent for a 15% budget cut in two weeks. The principal must determine the process for arriving at the cuts, who to involve in the process, and how to drive alignment around priorities. Of course, there are many conflicting perspectives to be managed, as well as a rumor mill working overtime. How will various stakeholder groups be managed to arrive at an optimal result?
Simulation 6	**Small School District Budget Crisis** This simulation involves a new Superintendent taking over a small school district that happens to be the primary employer in the community. When a budget shortfall is discovered, the Superintendent must decide which resources to involve in the resolution while balancing transparency and strategy among key constituencies. Decide which conditions warrant more persistence versus flexibility while keeping the focus on students.
Simulation 7	**Disruptive Teacher** This simulation is based around a collaborative teaching team. There is one teacher on the team, newer to the school but a mid-career teacher, who is "not a team player." The simulation begins with another teacher on the team coming to the school leader and expressing concern over the way the disruptive teacher is behaving. The school leader ultimately ends up at a team meeting and witnesses behavior that is inappropriate and over-the-top. The simulation goals relate to school culture and climate, conflict management, and responding to teacher concerns.

Simulation 8	**Girls Basketball Coach** A parent at the high school where you are the school leader goes to a school board meeting to complain about the way the girls' basketball coach is treating the players on the team. You must decide how you address the parent's concern and the alleged behavior of the winningest coach in school history.
Simulation 9	**Board Relations** This simulation takes place in a suburban school district at the end of the school year. After the prom, two students trespass on the high school principal's property. It turns out that one of the students is a board member's child. The superintendent must navigate the relationship with the board member and board chair and also decide how to support or manage the principal's reaction to the incident.
Simulation 10	**Academic Goal Setting** This simulation is based around a veteran social studies teacher in a middle school. The teacher has set goals that are not aligned with the new school goals or the Common Core standards. As the school leader, you must decide what steps you will take to try and move this teacher toward alignment with the school goals, and outside his comfort zone.
Simulation 11	**New Teacher Evaluation** This simulation involves an early-career (second year) elementary school teacher. The simulation begins following the school leader's observation of the teacher teaching a literacy lesson. The teacher teaches directly from the teachers' manual and the lesson has no higher level skills or thinking embedded within it. At the same time, there has just been a new teacher evaluation rubric implemented in the district that is based on four performance levels. The school leader must meet with the teacher and coach improvement to instructional practice while also helping the teacher understand the new rubric, though no longer saying her performance is "satisfactory," the new rubric does not mean she is "unsatisfactory."
Simulation 12	**Student in Crisis** Suicide is a tough reality among our teens and, as such, an inevitable tragedy for our schools. This simulation focuses on supporting the school leader as he/she navigates a loss due to suicide. From the first moment of notification, through the nuances of sharing the news with your students, staff, and community, and into the days and weeks after the tragedy, the Sim helps define what considerations to make when crafting decisions that will impact your community on every level.

Appendix I

Simulation Emails

Simulation 1

Hi (*Participant Name*),

Alright, it is time to begin the research study! Thank you again for participating in this (*Participant Name*). Below is the link to the first simulation and the password you will need to enter. You may also need to be using chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: http://edsimspd.com/simulations/administrator-first-week-on-the-job-simulation/
Password: ELS0418-5

Once you complete the simulation, I will receive an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 2

Hi (*Participant Name*),

Alright, below is the link to the second simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: http://edsimspd.com/Community_Partnerships/index.html
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 3

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: http://edsimspd.com/simulations/difficult-conversations-race-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 4

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation:
http://www.edsimspd.com/dresscode/Dress%20Code%20Sim%20alpha%20081912.html
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 5

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation:
http://www.edsimspd.com/dresscode/Dress%20Code%20Sim%20alpha%20081912.html
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 6

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation 6: https://www.edsimspd.com/simulations/small-school-budget-crisis-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 7

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation 7: https://www.edsimspd.com/disruptive-teacher-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 8

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation 8: https://www.edsimspd.com/girls-basketball-coach-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there

are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 9

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: https://www.edsimspd.com/board-relations-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 10

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: https://www.edsimspd.com/goal-setting-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 11

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also

need to be using Chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: https://www.edsimspd.com/goal-setting-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Simulation 12

Hi (*Participant Name*),

Alright, below is the link to the third simulation and the password you will need to enter. You may also need to be using chrome or Firefox to display the simulation. Let me know if you have any questions whatsoever.

Simulation: https://www.edsimspd.com/student-in-crisis-simulation/
Password: ELS0418-5

Once you complete the simulation, please just send me an email and we can setup a time to chat. If there are any technical issues, let me know so I can help. If you could just email me back letting me know you received this, that would be great.

Thanks (*Participant Name*)!

Ben

Appendix J

Institutional Review Board Letter of Approval

New England College

Benjamin C. White's

Ben'

Carlton J. Fitzgerald