AN EXAMINATION OF LEADERSHIP STYLES AMONG

VIRTUAL SCHOOL ADMINISTRATORS

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ABSTRACT

In this study, the researcher examined self-perceived school leadership styles of school administrators within the virtual school setting. Through this study, the researcher identified virtual school leaders and the leadership styles associated with their work. Participants in this study were employed at K12, Inc. representing virtual schools that were operating with a full-time state sponsored staff at that time. The 26 participants in this study represented a 35% response rate, which was the main limitation in this study. The research instrument used in the study was the Multifactor Leadership Questionnaire (MLQ) with an added demographic survey. The dependent variable was the administrators' leadership style identified on the MLQ. The independent variables were the demographic factors including years of experience, school type, size of school, administrator gender, administrator age, race, highest degree obtained, years in education, grade level, number of teachers in school, and previous role in brick and mortar setting.

The data were analyzed with descriptive statistics and Chi square to address the two main research questions. The second research question consisted of six sub-questions. The results showed a significant relationship between administrators' leadership style and the school type. District school administrators were more transformational, and state charter school administrators were more transactional. The results also showed a significant relationship between administrators' leadership style and gender. Male administrators perceived themselves as more transformational, and female administrators perceived themselves as more transactional.

The remaining variables did not have enough data to determine a relationship between those variables and leadership style.

        The findings of the study may have implications on leadership practice and development. Professional development could be provided for current virtual school leaders on topics of transformational and transactional leadership. Identifying the leadership styles of virtual school leaders as they relate to demographic factors could ultimately impact both teaching and learning outcomes.

DEDICATION

To my husband, Theodore, thank you for the encouragement, the push, and the challenge to finish what I started. Your love for me and for education was critical to this process and means more than words can say. Now it's your turn!

To my daughters, Shayla and Taryn, you are my inspiration. I wanted you to see that perseverance pays off and the reward is great. But, most of all, the possibilities in life are endless! Go for it!

To my parents, your unending support and love are beyond compare. Through the years, you have been there through every endeavor and adventure I have taken. Thank you is not enough!

I dedicate this especially to my Granny, who said that I could do anything! I know you are smiling down on me and I feel it.

To all my close friends and family in NY, NJ, GA, and TN, the words of life that you have spoken throughout the years have not gone unnoticed. Your support and encouragement were felt every day that I sat in front of the computer. Thank you!

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CHAPTER I

INTRODUCTION

According to Dr. Brian Ray, president of the National Home Education Research Institute, there are approximately 2.3 million home-educated students in the United States (Wyatt, 2014). Virtual (online) schools offer another option for traditional homeschool families and traditional brick and mortar. In the 2013-14 school year, over 400 full time virtual schools enrolled close to 262,000 students (Miron & Gulosino, 2016). Online learning continues to evolve as an educational choice for today's primary and secondary student. Huerta (2014), in *Virtual Schools in the U.S. 2014,* noted that an estimated 200,000 students were enrolled in full-time virtual school with another 700,000 engaged in various forms of online courses.

According to a virtual school report published by the National Education Policy Center, University of Colorado Boulder, thirty-three states have full time virtual schools, and sixteen states have blended schools. Over 40 states have some type of distance education program, but there has been minimal effort to prepare necessary personnel to be effective in the online instructional environment (Watson, Murin, Vashaw, Gemin, & Rapp, 2013). With school environments moving from the brick and mortar school building to cyberspace, the context and role of school leadership is undergoing transformation. School principals are challenged to be instructional leaders in their buildings (Spanneut, Tobin, & Ayers, 2012).

In 2004, the U.S. Department of Education released a national educational technology plan. The plan was written in response to a request from Congress on the state of affairs in educational technology ("International Association for K-12 Online Learning | Our Story," 2015;

Paige, Hickok, & Patrick, 2004). The plan shared how every student, even those from low-income groups, was seeking access to computers, yet schools were underutilizing computer technology. It was noted, "students, of almost any age, are far ahead of their teachers in computer literacy. They prefer to access subject information on the Internet, where it is more abundant, more accessible and more up-to-date" (Paige et al., 2004, p. 11). Six years later, the National Educational Technology Plan (2010) acknowledges how technology filled the lives of students giving them access to information around the clock. Technology has afforded opportunities to explore multiple sources of information outside the school building. The ability to share and learn is no longer bound to the pages of a textbook. However, open access without guidance could present a challenge for educators because more control of the learning is on the students in contrast to a traditional classroom room in which the teacher could have more control (Atkins, Bennett, Brown, Chopra, Dede, Fishman, Gomez, Honey, & Kafai, 2010).

Options for instruction and learning for school-aged children continue to emerge. Over 40 states have open enrollment programs, charter schools, or private school voucher programs (Brasington & Hite, 2014). Parents have more choices now and can decide between traditional public school, charter school, private school, and home school. A traditional public school, also referred to as brick and mortar in this paper, is a student's local school for which s/he is geographically zoned. Zoning can also change due to population and building capacity. Families are choosing schools that they believe will offer a better or more effective education for their children. "On virtually every measure tested – school safety, discipline, instructional quality, teacher skills, respect for teachers, class size, and school facilities – parents are overwhelmingly more satisfied with their chosen school than with their given school" (Atkins et al., 2010, p. x). The Public Schools Options organization is a group of parents seeking a right to choose and

access alternative options of schooling for their students. According to their website, Public School Options (2014), the organization supports "the creation of public school options, including charter schools, online schools, magnet schools, open enrollment policies, and other innovative education programs" ("Public School Options," 2016, par 1).

Home schooling is on the rise as another educational choice. All 50 states permit this option with each state establishing its own requirements. The number of homeschooled students was estimated at 1.5 million in 1999, which was an increase from 850,000 in 1997 (Vassallo, 2000). According to the United States Department of Education National Center on Educational Statistics, the number of homeschooled students has risen to 1.77 million, representing 3.4% of school aged children (Snyder & Dillow, 2015). The cause for the rise in numbers could be impacted by personal choice or environmental concerns. The top five reasons for choosing homeschooling are as follows: concern about the environment of other schools, a desire to provide moral instruction, a dissatisfaction with academic instruction at other schools, a desire to provide religious instructions, and a desire to provide a non-traditional approach to their child's education. In the past two decades, online schooling at home has emerged as a viable education choice (Planty, Hussar, & Snyder, 2009). As school choice grows, it may be important to investigate and evaluate how school leadership works in various school environments, such as virtual schools.

Background on Virtual Education

The first online learning related course was developed by Programmed Logic for Automated Teaching Operations (PLATO) in 1960 at the University of Illinois at Urbana-Champaign. With this system, students could study and send notes to professors. Five years later,

PLATO had developed materials called an electronic book, an electronic blackboard that stored information, an instructor page, and a comment page (McFarlane, 2011). By the late 1980s, the virtual environment was making its move down to younger students. A pilot project connected schools in New York with schools in Moscow. International Education and Resource Network (IEarn) engaged students in projects around the world (Sloan, 2009). Online learning has become a standard trend on the collegiate level and has allowed more adults to earn certificates and degrees that may have been otherwise unattainable or challenging to achieve (Allen & Seaman, 2011). Online learning has moved down to K-12 students with state level virtual schools. Online public school has been categorized into five types: statewide supplemental, district-wide supplemental, statewide cyber schools, local district cyber schools, and charter schools (Clark, 2001). Why are more school districts and counties joining this trend? Educational leaders saw a variety of purposes that online schooling could serve. Berge and Clarke (2009) cite these purposes: range of courses that can be offered, flexibility in use of time, lack of highly qualified teachers in the school system, and support in teaching technology literacy skills across the curriculum.

Elementary and secondary education students have moved into cyberspace using the Internet as a dominant medium for information and communication. Some statistics identify this generation of students as "The Millennials" (Gene V Glass, 2009, p. 3). Pew Internet and American Life Project (Paige et al., 2004) conducted a study on the Internet and education with youths aged 12- 17. The findings included 94% of participants who said they used the Internet for school research, 41% used email and instant messaging to contact teachers or classmates about schoolwork, 58% used websites that are school sponsored, 87% of parents believed that the Internet helps their students with schoolwork and learning new things, and another 55% said

that the Internet is essential for the child's success (2000). There are several states now

mandating more school choice for students through virtual learning. Five states have enacted

laws that require online courses for graduation, as well as multiple counties that require online

education as part of a student's college and career readiness plan (Sheehy, 2012). Online learning

at the post-secondary level has become a standard due to access and cost.

> A survey by the Babson Survey Research Group, for example, reveals that more than 6.7 million students took at least one online course last year, an annual increase of 9.3 percent. Compared to classroom courses, online courses were less costly to operate, more convenient, and more accessible. (Davis, 2012)

K-12 schools now seek a similar exposure for their students through organizations that

have the structures already in place. Companies, such as Connections Academy and K12, Inc.,

are for-profit organizations offering local school districts online school programs. Connections

Academy began in 2001 under Sylvan Ventures and by the fall of 2002, two states began virtual

academies. Apollo Management, L.P. then sold Connections Academy to Pearson. By this time,

Connections Academy was operating in 21 states with more than 40,000 students ("K-12 Online

Public School from Home | Connections Academy," (n.d.)). With headquarters in Baltimore,

Maryland, Connections Academy continues to offer online public and private school options.

K12, Inc. was founded in 2000 and has headquarters in Herndon, Virginia. According to their

website, K12, Inc. "set out to answer a call. The call was a voice by a growing number of parents

whose children's needs were not being met by traditional educational model" ("K12: Job

Openings at K12," n.d.). It offers public and private school programs like Connections Academy

does, but also has an international academy and courses for purchase. Both online schools

provide computers, lesson materials, and support/instruction from certified teachers. Each child

is required to have a learning coach, whether that is parent or other trusted family member who

will keep attendance and ensure school work is being done daily. With this comes the need for

accountability, advocacy, and a broader platform for resources in the ever-changing online climate. Critics argue for safeguards on quality of programs, quality of teachers, and monitoring student outcomes (Natale & Janet, 2012).

The International Association of Online Learning grew out of a need for "a home" for a virtual high school association ("International Association for K-12 Online Learning | Our Story," 2015). In the fall of 2000, virtual school leaders attended the National School Board Association's (NSBA) Teaching and Learning Conference. A discussion occurred that led to a need for more continued communication among virtual schools. A listserv was developed, and by 2002 a virtual high school summer institute was held in California. More than fifty virtual school leaders from Hawaii to Connecticut attended. The North American Council for Online Learning (iNACOL) was born by the following year. Membership consists of educators on all levels, individuals, entire schools, for profit and non-profits. The organization currently offers advocacy, funding assistance, research resources, networking, and more. Their mission is for all students to access a quality world-class education online that will prepare them for success ("International Association for K-12 Online Learning | Our Story," 2015). This organization provides support for online schools that are battling naysayers while also addressing the changing culture of teaching and learning:

> There are still people in leadership positions in education who say, 'I don't understand how students can be successful when they don't have a teacher teaching them.' There is a teacher teaching them –a faculty member who is trained to teach online who is teaching the child in a new way. There are not people who are actively against online learning. They just don't know what it is. (Ramaswami, 2009, p. 5)

In his article, *Potholes in the Road to Virtual Schooling*, Glass (2010) raised concerns about the push to cut education budgets by offering virtual schooling and replacing the personal touch of a teacher. But Glass (2010) also stated, "anyone who denies learning can take place on

the Internet ignores the fact that most of what people know about the Internet was learned there" (p. 34). Another literary paper sought to examine the differences in organizational structure in a virtual environment versus face-to-face. McFarlane (2011) stated, "technologies have been created and the process of teaching and learning have become fully immersed in space and time as virtual schools can now exist in cyberspace and reach anyone having access to computer-based technologies and the Internet" (p. 4). Additionally, he acknowledged the debates concerning online school and the questions that still arise. People have had difficulty seeing virtual schools as alternatives to traditional schools and not as replacements. This debate could cause negativity and opposition to the virtual school option (Ramaswami, 2009) . McFarlane (2011) also presented the benefits and drawbacks of the virtual school: (1) lower costs for transportation and facilities can reallocate funds to the resources students would need to support their learning, (2) families are equipped with technology and curriculum that can be self-paced regardless of economic and social factors, and (3) students who have learning difficulties can work at a slower pace or those who are advanced can work faster to move grade levels ahead.

McFarlane (2011) also presents additional benefits such as an elimination and reduction in social discrimination based on race, culture, or economics that has been predominant in traditional brick and mortar setting. With great benefits could come drawbacks of student engagement and socialization. For some, the lack of face to face interaction can cause a disconnect in peer relationships and lack of a sense of school community (Toppin & Toppin, 2015). The issue of student social interaction has been debated between proponents and opponents to schooling at home. Research has found that homeschooled students and their parents are very engaged within communities and engage in activities such as community-based sports teams, cooperative classes, and religious activities (Ray, 2013).

All of these factors lend to the importance of leadership and organizational structure, which is crucial for communication, employee evaluation, student achievement, teamwork, and a chain of command (McFarlane, 2011). Various areas of school leadership and accountability were outlined in a way that they then could be evaluated for leadership application and effectiveness. Representatives from multiple states and education organizations, wrote the Interstate School Leadership Licensure Consortium Standards for School Leaders in 1994-5. The standards were published by the Council of Chief State School Officers in 1996 (Consortium, 2008).

Purpose and Rationale for the Study

The leader of a school has influence on a school's success. The school principal has a greater impact on educational outcomes versus a superintendent who performs more as a CEO distributing company guidelines (Branch, Hanushek, & Rivkin, 2012). The principal is expected to guide the teaching and learning of all who are under his or her supervision. Educational outcomes are the responsibility of the school building administrator (Catano & Stronge, 2006). How a leader leads can impact those educational outcomes. Over the years, researchers have looked at school administrators' leadership styles and responsibilities. Bentley (2011) investigated self-perceived leadership styles within three Florida school districts using the Multifactor Leadership Questionnaire (MLQ). The majority of studies have looked at traditional brick and mortar school leaders with very little emphasis on virtual school leaders. It may be important to investigate, observe, and analyze leaders in a virtual school environment. With the rise of online public schools, principals face the challenge of transitioning to new, distance learning environments that may require a different method and practice of school leadership.

For most virtual academies, the head of school is based in the supervising county. His or her location could be hundreds of miles from most of the teaching staff. The administrator is expected to be the instructional leader and professional learning communities are encouraged.

> Before, you ran your school, you carried your budget, you hardly ever saw anyone. Now, suddenly it's different thinking, a different conversation. We are all learners. We are all to be involved in learning. It is not just about being an administrator, it's about being instructional leaders. (Branch et al., 2012, p. 4)

Distance could be a challenge in executing a particular leadership style and promoting a collegial atmosphere. The entire staff may not meet in person except for the beginning and end of each school year. Quilici (2011) noted that online school principals' primary contact with teachers was through emails or drop-in online classroom observations. More human contact was needed. The leader may not get to personally know each teacher that is working in the school, as could occur within a school building.

Virtual school settings may or may not have the same expectations to be an effective leader as traditional brick and mortar settings. Richardson, LaFrance, and Beck (2015) facilitated a case study that illustrated how online principals were challenged to be virtually available to staff and students as well as able to translate professional development to an online learning experience. New questions are being raised regarding the leadership style and practices that a virtual school administrator would need to implement and maintain a successful school environment. With the growth of online learning, there is a need to address leadership within this environment. As Ross (2010) indicates, "The administration of online education may be radically different compared to what we as educational professionals are attuned to, or it may be an electronic mirror of today's schools" (p. 1). Before addressing the practice and skills of a school leader, Bentley (2011) researched leadership style. Knowledge of leadership style could then lay the groundwork for further research into the relationship or impact on teacher performance or

student outcomes. The purpose of this study is to first look at the leadership style of school administrators and the relationship it could have with selected demographic variables.

Research Questions

Research question 1: To what degree do school administrators perceive their leadership style as transactional, transformational, or other?

Research question 2: Is there a relationship between school administrators' self-perceived leadership style in a virtual setting and selected demographic variables?

    a. What is the relationship between school administrators' years of experience in brick and mortar setting and self-perceived leadership style?

    b. What is the relationship between school demographics (U.S. region and school type) and self-perceived leadership style?

    c. What is the relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style?

    d. What is the relationship between the size of the school and self-perceived leadership style?

    e. What is the relationship between the gender of an administrator and self-perceived leadership style?

    f. What is the relationship between the age of an administrator and self-perceived leadership style?

Limitations

The following factors can affect the study and present some limitations. Virtual school leadership is a newer area of study and still somewhat of a phenomenon; therefore, research literature is limited to the past five to seven years. The second limiting factor was access to virtual school administrators. In former studies of virtual school leaders, the study groups were generally located within a close geographic area. In this study, leaders were spread across the United States and therefore required flexibility of the researcher in obtaining information via email survey. This leads to the third limitation of time. Due to the location of the participants across the United States, flexibility in time was needed to accommodate scheduling and differences in time zones should additional follow up be necessary.

Delimitations

The first delimitation to the study was the number of participants in the study. This was a purposive sample due to accessibility and time of school year. During the fall of 2016, southern region schools were on fall break and automatic email responses alerted the researcher to a weeklong leadership meeting that required some administrators to be away from daily access to work emails. Another delimitation was that the schools participating in the study were supported or employed by the same for-profit educational organization, K12, Inc., due to accessibility and corporate legalities that included that the researcher was working within the same organization at the same time as the participants. Employee contracts did not allow contact with other organizations that offer similar services. A third delimitation was the exclusion of the traditional homeschool network. The focus of the study involved schools that employed licensed and trained

teachers versus a homeschool network that did not require parents to hold licensure to teach their students.

Significance of the Study

School leadership incorporates many aspects of leadership skills, styles, education, and experiences. As a result, new perspectives on what it means to lead a school have emerged (Catano & Stronge, 2006). Leaders are located, not only in brick and mortar buildings, but also within online schools. Online academies were launched in local school districts in the late 1990s but soon grew to schools supported by for-profit companies across the United States (Watson, Pape, Murin, Gemin, & Vashaw, 2015). The increased responsibilities of school leaders and the expansion of K-12 education to a virtual setting have led to the significance this study could have in the education field. "Modern leadership requires a new focus on developing leadership expertise, new perspectives on the role of leader identity, and the development of adaptive leadership capacity" (McCleskey, 2014, p. 125). The research involving online school administrators could impact school leadership training programs, professional development, and state evaluation of principal performance.

This researcher attempted to identify who online school administrators are and how they lead. Previous studies on virtual schools, such as Quilici's (2011) focused on leaders in one state and one type of school (high school). This study expanded on the demographics of Quilici's (2011) study in the following ways: a larger sample from a broader geographic area was used, the type of schools included charter and district run, and the grade spans included kindergarten through twelfth grade. Another study was published in Jefferis (2015), focused on the role of the principal in the cyber school setting in Pennsylvania. The 20 participants had less than two years'

experience in leadership but most had taught within a virtual setting. This researcher modified a study conducted by Kathlene L. Bentley (Van Wart, 2013b) at the University of South Florida. The purpose of Bentley's study was to determine principals' self-perception of their leadership style in an era of accountability. The participants of her study were limited to three school districts in Florida. In her recommendations for future research, Bentley (2011) suggested replication to examine the leadership style versus years of administrative experience, gender, and school demographics. Those variables have been added to this study as well as including multiple states in a virtual school setting.

Definition of Terms

Some terms need to be defined for the purpose of this study.

Academic Administrators: K12, Inc. term for instructional leaders equivalent to assistant
> principals or principals ("K12: Job Openings at K12," n.d.)

Active management-by-exception (Transactional leadership style): focuses on monitoring task
> execution for any problems that might arise and correcting those problems to maintain
> current performance levels (B. J. Avolio & Bass, 2004)

Asynchronous learning: communication exchanges, which occur in elapsed time between two
> or more people. Examples are email, online discussion forums, message boards, blogs,
> podcasts, etc. (iNACOL, 2011)

B&M/brick and mortar: refers to traditional school or traditional school building, as contrasted
> with an online school (iNACOL, 2011)

Charisma/Inspirational (Transformational leadership style): provides followers with a clear

      sense of purpose that is energizing; a role model for ethical conduct which builds

      identification with the leader and his/her articulated vision (B. J. Avolio & Bass, 2004)

Blended learning: an education program in which a student learns in part online and in part in a

      supervised brick and mortar location outside the home (Watson et al., 2015)

Contingent reward (Transactional leadership style): clarifies what is expected from followers

      and what they will receive if they meet expected levels of performance (B. J. Avolio &

      Bass, 2004)

Distance education: general term for any type of educational activity in which the participants

      are at a distance from each other—in other words, are separated in space. They may or

      may not be separated in time (asynchronous vs. synchronous) (iNACOL, 2011)

Head of School: K12, Inc. term for leader of a virtual school; equivalent to district

      superintendent ("K12: Job Openings at K12," n.d.)

Individual consideration (Transformational leadership style): focuses on understanding the

      needs of each follower and works continuously to get them to develop to their full

      potential (B. J. Avolio & Bass, 2004)

Intellectual stimulation (Transformational leadership style): gets followers to question the tried

      and true ways of solving problems; encourages them to question the methods they use to

      improve them (B. J. Avolio & Bass, 2004)

Online learning: education in which instruction and content are delivered primarily over the

      Internet. Used interchangeably with virtual learning, cyber learning, e-learning

      (iNACOL, 2011)

Passive avoidant (Laissez-faire leadership style): tends to react only after problems have

become serious to take corrective action and may avoid making any decisions at all (B. J.

Avolio & Bass, 2004)

State virtual school: created by legislation or by a state-level agency, employ staff, and receive

state funding for the purpose of providing instruction across the state (Watson et al.,

2015)

Synchronous learning: online learning in which the participants interact at the same time and in

the same space (iNACOL, 2011)

CHAPTER II

REVIEW OF LITERATURE

A broad scan of literature was conducted to describe the emergence and growth of virtual schooling. The growth of online learning, as well as the history of school leadership, lay the foundation for this study. This research also raises discussion of learning versus schooling. Leadership theories lay the framework for the study of leadership in virtual schools. Additionally, this review of literature explores leadership standards that could impact leadership style and practice within the virtual learning environment.

Virtual Learning

State legislatures across the United States began passing education bills that supported the expansion of virtual learning (Miron et al., 2013). The 2010 report by the U.S. Department of Education describes a model of learning that is engaging and empowering ("National Education Technology Plan 2010 | U.S. Department of Education,"). Technology allows students as young as five years old access to resources and learning communities regardless of the time of day. A 2016 report discusses the shift from whether technology should be used to how it can be used in learning ("National Education Technology Plan 2016 : US Department of Education," 2016). The plan does affirm progress made in the last five years in educational technology, but also confirms there is still work to do. Students now have some choice at pacing learning, there is improved software that adapts and individualizes to learners, and technology costs have decreased ("National Education Technology Plan 2016 : US Department of Education," 2016).

At the same time, some schools still lack access to technology. Research on effectiveness of

technology programs is limited and a divide exists on the use of technology for learning versus

entertainment (Atkins et al., 2010).

Virtual learning programs seized an opportunity to expand K-12 learning beyond the

traditional classroom. In 1997, a state funded online program, called the Florida Virtual School,

was founded and is still fully operational approximately 20 years later. Students and employees

were full-time and part-time participants. Their goals were to offer high-needs courses, advanced

classes to areas that were lacking, and to ease overcrowding in many school districts (Paige et

al., 2004). The Sloan Consortium issued a report in 2007 regarding virtual learning. A sample of

10,000 randomly selected school districts nationwide were sent an invitation and eight hundred

and sixty-seven responded. Responding school districts reported that 75% had one or more

students enrolled in fully online or blended courses (Paige et al., 2004). "In 2011-12, the largest

for-profit operator of virtual schools, K12 Inc., alone enrolled 77,000 students" (Miron et al.,

2013, p. ii). State virtual schools that run part-time as part of charter or local school districts,

have served 742,728 students in SY 2012-13 (Watson et al., 2013). Innovations are changing the

field of education:

> They are being driven by the new realities of the digital marketplace, the rapid
> development of 'virtual' schools, and the enthusiasm of an amazing generation of
> students weaned on the marvels of technology who are literally forcing our schools to
> adapt and change in ways never before imagined. (Watson et al., 2013, p. 21)

A growing number of students include those who are homebound due to health

challenges, students at risk of dropping out, athletes who have scheduling conflicts, and students

who have experienced safety challenges. According to the National Alliance research,

approximately 180,000 students attended a full-time virtual school in 23 states and Washington,

D.C (Schools, 2016). School leaders seek to address this growing population as the leadership

requirements and expectations of the education system continue to change. The Center for American Progress highlighted a few surveys and studies done in 2011 and 2012 of principals and their job responsibilities. The principals reported an increase in expectations and complexity from the previous five years (Alvoid & Black Jr, 2014).

<center>History of Educational Leadership in the United States</center>

The growth in the number of principals in the mid-1900s led to an increase in the number of higher education institutions that were preparing school leaders. Approximately 125 institutions had active programs by the end of World War II (Murphy, 1998). The economic boom and focus on productivity during and after both World Wars impacted the education and training of school leaders. Superintendents, principals and teachers received the same education until the influence and acceptance of scientific business and management ideals. School administration programs became impacted and influenced by the business world (Murphy, 1998). School leaders were challenged to be responsible for more than just instruction. Principals had to hire, fire, and evaluate staff, find social services for students, supervise budgets and transportation (Halverson, Kelley, & Shaw, 2014).

Principals also became community personas. A 2015 study of three Moroccan urban schools asked three principals what it meant to be a principal in their school. The answers reflected three themes: " (1) the importance of a positive school reputation; (2) the importance of fostering communal bonds and participatory decision-making and (3) the high cost of excessive bureaucracy" (Elmeski, 2015, p. 6). Schools were, and still are, a significant part of local communities. As the educational system became more embedded in society, the school leaders became more involved in political, economic, and cultural change (Huber, 2004). Traditionally,

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school leaders' involvement with the community revolved around parent-teacher conferences, open houses, and visits from community partners. Principals now reach out to political figures and local community members, even hosting and organizing community events (Green, 2015). It has become necessary for principals to step out of the comfort zone of their schools to interact with non-educators in order to increase the leverage for change within their schools (Fullan, 2003). During times of crisis, the school became the center of activities (Pierce, 1935). The roles and expectations of school leaders changed as the expectations of schools changed. In the 1920s and 1930s, principals were still seen as somewhat spiritual and religious leaders despite working in a public-school setting. By World War II, principals' duties became more of managers and supervisors who mimicked a democratic leader (Beck, 1993). During the 1960s and 1970s, there were more federal dollars being distributed to schools. The management of federally funded programs and initiatives was added to the principal's plate of responsibilities. Principals were competing for families and community support while risking a loss of funding if scores did not improve (Kafka, 2009).

The expectations and skills of a principal were not only based in instruction, but also encompassed a skillset to navigate businesses, community, and economics. Management and instructional responsibilities determined whether a principal led as manager, visionary, or instructional specialist (Catano & Stronge, 2006). Context and concepts of leadership were constantly changing due to the varying demands in educational settings. In turn, the definition and skillset for leadership were contextual. The meaning depends on whether it is to be prescribed or described (Van Wart, 2013a). This researcher has found that literature has focused on describing how leadership looks versus the prescription of leadership. This could be due to the fluidity and flexibility of leadership in various settings.

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While assumed as a means of bringing about education reform, and hence a key leverage point for those beyond schooling to shape education it is devoid of any particular context and is simply out there. This 'out there-ness' is a substantial issue in the scholarship of educational administration as it goes with an underlying assumption that leadership, an idealization waiting to be discovered, can be captured, deconstructed, and then ultimately replicated elsewhere. (Eacott, 2013, p. 178)

Educational Leadership in a Virtual Setting

A descriptive study was published in 2010 to examine if instructional supervision practices performed in a traditional brick and mortar setting can transfer to a virtual setting. Gregory Charles Farley (2010) sought to describe performance criteria and supervisory practices needed to ensure a productive virtual school environment. An article, by Gene Glass (2009), published in *School Administrator* speaks of the challenges facing school leadership, i.e. principals and superintendents. His report on virtual education stated that educational accreditation agencies or government agencies must avoid abuses of proprietary schools and be more vigorous in addressing online programs that lead to a high school diploma (Gene V Glass, 2009).

Trudy A. Salberry (2010) a professor of educational leadership in Kansas, also raised some questions concerning leadership in K-12 virtual schools as it related to seven accreditation standards. Patrick, head of the International Association of K-12 Online Learning (iNACOL), states that online learning is butting up against old educational policies (Beem, 2010). School leadership contends with: seat time attendance, credit, teacher quality, and certification. In brick and mortar schools, there are staff members who take care of attendance and conduct home visits. Teacher instructional support and instructional quality could be impacted. "Virtual school leaders need to be aware that many teachers are transitioning from traditional classrooms to

virtual teaching environments and may undergo resistance due to shifting workloads and a lack of technical and pedagogical assistance" (Richardson, LaFrance, & Beck, 2015, p. 19).

Journal articles and studies have emerged over the past decade regarding leadership in a full-time virtual school. In 2008, Rachel Brown presented her study on high school virtual principals. At that time, she was presented with the difficulty in finding relative research on this topic. Brown could not locate who the leaders were, how they became leaders, their previous experience, nor the path taken to reach virtual school leadership (Brown, 2008). In the years following this statement, researchers had begun exploring the thoughts, ideas, and skills of the educators who have been chosen to lead virtual schools. A 2014 study sought to examine if virtual K-12 leadership was the same as traditional, brick & mortar K-12 leadership (Tucker, 2014). Tucker found a minimal amount of literature during his course of study that addressed leadership in the virtual K-12 environment. Expanding literature on virtual school leadership was on the way. That same year, Stone (2014) presented a dissertation on the perceived skills and professional development needs of administrative leadership in K-12 virtual education. Sivy (2014) conducted a broader exploratory study of state-led virtual school leaders across the United States using semi-structured interviews. The participants had to meet certain criteria to participate, such as: a senior leader with at least two years of experience in a traditional school and virtual setting with a student population of at least 5000 in grades 9-12. Johnson-Lee followed with a study through the University of Pennsylvania. She discussed the experience, perceptions, and beliefs related to instructional leadership in a K-12 cyber charter school (Johnson-Lee, 2015). Participants, principals and assistant principals, completed a multitude of data collection items that included: surveys, interviews, reflection journals, discussion boards, and school artifacts.

A study on leadership in higher education distance learning had some concepts and thoughts that could apply to K-12 distance learning. Distance education leadership required a level of understanding that includes diffusion and adoption of technology innovations and how change within them is managed (Nworie, 2012). The author also discussed how the evolution led to developing policies and procedures to evaluate the roles and the environment. Quilici (2011) conducted a study as part of her dissertation for the University of Idaho. She explored the leadership skills for virtual principals within the framework of the Interstate School Leaders Licensure Consortium (ISLLC) standards. With the numbers of students utilizing some form of online learning, accountability of the programs lands at the doorstep of the principal. "With increased accountability for all administrators through governmental programs and increased scrutiny of online education during an economic crisis, how principals meet this new responsibility will determine the online school's viability in terms of teacher performance and student learning" (Quilici & Joki, 2011, p. 153). The ISLLC standards have been adopted by 43 states, but with the rise of virtual schools, the standards need to be translated for this new environment.

The International Society for Technology in Education (ISTE) created the National Educational Technology Standards and Performance Indicators for Administrators in 2008 and republished it in 2014. The standards have five strands that guide a virtual school administrator in leading their school. The strands include: visionary leadership, digital age learning and culture, professional practice, systemic improvement, and digital citizenship. The first strand of visionary leadership encompasses the leader inspiring and engaging all stakeholders with a shared vision. The second strand, digital age learning culture, expects a leader to promote and provide learning through technology. In the third strand of professional practice, a leader is to

promote a collaborative learning environment for staff. Systematic improvement assesses how leadership establishes and maintains structure. The final strand, digital citizenship, seeks for leadership to ensure learners are responsible with use of digital tools and resources (Education, 2014).

Learning versus Schooling

Technology has added another layer to the discussion and debate between learning and schooling. The discussion around digital technology's impact on education has changed from predictions to the end of schooling to how e-learning questions formal processes of learning (Voogt, Erstad, Dede, & Mishra, 2013). Learning defined by Merriam-Webster is the activity or process of gaining knowledge or skill by studying, practicing, being taught, or experiencing something ("Learning," 2016). The definition does not confine learning within a school, yet the burden of responsibility lies there.

> Still today's education systems have as their challenge to relate the sociocultural developments of the knowledge society and its technological innovations to requirements with a refinement of learning and literacy as a process in- and out- of school. (Voogt et al., 2013, p. 404-5)

Schooling is defined, by Merriam-Webster, as teaching that is done in a school ("Schooling," 2016). With the emphasis on test scores and teacher accountability, some may say that the focus has been on schooling more than learning. "It is based on instruction rather than education and it is about inculcations rather than leading out. In the process, young people become schooled, rather than educated" (Hamilton & Zufiaurre, 2014, p. 56). In the late 1800s and early 1900s, the foundation of schooling in rural areas focused on reading, writing, math, citizenship and moral conduct while schooling in the urban areas was a place for children of freed slaves and factory workers to be educated by an elite business class (Waters, 2012). Formal schooling was

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established and laws established graded levels of education. Schooling took on a factory model that would produce people who had the automated skills necessary for the changing technologies (Mitra, 2014). Industry began to dictate the curriculum and learning shifted from what a student should know to be a productive citizen to what the economy and society needed in the next five or ten years. "Children were no longer the sole responsibility/possession of parents, but a resource in which the broader society had claims, and invested on its own terms" (Waters, 2012, p.52).

Education and schooling were connected by the belief that the more years a student spends in school, the more education a student acquired. In 2010, Education Initiatives did an assessment of sixth graders in India and found that only half could multiply a three-digit number by a two-digit number exactly the way it was taught (Pritchett, 2013). When they were presented a similar, yet simpler computation that showed relationship between addition and multiplication, they performed worse. "With so little learning per year, just increasing the number of years children stay in school adds very little learning" (Pritchett, 2013, p. 3). The advancement of technology has been added to schools as a means to increase learning, but that may not be proving as a means to an end. "In educationally advanced countries, educators are rightly worried about twenty-first century skills. Meanwhile, hundreds of millions of children finish schooling lacking even the basic literacy and numeracy skills of the 19th century" (Pritchett, 2013, p. 14). School leaders are assigned the task to impact student learning and academic performance.

Corry and Stella (2012) addressed frameworks for research in online education. They summarize the need to look closer at nine components that include: history, learners, teachers, materials, delivery, methodology, evaluation, administration, and international. The rise in

interest and enrollment in distance education warrants a change in school administration and policy (Corry & Stella, 2012). Despite the nine components addressing the need for future research in administration in virtual school, Corry and Stella focused on policy and accreditation while omitting any further reference to administrator training and development (2012).

<center>Educational Leadership Theories</center>

Various theories of leadership have been applied to better understand the role and behaviors of school leaders. These theories could be classified into two categories: one that is subordinate based and the other that is leadership based (Catano & Stronge, 2006). Khanin (2007) proposed that leadership theory should borrow from the fields of history, literature, organization theory, psychology, and political science. Leadership is not about the person. "Critical theorists of school administrators make the unusual (but not unheard of) argument that leadership is not actually the province of the administrator. Instead, leadership is the directive force of a group" (Howley & Howley, 2007, p. 227). The power of leadership is shared because no one person in an organization controls all resources, materials, or activities (Newstrom & Pierce, 2008). Leaders can emerge at various times depending on the situation or influence. "Certain individuals, …, find themselves adopting or being obliged to take a leadership role by virtue of the part they play in the definition of the situation " (Newstrom & Pierce, 2008, p. 22). Examination of relevant literature produced an extensive list of educational leadership theories (Richmon & Allison, 2003). For the purpose of this study, the researcher will focus on the following theories of leadership: distributive, transactional, transformational, and network systems theory.

Distributed Leadership Theory

Distributed leadership, also known as shared or democratic leadership, gained significant attention in the early part of the 21st century. Educational theorists, practitioners, and policymakers have acknowledged the high stress, crisis, and complexity of skills that fall on the shoulders of one leader that need to be distributed among others in the school (Lashway, 2002). A distributive perspective recognizes that leadership involves a group of individuals "leading" various aspects of a role and managing the tasks that are working towards a common cause (Harris, 2003). This type of leadership gives voice to multiple school staff. "That is, by de-monopolizing leadership and potentially increasing the sources and voices of influence in organizations beyond just one, distributed leadership has helped widen the span of employee and member participation" (Gronn, 2008, p. 154). Organizations have become flatter or less hierarchal. Distributed leadership acknowledges the work of everyone. Individuals contribute to the leadership practice whether they hold a leadership title or not. For distributed leadership to be effective, it must include support and mutual trust. Collaboration is the heart of this leadership type (Harris, 2003).

There are limitations with the idea of distributed leadership because different definitions and terms are used interchangeably. Some see distributed leadership as teamwork while others call it collaborative or participatory leadership (Harris & Spillane, 2008). Even within these varied applications, the focus of distributed leadership is not about who the leaders are within an organization, but how the function of "leadership" is practiced. Spillane pointed out in an earlier article that distributed leadership is also situational:

> Some educators might argue that this is merely semantics, pointing out that leadership scholars have long recognized the importance of these interactions and acknowledged that leadership typically involves more people than those at the top of the organizational hierarchy. My argument is not simply that situation is important to leadership practice,

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but that it actually constitutes leadership practice—situation defines leadership practice in interaction with leaders and followers. (Spillane, 2005, p. 145)

Gronn (2008) looked at distributed leadership in terms of decision-making and also admits the necessity to re-evaluate the term. "I raised the possibility of slightly refining current meanings of distributed leadership along with the need to better think through its relationship to two closely allied conceptual domains, power and democratic leadership in organizations" (2008, p. 155).

Laissez-Faire Leadership Theory

Another form of leadership that exists in organizations is one that could be considered a style actually lacking leadership. Laissez-faire leadership is the absence or avoidance of leadership style or direction (Anders, et al., 2014). Persons who exhibit this leadership style do not fulfill the needs of the followers. The leader avoids responsibilities and decisions, at times allowing the group to work through conflict and solve problems (Chaudhry & Javed, 2012). Laissez-faire, unlike distributed or participatory leadership, has little input from the leader and relies on the follower. This lack of leadership can lead to dissatisfied followers, low morale, and ineffectiveness (Anders et al., 2014). A leader possessing this style gives freedom to followers. He or she may give little or no feedback and wants the least amount of interaction with the team (Chaudhry & Javed, 2012).

Transactional Leadership Theory

Transactional leadership is best defined as the leader being manager of transactions or interactions (Sanders, 2003). The interactions or exchanges are not based on relationships, but on task completion. The leader identifies performance requirements as well as the rewards for completion. There is a mutually beneficial exchange that results in a task being completed as

directed by the leader and a reward given to the follower (Huber, 2004). Transactional

leadership, within a school, could create a relationship between leadership and staff that leads to

a culture of subordination. Transactional leaders could fail to garner enthusiasm and motivation

because of exchange process and inability to deviate from existing systems and procedures

(Hsiao, Lee, & Tu, 2013). Bass and Avolio (1997) identify three behavioral components of

transactional leadership: contingency reward, management by exception (active), and

management by exception (passive). Contingency reward is the exchange of a reward based on

performance or tasks completion. Management by exception is the monitoring for mistakes or

intervening only when mistakes occur. "These behavioral components created an environment in

which supervisors kept a greater distance from employees, thus creating less interaction and

intervention on the part of the leader" (Smith & Bell, 2011, p. 57).

This leadership style and theory may not lend much room for changes inside and outside

of the organization. Transactional leadership has become more difficult to institute due to the

changing landscape of organizations. "The fact that leaders lead flatter organizations is an

example of how changing organizations subtly but profoundly affect leadership" (Van Wart,

2013b, p. 555). However, transactional leadership theory could still have a place in leadership

behavior and practice. Critics of this style of leadership can yet see the benefits in situations

where the reward is substantial enough to garner strong motivation for success(Vann, Coleman,

& Simpson, 2014). Transformational leaders occasionally may revert to transactional behaviors

as needed.

Transformational Leadership Theory

The idea of transformational leadership arose as leadership emphasized the importance of leader-follower relationships. "Transformational leadership motivates followers to do more than they are originally expected and often even more than they thought possible, resulting in extra effort and greater productivity" (J. L. Whittington, Coker, Goodwin, Ickes, & Murray, 2009, p. 1863). They empower employees to perform better. Leaders with this style are characterized as charismatic, visionary, and passionate (Vann et al., 2014). Khanin (2007) noted that leaders had to choose between displaying transformational or transactional leadership practices. In contrast, though he uses Burns' theory as a foundation, Bass (Moolenaar, Daly, & Sleegers, 2010, p. 628) takes it a step further by examining "how to make transactional leadership more effective by imbuing it with some transformational ingredients—providing more individualized consideration, intellectual stimulation, and emotional excitement to followers." It's not just about the work, but the worker. Cultivating relationships are important to transformational leaders. They focus on getting commitment and cooperation of workers and not just on job structure and task (Khanin, 2007). Leaders utilize their influence to achieve goals within the work place. Bass and Avolio (1997) identify five behavioral components of transformational leadership: idealized influence (attributes), idealized influence (behavior), inspirational motivation, intellectual stimulation, and individualized consideration. Transformational leaders are about empowering employees in organizational change, but they are also focused on the results that are a product of transactional leadership. What was previously observed as contrary and contradictory, transactional and transformational leadership have become complementary.

In order to advance our understanding of public sector leadership, Van Wart argues, public administration scholars should begin to develop and test comprehensive leadership models that integrate transactional and transformational elements and that account for various situational variables inherent in the public context. (Huber, 2004, p. 672)

Whittington, et al. (2009) also supported this idea by highlighting Avolio's *full-range model of leadership.* Leaders are effective when they implement a full range of leadership. A full range includes the following factors: charisma, inspirational motivation, intellectual stimulation, and individualized consideration (McCarley, Peters, & Decman, 2016). This framework encompasses transformational and transactional characteristics of leadership. Transactional leadership is the foundation on which transformational leadership is built. An extension of transactional and transformational leadership has led into what Stone-Johnson (2014) called responsible leadership. Responsible leadership includes being a visionary who is a forward thinker, a servant who is aligned with other stakeholders, a steward who defends resources, and a citizen who is committed to the community (Stone-Johnson, 2014). The many facets of leadership connect and a leader to multiple roles inside and outside of a school.

Network and Systems Theory

In using network theory in educational leadership, researchers must look past just relational connections, but also how network theory relates to power, action, and cognition (Hadfield & Jopling, 2012). Network theory brings together a number of thoughts based on the interactions of leaders and followers connected within a complex organization or system.

A network consists of a set of actors or nodes along with a set of ties of a specified type (such as friendship) that link them. The ties interconnect through shared end points to form paths that indirectly link nodes that are not directly tied. The pattern of ties in a network yields a particular structure, and nodes occupy positions within this structure. (Borgatti & Halgin, 2011, p. 2)

Moliterno and Mahoney (2011) described the analysis of social network as one that looks at the actors (organizations, groups, individuals, etc.) and how they are tied by social relationships that could involve actions such as advice giving or business partnerships. Leadership is formed around the exchange, brokering, and facilitation of various networks and individuals (Hadfield & Jopling, 2012). Within a school, the principal would create official networks that consist of administrative staff, department chairs, grade level leaders, etc. Teachers can also create networks in schools, intentionally and unintentionally. Individuals in the network can shift from one group to another depending on need and identity (i.e. novice and veteran teachers, subject specific departments, cultural backgrounds, etc.). "School leadership has to be qualified to understand the complexity of the system along with the different individuals and groups involved as well as the interactive and collaborative relationships between them" (Huber, 2004, p. 679).

Leadership is not just top-down or hierarchal. Within a network, membership is influenced by individual and collective purpose, personal and professional identity, and mutual knowledge (Moliterno & Mahony, 2011). Delegation and collaboration are significant factors in network and systems theory. In a study of school leadership, "delegation by the principal did not amount to abdication. Even when there was a fairly wide distribution of leadership, the principal was able (and needed to) keep a finger on the pulse of each of the seven core areas" (Portin et al., 2003, p. 35). Leadership and/or power in a network are still significant as there are many connection points (nodes) in each network that requires someone to ensure the work is completed. Each point's power is specific to ensure goals are met, as well as maintain the influence or attraction of an audience (Hadfield & Jopling, 2012). The school leader is the central connection in a network and therefore the greater influence. Meta-analysis by Balkundi

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and Harrison (2006) indicated that leaders who occupy a central position in the group's social network tended to have a greater impact on group performance than groups with less central leaders.

<center>Educational Leadership Standards</center>

As the option for virtual schooling expands, there are efforts to develop standards in this field from content to instruction. Berge and Clark (2006) inform us that the National Education Association published the Guide to Online High School Courses, and the Southern Regional Education Board published the Standards for Quality Online Courses in 2006. A few years later, the North American Council for Online Learning (Pape & Wicks, 2009) published the National Standards of Quality Online Courses and one for online teaching. As there is an increase in teacher supervision and evaluation, similar attention is drawn to academic supervisors. "Assessing principal effectiveness has been an important element of school improvement for more than two decades" (Cravens et al., 2013, p. 125). This statement could address all school settings.

Schools do utilize business models to increase leadership effectiveness. Garrett (2012), of Capella University, presented a dissertation about managers in a virtual setting. Garrett noted that it was important to know the factors and traits virtual managers consider critical to their success. Self-efficacy and motivation were key traits for a virtual manager. What becomes challenging is the ability to monitor employees, flexibility, social and intellectual isolation, and attitude (Balkundi & Harrison, 2006). Researchers are now beginning to seek out best practices for effective leaders. Best practices are reflected in multiple leadership and technology standards, such as the ISTEs National Educational Technology Standards (NETS), iNACOL's standards for

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Quality Programs, and Interstate School Leadership Consortium Standards (LaFrance & Beck, 2014).

The Interstate School Leaders Licensure Consortium (ISLLC) standards were implemented in 1996 and revised in 2008 (Consortium, 2008). The majority of states in the U.S. have adopted these standards or some variation. School leadership programs in these states have worked to align themselves to the standards to ensure that leaders are prepared when the program is completed. The ISLLC standards are incorporated throughout leadership policy. The standards impact program approval, leadership assessment, licensure, and induction requirements (Consortium, 2008). The ISLLC standards are as follows:

- Standard 1: An education leader promotes the success of every student by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by all stakeholders.
- Standard 2: An education leader promotes the success of every student by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.
- Standard 3: An education leader promotes the success of every student by ensuring management of the organization, operation, and resources for a safe, efficient, and effective learning environment.
- Standard 4: An education leader promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources.
- Standard 5: An education leader promotes the success of every student by acting with integrity, fairness, and in an ethical manner.
- Standard 6: An education leader promotes the success of every student by understanding, responding to, and influencing the political, social, economic, legal, and cultural context (Consortium, 2008).

The standards for leadership are not about task completion and deadline submissions, but they move beyond a skillset to educational impact. The standards offer insight and evaluation beyond leading and managing people (Roach, Smith, & Boutin, 2011). The daily, weekly, and monthly routines of a school principal cannot be minimized to a precise formula due to the many variables (students, teachers, community members, ethics, politics, etc.) as noted in the standards

above. The focus of school leadership roles also recognizes distributive leadership and

collaboration that can build capacity (Halverson et al., 2014). It is not just who the leader is, but

how they set the tone for the educational environment to include all aspects of the school.

"Today, education leaders must not only manage school finances, keep buses running on time,

and making hiring decisions, but they must also be instructional leaders, data analysts,

community relations officers, and change agents" (Consortium, 2008, p. 14-15). Knuth and

Banks (2006) present an Essential Leadership Model based on the ISLLC standards. They state,

"in fact, all six ISLLC standards are presented as essential and overlapping" (Knuth, 2006, p. 6).

In 2000, the International Association for K-12 Online Learning (iNaCOL), sought to

ensure quality online instruction. It focused on policy making, research, and standards for all

parties involved. The organization published a document on promising practices in managing

online learning. In the introduction, the following were acknowledged for school leaders:

> When they start an online school, however, they quickly confront all the challenges of
> managing a high-quality, successful online program: creating online courses; finding,
> hiring, and managing teachers; supporting students; managing technology; and evaluating
> their programs to determine if they are successful. (Watson & Gemin, 2009, p. 3).

Years later, iNaCOL examined policy changes that allowed more students to choose

online courses, created opportunities for blended schools, and the impact of Common

Core standards on expectations of virtual schools (Worthen & Patrick, 2014). Managing

the complex issues of virtual schools and online administration requires effective

leadership style and skills (Watson & Gemin, 2009).

<center>Research in Virtual School Leadership</center>

Studies involving leadership within a virtual setting began emerging in 2008. One study

did not focus on the skills of the leader, but more on the leaders' thoughts on the emergence of

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online schooling (Brown, 2008). Brown's study looked at virtual school learning through the eyes of the leader. Basic characteristics of the schools and leadership skills were presented to provide a framework for the study. Their roles and skills tied into their beliefs about virtual schooling.

The Regional Educational Library (REL) Southeast published a reference desk request for an answer to the following question: What research has been done on effective school leadership for virtual school environments? (Abrego, 2010, p. 9). Databases searched were ERIC, JSTOR, Google Scholar, Institute of Education Sciences and What Works Clearinghouse. The results reflected a lack of rigorous research and some related resources significant to the topic ("Effective school leadership in virtual schools," 2014). However, a 2011 study focused on the following question: "Do the changing demands of environment, personnel, and students in online education call for a different skill set from an instructional leader?" (Quilici, 2011, p.3). Her focus was narrowed to examining how virtual principals served as instructional leaders in Idaho. The outcome was to show how online leadership differs from traditional B&M leadership. They had full-time jobs that could affect their skills and abilities in working in the online environment (Quilici, 2011).

> Thus, as the boundaries and distinctions between traditional and so-called non-traditional education are blurring, there is a need for leaders to be able to function effectively in both contexts, and because many distance educators are among the few who have already moved within these overlapping circles, they are well positioned to play key roles. ("Effective school leadership in virtual schools," 2014)

Beaudoin (2003) explored the significance of education leadership online, but does not detail what it should look like. Another dissertation study was conducted by Holly Briel (2011) that focused on the implementation of a new virtual school in the state of Delaware. Her paper

was designed to better understand the success and challenges of the Delaware virtual School in order to develop recommendations for improvement in student completion rate (Briel, 2011).

Barbara Frey, a principal for a virtual academy in Colorado, gave her perspective on what leadership online could look like (Frey, 2005). She contributed an article for T.H.E. Journal back in 2005. *A Virtual School Principal's To-Do List* provides six items that are important to the success of the school. She speculated that they might look different but still hold some similarities to the brick and mortar. The "To-Do" list contains items such as: training teachers, partnering teachers and parents, collaboration, focusing on achievement versus discipline, knowing the whole family, and spreading the vision (Frey, 2005). In the end, Frey suggested that principals try to work at a virtual school so that they can share their expertise while also broadening their experience. Quilici's investigation of online school principals expanded on the required skills to perform the duties of a school leader. She examined instructional leadership as well as pre-service preparation within an online environment and to evaluate if a different skill set is required for online principals (Quilici & Joki, 2011).

The U.S. Department of Education outlines seven action steps and recommendations that would support education's advancement and use of technology in the learning environment. Two items directly support the importance of this study. The first recommendation is to strengthen leadership. "For public education to benefit from the rapidly evolving development of information and communication technology, leaders at every level – school, district, and state – must not only supervise, but provide informed, creative and ultimately transformative leadership for systematic change" (Paige et al., 2004, p. 39). The highlight of this first recommendation points to the leadership style. Knowledge of leadership style is essential to advancement in the learning environment. The second item relevant to this study is to support virtual schools and e-

learning: "encourage the use of e-learning options to meet No Child Left Behind (Bush, 2001) requirements for highly qualified teachers, supplemental services and parental choice" (Archambault, Crippen, & Lukemeyer, 2007, p. 8). Expanding on the virtual school leadership of Quilici's study and using the research method of Bentley's study could allow this researcher to further examine leadership style on a national level.

Summary

The literature that informs this study is grounded in the foundations of leadership, leadership theories, and performance standards. Prior studies have shown the impact of leadership on school outcomes and teacher performance. Leadership studies have examined the style of a leader within a traditional, brick and mortar setting. The concepts and studies lay the groundwork for expansion of research into the virtual school setting that has evolved and grown in the past fifteen years.

CHAPTER III

GENERAL METHODOLOGY

Purpose of the Study

The purpose of this study was to examine the self-perceived leadership style of full time virtual school administrators. The group of participants included heads of schools, academic administrators, and individuals with director titles. These titles within a virtual school have similar role expectations (teacher supervision and student accountability) as principals and assistant principals in brick and mortar schools. "The Academic Administrator/Principal directs and coordinates educational, administrative and counseling activities by performing the following duties personally or through subordinate supervisors" ("K12: Job Openings at K12," n.d.). Once a school leader is in a position, he or she looks at applying his or her studies and experience to current schools. The setting of the school impacted how they use their knowledge and training. Expectations and skill sets for public school principals could vary among geographic location, grade level, size of school, and size of school district or county (Hess, 2003). Considerations, questions, and concerns could now arise when there is not a physical building, the school spans kindergarten through twelfth grade, and students cover all geographic settings of a particular state. These considerations and questions are what stimulated this researcher's decision to pursue a study of virtual school leaders. Specifically, the study described the leaders, the schools they lead, and the leadership styles implemented to execute and maintain their roles and responsibilities.

Ethical Considerations

Participants in this study received information regarding the purpose and details of this research. The participants were informed of the process followed by the researcher as determined by the Institutional Review Board at The University of Tennessee, Chattanooga. Participants had the right to decline participation or withdraw once they research had started. Each participant responded with a degree of confidentiality to the instrument to eliminate the potential for conflict of interest from the researcher. The survey did not ask for specific leaders' names or names of schools. Information was given about how the data would be used and secured with confidentiality with Qualtrics and the Statistical Package for the Social Sciences (SPSS).

Population and Sample

Information regarding virtual school demographics was accessed through public websites. The sample was representative of leaders serving full-time in K12, Inc. virtual schools across the United States. This included, but was not limited to: Arkansas, Florida, Georgia, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Washington and Virginia. The total population ranged from 75-90 elementary, middle, and high school leaders. Access to the principals was obtained with emailed permission from their respective regional directors and the assurance of school and principal confidentiality. Then, an emailed letter was sent to each principal outlining the research work and a request for their participation. A link to the demographic and leadership style survey was included at the bottom of the email (see Appendix A). It was noted that even though all the schools were connected to the same education corporation, some are established as stand-alone state charters and others are schools within a local district.

Research Questions

Research question 1: To what degree do school administrators perceive their leadership style as transactional, transformational, or other?

Research question 2: Is there a relationship between school administrators' self-perceived leadership style in a virtual setting and selected demographic variables?

a. What is the relationship between school administrators' years of experience in brick and mortar setting and self-perceived leadership style?

b. What is the relationship between school demographics (U.S. region and school type) and self-perceived leadership style?

c. What is the relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style?

d. What is the relationship between the size of the school and self-perceived leadership style?

e. What is the relationship between the gender of an administrator and self-perceived leadership style?

f. What is the relationship between the age of an administrator and self-perceived leadership style?

Overview of the Research Design

This descriptive, cross-sectional, quantitative research was designed to identify information from school administrators related to their leadership styles. The researcher collected and analyzed data that illustrate leadership style trends among virtual school leaders. The study

included the background, training, and individual principal leadership characteristics. This is essential in exploring and understanding the leadership styles warranted and utilized in a virtual school environment.

Data were collected from virtual school principals from within K12, Inc. The data were used to identify self-perceived styles of principals at a prescribed period of time.

Instrumentation

The first part of the survey (see Appendix B) included demographic and biographical data on full-time virtual school leaders. Items addressed were:

- Gender

- Age

- Total years of experience in education (teaching and/or leadership)

- Location of school's central operations (state)

- Size and type of virtual school

- Years in virtual setting

- Years in brick and mortar setting

The biographical and geographical data were used to investigate relationships between gender, experience, and schools level. Geographic locations were defined using United States Census Bureau Regions and Divisions (Bureau, 2010).

The second section of the survey assessed the leadership style of virtual school leaders. The instrument used is called the Multifactor Leadership Questionnaire (MLQ). Bernard M Bass and Bruce J. Avolio authored the MLQ, which is published by MindGarden (1997). The Multifactor Leadership Questionnaire has a group of forms for the leader (self-rater) and for

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others who work with the leader. This study looked at self-perceived leadership style and used the leader form only. The MLQ Self-Rater Only Form contains 45 items with nine leadership components. A five point Likert-type scale was used that ranges from 0= not at all to 4 = frequently, if not always. The instrument administration manual states that the questionnaire takes approximately 15 minutes to complete. "The MLQ represents an effort […] to capture a broader range of leadership behaviors, from Laissez-Faire to Idealized leadership, while also differentiating ineffective from effective leaders" (B. J. Avolio & Bass, 2004, p. 4). The instrument is copyrighted and commercially available. The survey contained nine leadership scales and three possible leadership outcomes. Permission to use the MLQ was granted on February 2, 2016 (Appendix C).

Reliability and Validity of the Instrument

The Multifactor Leadership Questionnaire had been tested for reliability and validity. According to Avolio and Bass (1997):

> The latest version of the MLQ, Form 5X, has been used in nearly 300 research programs, doctoral dissertations and masters theses around the globe in the nearly ten years between 1995 and 2004. This current version of the MLQ has also been translated into Spanish, Portuguese, Italian, French, German, Norwegian, Swedish, Hebrew, Turkish, Arabic, Chinese, Thai, and Korean for use in various assessment and training research projects. (p. 39)

Antonakis & Sivasubramaniam (2003) examined the use of MLQ by researchers and found that the revised nine-factor model best represented the factor structure that underlies the instrument. Their results demonstrated how the MLQ could represent the full-range model of leadership.

The MLQ was distributed online due to the distance of the participants from the researcher. The use of online surveys has surged because of limited barriers of time and space. "Online surveys are generally considered cheaper, faster, and more convenient. In addition, they

also have a potential for international reach, allow for elaborate skip-logic, and eliminate errors

in data-entry" (Antonakis, Avolio, & Sivasubramaniam, 2003, p. 283). This researcher used

Qualtrics to distribute the MLQ and collect data. This would cut down on the costs associated

with postal mailings. "Paper surveys tend to be costly, even when using a relatively small

sample, and the costs of a traditional large-scale survey using mailed questionnaires can be

enormous" (Wiersma, 2013, p. 1). A challenge and limitation to administering online surveys

was the response rate. Despite the efforts to increase return, online surveys are less likely to

achieve high response rates compared to those administered on paper (Wright, 2005). The

variables that affect response rate can be time, email spam folders, self-selection, multiple

submissions, or firewalls. Nulty (2008) presented some strategies to increase response rates:

provide clickable survey URL in an email, provide frequent reminders, assure participants that

their responses will be used, and increase duration of survey availability.

An additional factor affecting response time and rate was the survey sponsorship.

Edwards, Dillman, and Smith (2014) investigated this notion. They conducted an experiment in

2012 in which they sent out two questionnaires to random addresses in Washington and

Nebraska. Washington State University and the University of Nebraska-Lincoln sponsored the

questionnaires. The results showed that in-state sponsored surveys obtained a higher response

rate than those from out of state. A result of their findings also suggests:

> That when conducting university sponsored survey research in distant states, researchers
> explain to sample members why they are being contacted by an out of state researcher.
> This move could potentially ease respondent concerns and improve out of state response.
> (p. 749)

This researcher sought out participants from across the United States. The explanation

mentioned in the above quote may not be necessary because the participants work within the

same educational organization as the researcher. This fact could show relatability and

connectivity to the participants. "One potential threat to validity that researchers must be careful to watch out for is called researcher bias" (Wright, 2005). This researcher was intentional in only using the University of Tennessee, Chattanooga email when responding in written form and to refrain from any comments regarding personal experience with the online instructional environment.

Procedures

The process of collecting data followed a series of steps. The first required approval to access the emails of virtual school administrators. Permission to proceed with research was approved by the regional vice presidents of academics of K12, Inc. Copies of the questionnaire, survey, and participant request letter were submitted for their review by K12, Inc. southern regional legal counsel. In turn, the researcher was then directed to the legal department to obtain final approval. The Assistant General Counsel emailed a research agreement form that was filled out by this researcher and submitted to the K12 contracts department. The Executive Vice President of School Management and Services sent final approval on January 31, 2016. An extension was obtained and granted on August 24, 2016 (see Appendix D).

An application for research on human subjects was submitted to the Institutional Review Board (IRB) at The University of Tennessee at Chattanooga. The email invitation for the study was sent to school administrators of virtual schools across the United States. A description and purpose of the study was included in the email along with the link to the questionnaires. The questionnaire contained the demographic survey and the MLQ items (see Appendix B). Participants were assured of confidentiality. The participants had 14 days to complete the

questionnaire. A reminder email was sent at 3 days, 5 days and 10 days. A final email was sent at the end of 14 days to thank the participants.

Statistical Analysis

The survey and questionnaire data were gathered and tallied using Qualtrics. Qualtrics is a web based survey tool that helps capture survey results. The data from the demographic items were used to present data about the leaders regarding age, level of education, experience, size of schools, etc. The MLQ contains 45 questions that measure transformational leadership factors, transactional leadership factors, and other (that could fall into laissez-faire and what is identified as leadership outcomes). Each question item related to a leadership style and was categorized after the ratings for each question are submitted. Each leader's score for each leadership domain, as well as their demographic data, were uploaded into SPSS for statistical analysis.

Cut-off scores for each leadership domain (transformational, transactional, and other) were computed in SPSS. Each leadership style was transformed into the following variables: other = 1, transactional = 2, and transformational = 3. The data were analyzed using descriptive statistics for research question one. Percentage and frequencies are presented within each leadership style. The variables were nominal (Appendix E) therefore, Chi square was used to test the dependent variable of leadership style with each independent variable outlined in research questions 2a – 2f (Table 3.1). This study used the demographic independent variables, such as years' experience in brick and mortar and virtual settings, size of school, age, gender, school region, etc., to determine if different demographic groups possessed different or similar leadership styles.

Table 3.1 Statistical Analyses for the Research Questions

Research Question	Statistical Analysis
To what degree do school administrators perceive their leadership style as transactional, transformational, or other?	Descriptive statistics –to feature the breakdown of administrators' leadership styles
Is there a relationship between school administrators' self-perceived leadership style in a virtual setting and selected demographic variables?	
What is the relationship between school administrators' years of experience in brick and mortar setting and self-perceived leadership style?	Chi Square
What is the relationship between school type and self-perceived leadership style?	Chi Square
What is the relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style?	Chi Square
What is the relationship between the size of the school and self-perceived leadership style?	Chi Square
What is the relationship between the gender of an administrator and self-perceived leadership style?	Chi Square
What is the relationship between the age of an administrator and self-perceived leadership style?	Chi Square

Summary

The population included school leaders who worked in a virtual school environment in

the 2015-16 school year. A cross sectional, quantitative research design was employed to answer

research questions related to leadership styles in the Multifactor Leadership Questionnaire.

Demographic data were collected to examine possible relationships between leadership styles and demographics. Statistical analysis included descriptive statistics to examine results of research question one. The same was applied to research question two, as well as Chi Square to examine relationships between leadership styles and demographic characteristics. Results displayed the most prevalent and least prevalent leadership style as well as any significant differences in identified leadership styles and participant characteristics.

CHAPTER IV

ANALYSIS OF DATA

Purpose of the Study

In this study, the researcher examined the leadership styles according to the Multifactor

Leadership Questionnaire (MLQ). Participants used the MLQ leader form to identify their self-

perceived leadership styles utilized in a virtual school environment. Additionally, the researcher

investigated the relationship of demographic variables and each self-perceived leadership style.

This chapter describes the data analysis process and gives the descriptive information about the

participants collected from the demographic questions of the survey. The results were then

summarized and disaggregated in charts using Chi square.

Survey Instrument

As described in Chapter III, the instrument used in this study was the MLQ Leader Form

5x short. There are nine subscales of leadership factors and three subscales of leadership style

outcomes totaling 45 individual items. The MLQ has been tested for reliability and validity by

Aviolo and Bass (2003) within the Multifactor Leadership Questionnaire manual and in separate

research by Antonakis & Sivasubramaniam (2003). The instrument has been used in over 300

research programs, dissertations, and master's thesis internationally with translation into multiple

languages (Aviolo and Bass, 1997). Reliability of the instrument was tested using SPSS (see

Appendix F). A Cronbach's alpha reliability coefficient of .70 or higher is considered acceptable

and shows a high level of internal consistency. For this research, MLQ's Cronbach's alpha reliability coefficient was .839.

The questionnaire was used to collect data from participants based on their position on various survey items identifying them as transactional, transformational, or other (laissez-faire leaders). The responses were collected using Qualtrics. The average completion time, based on Qualtrics survey duration report, was between 10 and 13 minutes. The MLQ contains nine subscales of three leadership factors as well as three leadership outcomes. Each subscale had 2- 4 survey items that identified with each leadership style as shown in Appendix G. The numbered items from the original MLQ were translated to new item numbers when combined with the demographic questions of the survey.

Population and Sample

The survey was distributed to 75 virtual school administrators across the United States employed by K12, Inc. using an email distribution list approved by vice presidents of instruction. Of the 75 participants invited to participate, 26 administrators completed the survey for a 35% response rate. The sample group (N=26) is a diverse cohort representing various demographic characteristics based on participant responses. Demographic data for all invited participants were not provided during the time the research was completed, only participant contact information. Of the 26 respondents, females (73.1%) outnumbered males (26.9%). The majority of participants were between the ages of 31 to 50 with one each in the 20 to 31 and 61 to 70 age ranges. Four identified between the ages of 51 to 60. Twenty-two participants identified as white with one in each of the remaining categories of Asian, black, Hispanic, and no answer.

Participants represented all four regions of the United States, as defined in this study, with the largest representation from the South with 12 (46.2%). The West followed with nine (34.6%), one (3.8%) in the Northeast, and four (15.4%) in the Mid-West. In the next four categories: degree earned, virtual experience, Brick & Mortar (B&M) experience, and total years' experience, there was a large representation in one area of each variable. A Master's degree was earned by more than half (16) of the participants to represent 61.5%. Eight earned an advanced degree with five obtaining an EdS (19.2%) and three (11.5%) earning a doctorate. Two participants have earned a Bachelor's degree. Regarding experience, 42.3% of participants had 11 to 15 total years of experience in education with 65.4% having five years or less experience in a virtual setting. Overall, 61.5% have more than six years' experience in brick and mortar setting.

Participants were also asked to identify the type of school, as well as the size and grade levels. Fifteen (57.7 %) of the schools were identified as state charters with 7 (26.9%) identifying as district schools. The four others made notes (state alternative, school district choice, public district, and K12 employee hired by county), which placed them in the same category as district schools. This brought the district school number to 11 (40.5%). Grade levels of kindergarten through twelfth represent 61.5% of the schools that the administrators led, with the remaining 38.5% having only kindergarten through eighth or high school grades only.

Analysis of Research Questions

Question One: To what degree do school administrators perceive their leadership style as transactional, transformational, or other?

Participants ranked the leadership styles on a five-point scale. The scaled scores were coded 0 (for Not at all), 1 (for Once in a while), 2 (for Sometimes), 3 (for Fairly often), and 4 (for Frequently, if not always). The items were scored by summing and then dividing them by the number of items that make up the scale in order to standardize the scores. The scores were uploaded into Statistical Package for the Social Sciences (SPSS). The data were analyzed using SPSS and descriptive statistics (minimum, maximum, mean, and standard deviation) are shown below in Table 4.1.

Table 4.1 Descriptive Statistics for Leadership Styles by Administrators on the MLQ (N=26)

Leadership Factor	Min	Max	Mean	Standard Deviation
Transformational: Idealized Influence Attributes	1.25	3.75	3.05	.653
Transformational: Idealized Intellectual Behaviors	2.50	3.75	3.25	.346
Transformational: Inspirational Motivation	2.00	4.00	3.28	.550
Transformational: Intellectual Stimulation	2.50	3.75	3.15	.430
Transformational: Individualized Consideration	1.50	3.75	3.25	.521
Transactional: Contingent Reward	2.00	4.00	3.14	.575
Transactional: Management-by-Exception (Active)	.50	2.50	1.40	.553
Passive Avoidant: Management-by-Exception (Passive)	.50	2.00	1.37	.395
Passive Avoidant: Laissez-faire	1.00	2.75	2.02	.334
Outcomes of Leadership: Extra Effort	1.33	4.00	2.94	.680
Outcomes of Leadership: Effectiveness	1.25	4.00	3.22	.638
Outcomes of Leadership: Satisfaction	1.50	4.00	3.27	.636

The mean scores for the transformational factors for the self-rating scale ranged from 3.05 to 3.28. Within transformational leadership styles, the inspirational motivation factor had the highest mean (3.28). Transactional mean scores were lower with a range of 1.39 to 3.14. Passive avoidant: laissez-faire style and management-by-exception scored the lowest with a mean range of 1.37 to 2.0. Leaders did not see themselves as reactive or ones to avoid problems. Other leadership outcomes including extra effort, effectiveness, and satisfaction had mean scores that fell between transactional and transformational with a range of 2.9 to 3.26.

Leaders participating in the study ranked themselves more transformational. However, there could be some overlaps of transactional leadership style characteristics as the data above show maximum scale scores of 4.0 in transactional: contingent reward domain. Objectives and goals are clarified with expectation of specific outcomes, targets, and rewards (B. J. Avolio & Bass, 2004).

Question Two: Is there a relationship between school administrators' self-perceived leadership style in a virtual setting and selected demographic variables?

> a. What is the relationship between school administrators' years of experience in a brick and mortar (B&M) setting and self-perceived leadership style?
>
> b. What is the relationship between school demographics (U.S. region and type) and self-perceived leadership style?
>
> c. What is the relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style?
>
> d. What is the relationship between the size of the school and self-perceived leadership style?

e. What is the relationship between the gender of administrators and self-perceived leadership style?

f. What is the relationship between the age of administrators and self-perceived leadership style?

Related Null Hypotheses

a. There is no relationship between school administrators' years of experience in a brick and mortar (B&M) and self-perceived leadership style.

b. There is no relationship between school demographics (U.S. region and type) and self-perceived leadership style.

c. There is no relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style.

d. There is no relationship between the size of the school and self-perceived leadership style.

e. There is no relationship between the gender of administrators and self-perceived leadership style.

f. There is no relationship between the age of administrators and self-perceived leadership style.

Testing the Null Hypotheses

Each participant's scores for the items in Multifactor Leadership Questionnaire (MLQ) were tallied and summed for an overall leadership score. The scores were then ordered from least to greatest and grouped by leadership style. Each leadership style was transformed using SPSS

into the following variables: other (passive avoidant: laissez-faire and leadership outcomes) = 1, transactional = 2, and transformational = 3. Group one ranged from 22.83 to 30.00. Group two ranged from 31 to less than 35.00. Group three ranged from 35.00 to 38.75.

Null hypothesis a. There is no relationship between school administrators' years of experience in a brick and mortar (B&M) and self-perceived leadership style?

The null hypothesis was retained. There was no relationship between administrators' years of experience in brick and mortar (Chi square =1.964, p = .374). As shown in Table 4.2, 61.5% of participants have seven or more years' experience and 38.5% had less than seven. Of the Administrators with 0 to 6 years of brick and mortar experience (B&M) five (19.2%) rated themselves transactional and four (15.4%) followed with transformational style. Eight leaders (30.8%) with seven or more years' experience working in brick and mortar schools rated themselves highest with transformational style with the remaining eight (30.8%) split as transactional and other styles.

Table 4.2 Administrator Years of Experience in Brick and Mortar and Leadership Style

B&M Yrs. Exp.	Transformational	Transactional	Other	Total
0 to 6	4 15.4%	5 19.2%	1 3.8%	10 38.5%
7+	8 30.8%	4 15.4%	4 15.4%	16 61.5%
Total	12 46.2%	9 34.6%	5 19.2%	26 100%

Null hypothesis b. There is no relationship between school demographics (U.S. region and type) and self-perceived leadership style.

The null hypothesis was retained. There was no relationship between the school demographic, U.S. region, and self-perceived leadership style (Chi square =.644, p = .725). The

participants were split among location representing the condensed two U.S. regions shown below in Table 4.3. Transformational leadership style was the most represented overall (46.2%), however the numbers vary among styles within the regions. The North/South had more leaders with transformational leadership styles (26.9%) than transactional (15.4%), and other (7.7%). The Midwest/West split between transformational and transactional evenly with five participants (19.2%) selecting each style. The remaining three (11.5%) participants in the region were other leadership style.

Table 4.3 School Demographics (U.S. region and school type) and Leadership Style

	Transformational	Transactional	Other	Total
North/South	7	4	2	13
	26.9%	15.4%	7.7%	50%
Mid-West/West	5	5	3	13
	19.2%	19.2%	11.5%	50%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%

The null hypothesis was rejected. There was a significant relationship between school type and self-perceived leadership style (Chi square = 6.790, p =.034). In Table 4.4, 11 (42.3%) of participants represented district sponsored schools and fifteen (57.5%) of participants represented state charter schools. Overall, 12 (46.2%) participants perceived themselves as transformational, nine (34.6%) as transactional, and five (19.2%) as other. Transformational leadership style ranked higher for six (23.1%) administrators working in a district school. However, transactional leadership style ranked higher with eight (30.8%) administrators within a state charter virtual school. Other leadership style (laissez-faire/leadership outcomes) ranked second for four (15.4%) participants to transformational within district schools. District

administrators were transformational and state charter school administrators were more

transactional.

Table 4.4 School Type and Leadership Style

	Transformational	Transactional	Other	Total
District	6	1	4	11
	23.1%	3.8%	15.4%	42.3%
State Charter	6	8	1	15
	23.1%	30.8%	3.8%	57.7%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%

Null hypothesis c. There is no relationship between school administrators' years of experience in a virtual setting and self-perceived leadership style

The null hypothesis was retained. There was no relationship between the leadership style

and years' experience within the virtual setting (Chi square =.938, p =.625). In Table 4.5, 65.4%

of participants had five years or less experience in a virtual setting and 34.6% had six years or

more experience in a virtual setting. The less experienced administrators perceived themselves as

more transformational (34.6%) than transactional (19.2%) and 11.5% of participants rated

themselves in the other category. The participants with the most experience were closer in

ratings with 15.4% as transactional, 11.5% as transformational, and 7.7% as other.

Table 4.5 Administrator Years' Experience in Virtual Setting and Leadership Style

	Transformational	Transactional	Other	Total
0 to 5	9	5	3	17
	34.6%	19.2%	11.5%	65.4%
	3	4	2	9
6+	11.5%	15.4%	7.7%	34.6%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%

Null hypothesis d. There is no relationship between the size of the school and self-perceived leadership style.

The null hypothesis was retained. There was no relationship between the size of school and self-perceived leadership style (Chi square = 4.911, p = .086). In Table 4.6 below, school size (student population) was equally distributed between 0 to 2000 students and 2001+ students with 50%. In the first category, transformational leadership style was dominant with 26.9% of administrators, followed by other leadership style with 15.4%. Transactional leadership style was the least with 7.7%. However, in larger schools, transactional leadership style was dominant with 26.9%. Transformational style followed with 19.2% and other leadership style with 3.8%.

Table 4.6 Size of School (Population) and Leadership Style

	Transformational	Transactional	Other	Total
0 to 2000	7	2	4	13
	26.9%	7.7%	15.4%	50%
2001+	5	7	1	13
	19.2%	26.9%	3.9%	50%
Total	12	9	5	26
	46.1%	34.6%	19.2%	100%

Null hypothesis e. There is no relationship between the gender of administrators and self-perceived leadership style

The null hypothesis was rejected. There was a significant relationship between gender and self-perceived leadership style (Chi square = 6.347, p = .042). Females represented the larger group of participants in the study with 73.1% compared to 26.9% of men in Table 4.7. Transactional leadership styles were identified by 34.6% of female participants, but closely followed with 30.8% representing transformational style. Two (7.7%) females perceived themselves in the other leadership style category. There were not any men identified as

transactional. Four (15.4%) male administrators identified transformational leadership style and

three (11.5%) as other leadership style.

Table 4.7 Administrator Gender and Leadership Style

	Transformational	Transactional	Other	Total
Female	8	9	2	19
	30.8%	34.6%	7.7%	73.1%
Male	4	0	3	7
	15.4%	0%	11.5%	26.9%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%

Null hypothesis f. There is no relationship between the age of administrators and self-perceived leadership style

The null hypothesis was retained. There was no relationship between age of an

administrator and self-perceived leadership style (Chi square =1.768, p =.413). In Table 4.8,

administrators' ages ranged from 20 to 70 years old split into two categories (20 to 40 and 41 to

70). The second category representing older participants had a majority representation with

53.8%. Transformational leadership style was dominant amongst both age categories with

23.1%. Transactional leadership style and other leadership style split evenly with 15.4 % each

among the 41 to 70 aged administrators. Among the 21 to 40 aged category, the remaining

19.2% rated themselves as transactional and 3.8% rated themselves as other leadership styles.

Table 4.8 Administrator Age and Leadership Style

	Transformational	Transactional	Other	Total
20 to 40	6	5	1	12
	23.1%	19.2%	3.8%	46.2%
41 to 70	6	4	4	14
	23.1%	15.4%	15.4%	53.8%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%

Participants answered six more demographic questions that included race, highest degree earned, total years' experience in education, number of teachers in school, grade level of school, and previous B&M role. Cross tabulations for each variable are described below.

As shown in Table 4.9, Caucasians represented 22 of the participants with 84.6%. Eleven (42.3%) identified themselves as transformational with nine (34.6%) as transactional. Other races included Black, Hispanic and one who chose not to identify as any listed. Two (7.7%) identified themselves as transactional with one each as other and transformational. There was no significant relationship between race and leadership style (Chi square = .863, p = .649).

Table 4.9 Race and Leadership Style

	Transformational	Transactional	Other	Total
Other	1	2	1	4
	3.8%	7.7%	3.8%	15.4%
Caucasian	11	7	4	22
	42.3%	26.9%	15.4%	84.6%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square = .863			p = .649

Another extraneous variable, identified in Table 4.10, was the highest degree obtained. Eighteen (69.2%) had obtained a Bachelor and/or a Master's degree. Of these percentage, nine (34.6%) identified as transformational and six (23.1%) as transactional. Participants with a post graduate degree, which included and Education Specialist (EdS) or Doctorate, totaled eight (30.8%). Of this group, six split with three each (11.5%) between transformational and transactional leadership styles. Two identified as other leadership style. There was no significant

relationship between the participant's highest degree obtained and their identified leadership style (Chi square = 1.768, p = .649).

Table 4.10 Highest Degree Obtained and Leadership Style

	Transformational	Transactional	Other	Total
Bachelors/Masters	9	6	3	18
	34.6%	23.1%	11.5%	69.2%
Post Grad	3	3	2	8
	11.5%	11.5%	7.7%	30.8%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square = 1.768			p = .649

As shown in Table 4.11, participants identified the total number of years in the education field. Participants with 6 to 15 years of total experience (50%) were equal to those with 16 or more years' experience. Administrators with 6 to 15 years' experience identified as more transformational with 7 (26.9%) followed by four (15.4%) participants as transactional. Two (7.2%) identified as other leadership styles. Administrators with 16 or more years' total experience were split with five each (19.2%) as transformational and transactional. Three identified as other. There was no significant relationship with total years' education and leadership style (Chi square = .644, p = .725).

Table 4.11 Total Years in Education and Leadership Style

	Transformational	Transactional	Other	Total
6 to 15	7	4	2	13
	26.9%	15.4%	7.2%	50%
16+	5	5	3	13
	19.2%	19.2%	11.5%	50%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square =.644			p = .725

Participants identified their respective schools employing various numbers of teachers.

Two grouping were identified in Table 4.12 below. Administrators in schools with 21 to 60

teachers totaled 12 (46.2%). Of the 12, six (23.1%) identified as transformational, followed by

four (15.4%) who identified as other leadership style, and two (7.7%) identified as transactional.

Schools with 61 or more teachers had 14 participants identified in this category. Twelve (46.2%)

identified as transformational, nine (34.6%) identified as transactional, and five (19.2%)

identified as other leadership style. There was no significant relationship between the number of

teachers at a school and leadership style (Chi square = 4.450, p = .108).

Table 4.12 Number of Teachers and Leadership Style

	Transformational	Transactional	Other	Total
21 to 60	6	2	4	12
	23.1%	7.7%	15.4%	46.2%
61+	6	7	1	14
	23.1%	26.9%	3.8%	53.8%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square = 4.450			p = .108

As shown in Table 4.13 participants identified the grade level of the school in which they

work. The two categories are K-8th or high school only and K-12th grade. Administrators

working in K-8 or high school only total ten (38.5%). Six (23.1%) identified as transformational,

three (11.5%) as other, and one (3.8%) as transactional. More administrators, 16 (61.5%) within

the study worked with K-12th grade. Of the 61.5%), eight (30.8%) identified as transactional,

followed by six (23.1%) as transformational, and two (7.7%) as other leadership style. There was

no significant relationship between the grade level of school and leadership style (Chi square = 4.499, p = .105).

Table 4.13 Grade Level of School and Leadership Styles

	Transformational	Transactional	Other	Total
K-8 or HS only	6	1	3	10
	23.1%	3.8%	11.5%	38.5%
K-12	6	8	2	16
	23.1%	30.8%	7.7%	61.5%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square = 4.499			p = .105

The final extraneous variable, shown in Table 4.14, was the participants' previous brick and mortar (B&M) role. Eight (30.8%) were school administrators in their previous B&M. Of those ten, four (15.4%) identified as transformational, followed by three (11.5%) as other, and one (3.8%) as transactional leadership style. Participants who were previously teachers or other educational personnel totaled 18 (69.2%). Eight administrators (30.8%) each identified as either transformational or transactional and two (7.7) identified as other. There was no significant relationship between and administrator's previous B&M role and leadership style (Chi square = 3.675, p = .159).

Table 4.14 Previous Brick and Mortar Role and Leadership Styles

	Transformational	Transactional	Other	Total
School Admin	4	1	3	8
	15.4%	3.8%	11.5%	30.8%
Teacher/Other	8	8	2	18
	30.8%	30.8%	7.7%	69.2%
Total	12	9	5	26
	46.2%	34.6%	19.2%	100%
	Chi square = 3.675			p = .159

Summary

This study investigated self-perceived leadership styles of virtual school administrators who worked full-time at virtual schools. Chapter IV presented how the participants rated themselves in the categories of transformational, transactional, and other. Participants identified demographic data that were cross-tabulated to determine if any of the variables had a significant relationship with the leadership styles. Transformational leadership style was dominant in the overall mean scores, however participants rated themselves higher in contingent reward, a transactional sub-group. This indicated that virtual school administrators perceived themselves as transformational in style with transactional characteristics. The null hypotheses were rejected for gender and school type, therefore demonstrating a significant relationship between these demographic characteristics and leadership styles. Administrators' years' experience in either B&M or virtual setting did not show a significant relationship to leadership style even though the dominant type of leadership style changed from one setting to another. Race, highest degree earned, total years in education, number of teachers, grade level, and previous B&M role were extraneous variables in the study and did not show a significant relationship to leadership style.

CHAPTER V

FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Chapters I and II provided background to educational leadership and literature review related to leadership roles, responsibilities, and style. Chapter III presented the purpose of this study, which was to examine self-perceived leadership styles of virtual school administrators as well as demographic characteristics that were related to their style. The participants were all school administrators who worked for virtual schools within K12, Inc., in the United States. The methodology in chapter III was partly replicated from a study by Bentley (2011). The first part of the study collected demographic data, and the remaining used the Multifactor Leadership Questionnaire (MLQ) to assess virtual school administrators' perception of their leadership styles. Chapter IV provided the data analysis of the leaders' demographic information as well as their self-perceived leadership style rating scores according to the MLQ. Chapter V summarizes the findings of the study, the limitations of the study, as well as implications of the results. The conclusion is followed by recommendations for future research related to this study.

Purpose and Rationale for the Study

School leadership continues to be a primary focus in education as we advance through the 21st century with the rise of school-based technology. School choice has expanded to include not only traditional homeschool, but also virtual school learning at the K-12 grade level. How and why a leader leads can impact teacher job performance and/or student outcomes. The purpose of this study was to take the first step to determine the self-perceived leadership styles of virtual

school administrators and to examine if there is a relationship between the leadership style and demographic variables. The administrator variables included years' experience in brick and mortar and virtual setting, age, and gender. The school variables included school type, location, and student population. The study was conducted nationally within K12, Inc.

This study was designed to investigate the following two research questions:

1. To what degree do school administrators perceive their leadership style as transactional, transformational, or other?

2. Is there a relationship between a school administrator's self-perceived leadership style in a virtual setting and selected demographic variables?

    a. What is the relationship between a school administrator's years of experience in brick and mortar setting and self-perceived leadership style?

    b. What is the relationship between school demographics (U.S. region and school type) and self-perceived leadership style?

    c. What is the relationship between a school administrator's years of experience in a virtual setting and self-perceived leadership style?

    d. What is the relationship between the size of the school and self-perceived leadership style?

    e. What is the relationship between the gender of an administrator and self-perceived leadership style?

    f. What is the relationship between the age of an administrator and self-perceived leadership style?

The dependent variable was the administrator's self-perceived leadership style, scored using the MLQ leader form 5x survey instrument. Participants were provided a hyperlink that

directed them to the survey hosted on Qualtrics. This researcher exported the results into

Microsoft Excel and uploaded into the Statistical Package for the Social Sciences (SPSS) for

analysis. Data were gathered for each of the nine leadership factors, and statistics were derived

using means, frequency, and chi-square. The independent variables were addressed using

demographic questions developed by the researcher.

Overview of Literature Review

A literature review was conducted to present a range of topics as they related to virtual

school leadership and learning. The United States Department of Education published a yearly

education technology plan ("National Education Technology Plan 2016 : US Department of

Education," 2016). The plan discussed the impact from the youngest students in kindergarten to

the oldest students in self-paced courses in high school. Virtual learning had already been

introduced and implemented on the collegiate level and was moving into the K-12 realm. Florida

Virtual School was founded in 1997 to serve both full-time and part-time students (Paige et al.,

2004).

As virtual schooling increased as an educational option, leadership and leadership

development became important. The International Society for Technology in Education (ISTE)

created the National Educational Technology Standards and Performance Indicators for

Administrators (Education, 2009, 2014). Corry and Stella (2012) also addressed research in

online education, but they had little reference to school administrator training and development.

To understand school leaders and leadership development, researchers relied on the foundation

of a number of leadership theories: distributed, laissez-faire, transactional, transformational, and

network systems theory. Research has shown that leaders could implement any of these

leadership theories and leadership styles throughout their careers and are most effective when they implement a full range of leadership (Whittington, et al., 2009)

Studies have been conducted to further understand this range of leadership in a virtual setting. Barbara Frey (2005) shared her experiences as a virtual school principal in Colorado. She provided items for success in a virtual environment. A few years later, Brown (2008) researched the characteristics of virtual school and expected leadership skills from the principal's perspective. Quilici (2011) has conducted research and written a few articles about virtual school leadership. Her study examined how virtual school leaders served as instructional leaders as well as how they compared to traditional B&M leadership. Quilici's second study (Quilici & Joki, 2011) was an investigation on the skills required for virtual school principals to lead. The skillset and preparation were similar to those in B&M with the added component of technology literacy. In the same year, Bentley (2011) conducted a study to determine the self-perceived leadership styles of principals. The last two studies laid the groundwork for this researcher's study of leadership in the virtual setting.

Review of Methodology

A quantitative research design, descriptive in nature, was utilized to determine the leadership styles of virtual school administrators and whether there was a relationship with administrator demographics. The instrument, Multifactor Leadership Questionnaire Leader Form 5x short, was developed by MindGarden (B. J. Avolio & Bass, 2004). It contains 45 individual items that rate leadership styles and leadership factors. The reliability and validity of the forms have been tested and used in over 300 research programs, dissertations, and masters' theses.

The demographic survey, at the beginning of the MLQ, collected data regarding participant personal and professional characteristics. The survey was completed within 10 to 13 minutes using Qualtrics, an online data-collection program approved for graduate researchers. Two email reminders were sent out as well as an email thanking all the participants for their submissions. The data were uploaded into SPSS, the statistical analysis program for research. The first research question was analyzed using descriptive statistics to feature the breakdown of administrator leadership styles by demographic categories. The second research question addressed to what degree, if any, there was a relationship between the demographics and leadership style.

Summary of Findings and Discussion

In order to determine the degree to which school administrators perceived their leadership style as transactional, transformational, or other, the researcher analyzed the results of the Likert scale of the MLQ (Table 4.2). Seventy-five surveys were distributed with a return of 26 for a 35% response rate. The demographic data compiled showed that a virtual school leader who participated in the study was a middle-aged (53.8%), White woman (84.6%), from the West (50%), or South (50%). The participants had over 10 years teaching experience in a B&M and less than six years' experience in the virtual setting. The leaders had at least a Master's degree and worked at a K-12 school.

Discussion of Research Questions One: To what degree do school administrators perceive their leadership style as transactional, transformational, or other? Administrators perceived their leadership style as more transformational as evidenced by high mean scores for all areas of transformational factors. Leaders with this factor speak optimistically about the

future and what needs to be accomplished, articulate a vision of the future, and goals that will be achieved (B. J. Avolio & Bass, 2004). Leadership factors that indicated management-by-exception: transactional and passive avoidant, as well as laissez-faire received the lowest mean scores. However, transactional: contingent reward had a maximum score of 4.0 and a mean of 3.14 that were relatively high. Bentley (2011) had similar results in her study of transactional: contingent reward with a mean of 3.19 and higher mean scores for all transformational factors than transactional and laissez-faire. The results signified that leaders perceived they exhibit a transformational leadership style, but could incorporate aspects of transactional style as needed. This evidence continues to support the principle and need for "full range" model of leadership that includes the skills related to both transactional and transformational leadership styles (Mahdinezhad, Bin Suandi, bin Silong, & Omar, 2013). Administrators also perceived themselves using other aspects of leadership identified as leadership outcomes: effectiveness and satisfaction. These outcomes were focused on meeting a group's needs in a satisfactory way (B. J. Avolio & Bass, 2004).

Discussion of Research Question 2: Is there a relationship between a school administrator's self-perceived leadership style in a virtual setting and selected demographic variables? The first demographic variable examined was an administrator's years of experience in brick and mortar setting. Leaders with the least amount of experience in brick and mortar perceived themselves as more transactional than transformational. This style could be appropriate because of the learning curve of the position and new leaders finding balance between their managerial responsibilities and the instructional responsibilities. Leaders are challenged with how to maintain focus on learning rather than more on administrative concerns and finances (Earley, 2016).

The second sub-question addressed two variables: What is the relationship between school demographics (U.S. region and school type) and self-perceived leadership style? Participants were evenly distributed across the United States regions and represented each leadership style. More data were needed to determine if location of virtual school had a relationship to style. Using the data provided, it showed that school location had neither a strong or weak relationship with leadership style. Leadership style was not related to school location. Little research exists that has examined how or if leadership styles are impacted or related to school location (Urick & Bowers, 2014). The type of school, however, did show a significant relationship according to research completed by Urick & Bowers (2014). Virtual schools could be classified as state charters, schools within a local school district, private schools, or university-based schools. In this study, participants worked at either a state charter or district level school and perceived themselves using a transformational leadership style. The chi-square showed a strong significance in the study results. State charters and district-level schools varied in each of the aforementioned areas. The study identified different types of principals within school contexts that included school size, community and school environments, and principal background. The research study concluded that different leadership behaviors and styles were found in similar school environments.

In Table 4.6, administrators' years' experience in the virtual setting was examined. Experience did not show a relationship to leadership style, although more leaders perceived themselves as transformational. The participants had less experience in a virtual setting, but come to virtual setting with more than ten years' experience in the B&M setting. When comparing years in each setting, the reported leadership styles changed. Participants in the B&M setting with less than six years' experience perceived themselves as more transactional, yet when

in the virtual setting with less than the same amount of time, the leadership style was transformational. The leadership style then shifted once the participants had more than six years' experience with transformational in B&M setting and transactional in the virtual setting. "Perhaps years of administrative experience alone are not as important of a role as one's ability to master the process" (Bentley, 2011, p. 125). Another variable that did not show a significant relationship to leadership style was school population. The Chi-square significance level in school size was .086. An increase in sample size could have impacted the outcome and shown a different relationship between student population and leadership style. The school population represented an even split between less than and greater than 2000 students. Seven participants in each category either saw themselves as transformational (<2000) or transactional (>2000). Size of organization could have an effect on structure, and a leader may have to adjust his or her leadership style. The type of leadership employed could depend on various characteristics including the working environment, cultural climate, structural size, and geographic location (Franco & Matos, 2015).

Administrator characteristics of gender and age had contrasting results. Gender showed a significant relationship to leadership style. Females were the predominant participants in this study. As a whole, all leaders perceived themselves more transformational, but when separated by gender, there was a shift. Nine women (34.6%) perceived themselves as transactional and eight women (30.8%) perceived themselves as transformational. Out of seven male participants, none perceived themselves as transactional leaders. They rated themselves higher as transformational than any other leadership style. The maximum scores in both transformational and transactional leadership styles were 3.75-4.00. This may indicate participants perceived themselves to exhibit a blend of leadership styles accordingly. The participants in Bentley's

(2011) study were also predominantly women (61%), but they scored higher in all factors of transformational leadership. Women were also major participants in another study of virtual school leaders in Florida (Hickmon, 2015). The age variable was split between participants 20-40 years old and 41-70 years old. The latter age category had two more participants than the younger at 20-40 years old. Transformational leadership style scored higher among both age groups, but there was an even representation of transactional and other in the older, 41-70, age group. The chi-square value and significance did not show a significant relationship between age and leadership style. A larger sample size is required to make this determination. The extraneous variables showed no significance, but provided data that could describe the typical virtual school administrator.

Limitations of the Study

This study was limited to educators employed within one virtual school provider. The administrators were trained within the company with similar mission and vision for their schools and as leaders. Had the study included administrators from other education providers as well as those supported by local school districts, the sample may have been large enough to show significance in demographic variables and/or leadership styles.

The second limitation was the timing of the study. The data collection coincided with fall vacation break among southern schools and head of school leadership meetings for others. Each circumstance caused a leader to be out of the office for at least 3-5 days. As a result, the participation was 26 out of 75 possible participants. This study yielded a 35% response rate, however the sample size created small cells when running chi-square statistics.

A third limitation was the small number of participants. There is a possibility that leaders who did not respond and submit the survey could have held different perceptions of their leadership style. More participants may have led to an increase in male administrators or those with more experience in the virtual setting. This researcher depended on the participants' responses and assumed that the scoring reflected their beliefs accurately.

Recommendations for Practice and Future Research

This study examined self-perceived leadership styles and their relationship with demographic variables. The following suggestions are made for leadership practice and development based on the research presented in this study. Leadership training should be provided for prospective administrators transitioning from teaching positions. This study identified 69.2% of participants as teachers prior to obtaining positions as virtual school administrators. Professional development should be provided for current virtual school leaders on topics of transformational and transactional leadership. Participants perceived themselves as more transformational, but transactional leadership style followed closely behind.

As a result of this study, the researcher recommends the following suggestions for future research. Further research could focus on the demographic of race in the virtual setting and whether recruitment and training have an impact on leadership within the schools. As shown in this study, participants were predominately Caucasian, one Asian and one was Black. Further research could also include teacher perception of administrator's leadership style compared to the administrators' self-perceived leadership style within the virtual setting. Another investigation could be conducted to determine if there is a relationship between self-perceived leadership style of virtual school leaders and student outcomes. Results could identify if

particular leadership styles impact student learning. This study could be expanded to include

virtual school administrator's working with other school providers or local district-run virtual

schools. The expansion would enlarge the participant number as well as diversity in

demographics. Another investigation of leadership styles could determine if a relationship exists

between style and leadership skills. The study should include a qualitative method involving

interviews or another survey that identifies leadership skills. The results could impact

professional development opportunities and leadership trainings.

Conclusion

The purpose of this study was to determine the self-perceived leadership styles of virtual

school administrators and the possible relationship to demographic variables. Based on the

findings of this research, virtual school administrators as a group perceived themselves as

transformational leaders. Transformational leadership can be applied to a variety of situations

and cultural contexts due to its focus on individual differences and behaviors (McCleskey, 2014).

The data showed a significant relationship between administrators' leadership style and

the school type. District school administrators were more transformational, and state charter

school administrators were more transactional. The data also showed a significant relationship

between administrators' leadership style and gender. Male administrators perceived themselves

as more transformational, and females perceived themselves as more transactional. The

remaining variables did not have enough data to determine a significant relationship.

Many variables could affect how a leader leads and provide a deeper look into virtual

school administrators. Richardson, LaFrance, & Beck (2015) examined the challenges of virtual

school leadership and found professional development appeared to be higher in quality and

quantity. Identifying the leadership styles of virtual school leaders and the relationship to demographics could lead to developing targeted leadership development starting with the variables presented in this study. Leadership could influence teachers in teaching and in turn affect learning and student outcomes (Earley, 2016).

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APPENDIX A

EMAIL INVITATION TO PARTICIPATE IN STUDY

Email Invitation to Participate in Study

This email serves as an invitation to participate in a study that I am conducting as a doctoral candidate at the University of Tennessee, Chattanooga under the direction of Dr. Hinsdale Bernard. Your contact information was obtained through your regional Vice Presidents. You are being asked to participate because of your position within a virtual school setting. Your participation in the study is entirely voluntary and you can decline or withdraw. Furthermore, your professional standing will be in no way be affected by your decision.

This study will focus on the experience and styles of leaders within virtual schools. The researcher will examine the perception of leadership style and any correlation to biographical data.

The study will be a single phase in which you click the link below. You will be directed to a website that contains a survey with two parts. The first being biographical and the next contains 45 items related to assessing your leadership style. The entire questionnaire should take no more than 20 minutes. Your name or the school's name *will not* be used in this study.

Completing the survey and questionnaire will be considered your consent to participate. By completing this survey, you are certifying that you are 18 years of age or older.

SYoungUTCLeadershipSurvey

Please contact me at this email address and/or telephone number if you have any questions or concerns: Stephanie-young@mocs.utc.edu, or 917-567-5893. I will follow up with another email in 14 days.

Thank you for your assistance.

Sincerely,

Stephanie S. Young

Doctoral Candidate

University of Tennessee, Chattanooga

APPENDIX B

SURVEY INSTRUMENT: MUTLIFACTOR LEADERSHIP SURVEY AND
QUESTIONNAIRE

Multi-factor Leadership Survey and Questionnaire

Q1 What is your gender?

- ○ Female (1)
- ○ Male (2)

Q2 What is your age?

- ○ 20 to 30 (1)
- ○ 31 to 40 (2)
- ○ 41 to 50 (3)
- ○ 51 to 60 (4)
- ○ 61 to 70 (5)

Q3 What is your race/ethnicity? (Please select all that apply)

- ○ American Indian or Alaskan Native (1)
- ○ Asian or Pacific Islander (2)
- ○ Black or African American (3)
- ○ Hispanic or Latino (4)
- ○ White/Caucasian (5)
- ○ Prefer not to answer (6)

Q4 What is the highest level of education you have attained?

- ○ Bachelor's degree (1)
- ○ Master's degree (2)
- ○ EdS (Specialist) (3)
- ○ Doctorate (4)

Q9 What are your total years in the education field?

- ○ 0 to 5 years (1)
- ○ 6 to 10 years (2)
- ○ 11 to 15 years (3)
- ○ 16 to 20 years (4)
- ○ 21 to 25 years (5)
- ○ 25 years + (6)

Q8 How many years have you worked as a school administrator in the virtual school environment?

○ 0 to 5 years (1)
○ 6 to 10 years (2)
○ 11 to 15 years (3)
○ 16 + years (4)

Q5 What region is your school located?

○ Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT) (1)
○ South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV) (2)
○ Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI) (3)
○ West (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY (4)

Q6 What is the size of your school?

○ 0 to 500 students (1)
○ 501 to 1000 students (2)
○ 1001 to 2000 students (3)
○ 2001 to 3000 students (4)
○ 3001 to 4000 students (5)
○ 40001 to 5000 students (6)
○ 5001 + students (7)

Q7 What best describes your school?

○ District school (1)
○ State charter (2)
○ Private (3)
○ University based (4)
○ Other (please specify) (5) _____

Q10 How many teachers currently work at your school?

○ 1 to 20 (1)
○ 21 to 40 (2)
○ 41 to 60 (3)
○ 61 to 80 (4)
○ 81 to 100 (5)
○ 101 + (6)

Q11 Grade levels of school?

○ K to 8 (1)
○ K to 5 (2)
○ 6 to 8 (3)
○ High school only (4)
○ K to 12 (5)

Q12 How many previous years' experience do you have in a Brick and Mortar school?

○ None (1)
○ 1 to 3 years (2)
○ 4 to 6 years (3)
○ 7 to 10 years (4)
○ 11 + years (5)

Q19 What was your previous position/role in Brick and Mortar school?

○ School Administrator (Principal/Vice Principal) (1)
○ General Education Teacher (2)
○ Special Education Teacher (3)
○ Other (4) _____
○ N/a (5)

Q20 This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank. Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits you. The word "others" may mean your peers, clients, direct reports, supervisors, and/or all of these individuals. © 1995 Bruce Avolio and Bernard Bass. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

Q21 I provide others with assistance in exchange for their efforts

○ 0 - Not at all (1)
○ 1 - Once in a while (2)
○ 2 - Sometimes (3)
○ 3 - Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q22 I re-examine critical assumptions to question whether they are appropriate

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q23 I fail to interfere until problems become serious

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q24 I focus attention on irregularities, mistakes, exceptions, and deviations from standards

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q25 I avoid getting involved when important issues arise

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q21 I talk about my most important values and beliefs

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q22 I am absent when needed

- ⭘ 0 - Not at all (1)
- ⭘ 1- Once in a while (2)
- ⭘ 2- Sometimes (3)
- ⭘ 3- Fairly Often (4)
- ⭘ 4 - Frequently, if not always (5)

Q23 I seek differing perspectives when solving problems

- ⭘ 0 - Not at all (1)
- ⭘ 1- Once in a while (2)
- ⭘ 2- Sometimes (3)
- ⭘ 3- Fairly Often (4)
- ⭘ 4 - Frequently, if not always (5)

Q24 I talk optimistically about the future

- ⭘ 0 - Not at all (1)
- ⭘ 1- Once in a while (2)
- ⭘ 2- Sometimes (3)
- ⭘ 3- Fairly Often (4)
- ⭘ 4 - Frequently, if not always (5)

Q25 I instill pride in others for being associated with me

- ⭘ 0 - Not at all (1)
- ⭘ 1- Once in a while (2)
- ⭘ 2- Sometimes (3)
- ⭘ 3- Fairly Often (4)
- ⭘ 4 - Frequently, if not always (5)

Q26 I discuss in specific terms who is responsible for achieving performance targets

- ⭘ 0 - Not at all (1)
- ⭘ 1- Once in a while (2)
- ⭘ 2- Sometimes (3)
- ⭘ 3- Fairly Often (4)
- ⭘ 4 - Frequently, if not always (5)

Q27 I wait for things to go wrong before taking action

○ 0 - Not at all (1)
○ 1- Once in a while (2)
○ 2- Sometimes (3)
○ 3- Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q28 I talk enthusiastically about what needs to be accomplished

○ 0 - Not at all (1)
○ 1- Once in a while (2)
○ 2- Sometimes (3)
○ 3- Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q29 I specify the importance of having a strong sense of purpose

○ 0 - Not at all (1)
○ 1- Once in a while (2)
○ 2- Sometimes (3)
○ 3- Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q30 I spend time teaching and coaching

○ 0 - Not at all (1)
○ 1- Once in a while (2)
○ 2- Sometimes (3)
○ 3- Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q31 I make clear what one can expect to receive when performance goals are achieved

○ 0 - Not at all (1)
○ 1- Once in a while (2)
○ 2- Sometimes (3)
○ 3- Fairly Often (4)
○ 4 - Frequently, if not always (5)

Q32 I show that I am a firm believer in "If it ain't broke, don't fix it."

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q33 I go beyond self-interest for the good of the group

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q34 I treat others as individuals rather than just as a member of a group

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q35 I demonstrate that problems must become chronic before I take action

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q36 I act in ways that build others' respect for me

- ○ C0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q37 I concentrate my full attention on dealing with mistakes, complaints, and failures

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q38 I consider the moral and ethical consequences of decisions

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q39 I keep track of all mistakes

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q40 I display a sense of power and confidence

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q41 I articulate a compelling vision of the future

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q42 I direct my attention toward failures to meet standards

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q43 I avoid making decisions

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q44 I consider an individual as having different needs, abilities, and aspirations from others

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q45 I get others to look at problems from many different angles

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q46 I help others to develop their strengths

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q47 I suggest new ways of looking at how to complete assignments

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q48 I delay responding to urgent questions

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q49 I emphasize the importance of having a collective sense of mission

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q50 I express satisfaction when others meet expectations

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q51 I express confidence that goals will be achieved

- ❍ 0 - Not at all (1)
- ❍ 1- Once in a while (2)
- ❍ 2- Sometimes (3)
- ❍ 3- Fairly Often (4)
- ❍ 4 - Frequently, if not always (5)

Q52 I am effective in meeting others' job-related needs

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q53 I use methods of leadership that are satisfying

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q54 I get others to do more than they expected to do

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q55 I am effective in representing others to higher authority

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q56 I work with others in a satisfactory way

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q57 I heighten others' desire to succeed

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q58 I am effective in meeting organizational requirements

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q59 I increase others' willingness to try harder

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

Q60 I lead a group that is effective

- ○ 0 - Not at all (1)
- ○ 1- Once in a while (2)
- ○ 2- Sometimes (3)
- ○ 3- Fairly Often (4)
- ○ 4 - Frequently, if not always (5)

APPENDIX C

APPROVAL FOR REMOTE ONLINE USE OF A MIND GARDEN INSTRUMENT

Remote online use of the Mind Garden instrument stated below is approved for the person on the title page of this document.

Question	Answer
Your name:	Stephanie S Young
Email address:	wgn528@mocs.utc.edu
Repeat email address:	wgn528@mocs.utc.edu
Phone number:	423-710-1312
Company/institution:	University of Tennessee, Chattanooga
Your project title:	An Examination of Leadership Styles Among Virtual School Administrators
Mind Garden Sales Order or Invoice number for your purchase of reproduction licenses:	IPTLYZXMJ
The name of the Mind Garden instrument you will be using:	Multi factor Leadership Questionnaire Leaders From 5xShort

Guidelines

You have agreed to the following guidelines:

Question	Answer
I have paid for my reproductions licenses and I will compensate Mind Garden, Inc. for every time the form is accessed or the participant logs in to access the survey. I understand that an administration or license is considered "used" when a respondent views one or more items/questions.	I agree to this condition.
I will put the instrument copyright statement (copyright date and copyright holder, including "Published by Mind Garden, Inc. www.mindgarden.com") on every page containing questions/items from this instrument **and** I will allow Mind Garden to verify the appearance in one of two ways: I will include info@mindgarden.com on my list of survey respondents **or** I will send screenshots of the survey so that Mind Garden can verify that the copyright statement appears.	I agree to this condition.
I will remove this online survey at the conclusion of my data collection and I will personally confirm that it cannot be accessed.	I agree to this condition.
Once the number of administrations reaches the number purchased, I will purchase additional licenses or the survey will be closed to use.	I agree to this condition.
I will **not** send Mind Garden instruments in the text of an email or as a PDF file to survey participants.	I agree to this condition.

Your comments and method of putting the instrument online

Question	Answer
Please specify the name of and web address for the remote online survey website you will be using and describe how you will be putting this instrument online:	Qualtrics https://az1.qualtrics.com/ControlPanel/

104

Your signature and date

Question	Answer
Your name (as electronic signature):	Stephanie S Young
Date:	2/2/16

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APPENDIX D

K12 RESEARCH AGREEMENT AND ADDENDUM

RESEARCH AGREEMENT BETWEEN
K12 VIRTUAL SCHOOLS LLC
AND
STEPHANIE YOUNG

This agreement ("Agreement") is made this _20th__ day of January, 2016 (the "Effective Date"), by and between K12 Virtual Schools LLC., with a business address located at 2300 Corporate Park Dr., Herndon, VA 20171 ("K12") and Stephanie Young, with an address of __6518 Harbor View Drive, Hixson, TN 37343__ ("Student"), each individually a "Party" and collectively the "Parties."

SCOPE

1.1   Student will be undertaking research for her own educational requirements to determine: *the leadership styles of virtual school administrators*. As part of the Study, K12 will provide email addresses of certain heads of schools and administrative assistance with Student's region to participate in an online leadership survey. Student is permitted to use the Information for the sole purpose of completing the Study.

1.2   Student understands that he will not be given access to any "education records," as that term is defined in the Family Educational Rights to Privacy Act.

RELATIONSHIP OF THE PARTIES

2.1   Nothing in this Agreement is intended to create an employment relationship, company, partnership, joint venture, association or other legal entity of any kind or for any purpose as between the Parties. No Party will have any authority to bind or commit the other Party, or cause the other Party to incur any liability or obligation, for any purpose without the express written consent of the other Party and either Party has the right to enter into the same or similar relationships with other Parties.

RIGHT TO PUBLISH

3.1   K12 understands that results or other information based in whole or in part on the Study may be embodied in Student's final dissertation or such other document as is necessary for Student to complete his doctoral research study through University of Tennessee at Chattanooga. (collectively, "Presentations and Publications"). If, however, any Presentations and Publications contain K12-Identifying Information, K12 must be furnished notice including copies of any proposed Presentations and Publications at least four (4) weeks in advance of the earlier of their publication or submission to a third party. K12 shall have two (2) weeks after receipt of said copies, to object, in its sole discretion, to the use of the K12-Identifying Information. In the event that K12 makes such objection, Student shall remove from such Presentations and Publications the K12-Identifying Information. K12-Identifying Information shall mean all information, either by itself or in combination with other publicly available information, from which a person could reasonably be expected to be able to identify K12.

3.2   Student will comply with any request by K12 that the following statement be included in any publication related to the Study: "The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of K12 Inc."

INTELLECTUAL PROPERTY AND OTHER AGREEMENTS

4.1   Nothing in this Agreement is intended to transfer, grant, deny, license or provide permission with respect to any rights in any intellectual property of a Party to this Agreement.

PROTECTION OF HUMAN SUBJECTS PARTICIPANTS

5.1   In accepting this agreement, Student warrants that the participation of all human subjects in this research project has been reviewed and approved by the cognizant Institutional Review Board in accordance with DHHS Regulations (45 CFR, Part 46). The Principle Investigator assigned for directing the performance of work of the Study is Dr. Hinsdale Bernard, 423-425-5460, Hinsdale-Bernard@utc.edu If, for any reason, that person is no longer the Principle Investigator, Student shall notify K12 as soon as practicable but, in any event, within thirty (30) days thereafter, of the name of the new Principle Investigator.

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TERM AND TERMINATION

6.1   This Agreement shall terminate 180 days from the Effective Date set forth above. Notwithstanding the forgoing, this Agreement can be terminated a) at any time for material breach upon provision of written notice and an opportunity to cure not to exceed 30 days, or b) for any reason upon one (1) month written notice, in which case reasonable efforts shall be made to minimize disruption of the Study.

USE OF NAME AND PUBLIC ANNOUNCEMENTS

7.1   Student shall not use the name of K12 or any of its affiliates, employees or school names including any of its related logos, in any publication, without the prior written approval of K12.

LIABILITY

8.1   Student agrees to accept the responsibility for injury or damage to any person or persons or property that arise out of Student's negligent acts or omissions in connection with this Agreement.

WARRANTIES AND REPRESENTATIONS

9.1   Neither Party guarantees any specific results of the Study.

9.2   Student represents that she understands that any grade, evaluation or degree she receives in connection with the Study is based solely on her own work and that K12 bears no responsibility for any such grade, evaluation or degree.

9.3   THERE ARE NO WARRANTIES, CONDITIONS, COVENANTS OR REPRESENTATIONS (EXPRESSED OR IMPLIED) INCLUDING WITHOUT LIMITATION THE FITNESS OF A PARTICULAR PUPOSE, OR MERCHANABILITY GRANTED BY EITHER PARTY IN THIS AGREEMENT.

OTHER OBLIGATIONS

10.1   Non-Assignment. Student shall not have the right to assign any duty or responsibility arising hereunder without the prior written consent of K12. Any assignment without such consent is void from its beginning.

10.2   Notices. All notices shall be in writing mailed via certified mail, return receipt requested, or by reputable overnight courier addressed as follows, or to such other address as may be designated from time to time. If to K12, to the Executive Vice President of School Services at the address set forth above. If to the Student, to her at the address set forth above. Notices shall be deemed given as of the date received.

10.3   Entire Agreement/Modification. This Agreement constitutes the entire agreement between the parties and may be amended only in writing signed by all parties.

10.4   Waiver. The failure of either party to enforce any of the provisions hereof will not be construed to be a waiver of the right of such party thereafter to enforce such provisions or any other provisions.

10.5   Severability. If any provision of this Agreement is declared void, such provision will be deemed severed from this Agreement, which will otherwise remain in full force and effect.

10.6   Survival. Sections 3.1, 3.2, 4.1, 4.2 and 8.1 of this Agreement survive the termination of the Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

STEPHANIE YOUNG

By: _Stephanie S Young (Jan 26, 2016)_____

Date: Jan 26, 2016

K12 VIRTUAL SCHOOL LLC.

By: _Allison Cleveland (Jan 22, 2016)_____

Title: EVP

Date: Jan 22, 2016

RESEARCH AGREEMENT BETWEEN
K12 VIRTUAL SCHOOLS LLC
AND
STEPHANIE YOUNG
AMENDMENT #2

This Amendment Number 2 dated August 24, 2016 ("Amendment") hereby amends the Research Agreement ("the Agreement") by and between K12 Virtual Schools LLC with a business address located at 2300 Corporate Park Dr., Herndon, VA 20171 ("K12") and Stephanie Young, with an address of __6518 Harbor View Drive, Hixson, TN 37343__ ("Student"), each individually a "Party" and collectively the "Parties.". All capitalized terms used in this Amendment shall have the meaning set forth in the Agreement unless otherwise indicated herein.

RECITALS

WHEREAS, Student is undertaking research to study the leadership styles of virtual school administrators.

WHEREAS, Study was originally granted permission to provide research surveys to administrators on January 20, 2016;

WHEREAS, Student was unable to complete her dissertation research by the deadline set forth in the original Agreement and has requested subsequent extensions of the original deadline;

WHEREAS, Student has requested an additional extension of time to conduct the research surveys and K12 has agreed to one (1) additional extension;

NOW, THEREFORE, the Parties mutually agree as follows:

1. The Term of the Agreement is extended until October 30, 2016. Student acknowledges that this will be the final extension.
2. All other terms and conditions contained in the Agreement shall remain unchanged.

IN WITNESS WHEREOF, the Parties have caused this Amendment Number 2 to be executed by their duly authorized representatives.

STEPHANIE YOUNG

By: _Steph SY_

Date: _8/25/16_

K12 VIRTUAL SCHOOL LLC.

By: _allison Cleveland_

Title: _EVP_

Date: _9/8/16_

APPENDIX E

VARIABLES ANALYSIS

Variables Analysis

	Variable Label	Levels of the Variable	Scale of Measurement
Dependent Variable(s)	Leadership Style	Likert score (0.00 – 4.00) Categorized after each item is scored	Nominal
Independent Variables	Years' experience in brick and mortar	1 = None 2 = 1 to 3 years 3 = 4 to 6 years 4 = 7 to 10 years 5 = 11 + years	Nominal
	School type	1 = District School 2 = State Charter 3 = Private 4 = University based 5 = Other	Nominal
	Years' experience as administrator in virtual setting	1 = 0 to 5 years 2 = 6 to 10 years 3 = 11 to 15 years 4 = 16 + years	Nominal
	Size of school	1= 0 to 500 students 2 = 501 to 1000 students 3= 1001 to 2000 students 4 = 2001 to 3000 students 5 = 3001 to 4000 students 6 = 40001 to 5000 students 7 = 5001 + students	Nominal
	Gender	1 = Female 2 = Male	Nominal
	Age	1 = 20 to 30 2 = 31 to 40 3= 41 to 50 4= 51 to 60 5= 31 to 70	Nominal
Some Extraneous Variables	Race/Ethnicity	1= American Indian or Alaskan Native 2= Asian or Pacific Islander 3= Black or African American 4= Hispanic or Latino 5= White/Caucasian 6= Prefer not to answer	Nominal
	Highest Level of Education	1= Bachelor's degree 2= Master's degree 3= EdS (Specialist) 4 = Doctorate	Nominal
	Region of School (Location)	1 = Northeast 2 = South 3 = Midwest 4 = West	Nominal

	Total Years in Education Field	1= 0 to 5 years 2 = 6 to 10 years 3 = 11 to 15 years 4 = 16 to 20 years 5 = 21 to 25 years 6 = 25 years +	Nominal
	# of teachers working at your school	1 = 1 to 20 2 = 21 to 40 3 = 41 to 60 4 = 61 to 80 5 = 81 to 100 6 = 101 +	Nominal
	Grade levels of school	1 = K to 8 2 = K to 5 3 = 6 to 8 4 = High school only 5 = K to 12	Nominal
	Previous position in brick and mortar school	1 = School Administrator (Principal/Vice Principal) 2 = General Education Teacher 3 = Special Education Teacher 4 = Other _____ 5 = N/a	Nominal

APPENDIX F

SURVEY ITEM RELIABILTY

	Mean	Std. Deviation	N
V1	2.731	1.4016	26
V2	3.154	.5435	26
V3	.731	.7243	26
V4	1.885	1.1073	26
V5	.346	.8458	26
V6	2.577	.9868	26
V7	.385	.6373	26
V8	3.346	.4852	26
V9	3.423	.6433	26
V10	3.000	1.0954	26
V11	3.192	.7494	26
V12	.346	.6288	26
V13	3.269	.6038	26
V14	3.269	.8744	26
V15	2.885	.6528	26
V16	3.077	1.0168	26
V17	1.462	1.1741	26
V18	3.385	.5711	26
V19	3.462	.7606	26
V20	.423	.6433	26
V21	3.231	.6516	26
V22	1.346	.9356	26
V23	3.769	.4297	26
V24	.885	.8162	26
V25	2.615	1.1341	26
V26	3.038	.7200	26
V27	1.462	.8593	26
V28	.500	.7071	26
V29	3.423	.8086	26
V30	3.154	.6748	26
V31	3.269	.7243	26
V32	2.846	.6748	26
V33	.577	.7027	26
V34	3.423	.5778	26
V35	3.577	.5778	26
V36	3.423	.7027	26
V37	3.000	.8000	26
V38	3.115	.8638	26

	Mean	Std. Deviation	N
V39	2.615	1.0983	26
V40	3.077	.7442	26
V41	3.423	.5778	26
V42	3.192	.6939	26
V43	3.346	.7452	26
V44	3.000	.7483	26
V45	3.346	.8458	26

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.556	.346	3.769	3.423	10.889	1.197	45

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.858	45

APPENDIX G

LEADERSHIP SUBSCALE ITEMS ON THE MLQ LEADERS FORM 5X SHORT

Table 5.1 Leadership Subscale Items on the MLQ Leader Form 5x-Short

Characteristic	Subscale Name	Items
Transformational	Idealized Attributes	10, 18, 21, 25
Transformational	Idealized Influence	6, 14, 23, 34
Transformational	Inspirational Motivation	9, 13, 26, 36
Transformational	Intellectual Stimulation	2, 8, 30, 32
Transformational	Individualized Consideration	15, 19, 29, 31
Transactional	Contingent Reward	1, 11, 16, 35
Transactional	Management by Exception (Active)	4, 22, 24, 27
Transactional	Management by Exception (Passive)	3, 12, 17, 20
Passive Avoidant	Laissez-Faire	5, 7, 28, 33
Outcomes of Leadership	Extra Effort	39, 42, 44
Outcomes of Leadership	Effectiveness	37, 40, 43, 45
Outcomes of Leadership	Satisfaction	38, 41

VITA

Stephanie S. Young was born in the Bronx, NY and raised in the borough of New York City. Stephanie attended her first year of college at the State University of New York, College at Cortland before transferring her second year to the State University of New York, College at New Paltz where she studies Media Communications with a minor in Anthropology. Upon completion of her undergraduate degree, she returned home to work at an advertising company. Stephanie returned to school to obtain her Master of Education degree at Mercy College and entered in the New York City Board of Education as a special education teacher. Stephanie advanced through the school system and served as assistant principal at a Bronx high school until she relocated to Chattanooga, TN.

Stephanie currently serves as the Family Engagement Administrator at Tennessee Virtual Academy where she supervises the student support team for a K-8 virtual school. During her transition to Tennessee, Stephanie has also served as adjunct faculty at Bryan College and Grand Canyon University in the Department of Education.