

PARTICIPATION IN DIGITAL PROFESSIONAL LEARNING NETWORKS AS A MEANS
FOR SUPERINTENDENTS TO FULFILL THEIR RESPONSIBILITIES
AS INSTRUCTIONAL LEADERS

A Doctoral Research Project

Presented to

Assistant Professor Deborah Shea, Ed. D.

Doctoral Committee Chair

Esteves School of Education

The Sage Colleges

In Partial Fulfillment of the
Requirements for the
Degree of Doctor of Education
In Educational Leadership

Aaron T. Bochniak

August 15, 2017

**PARTICIPATION IN PROFESSIONAL LEARNING NETWORKS AS A MEANS
FOR SUPERINTENDENTS TO FULFILL THEIR RESPONSIBILITIES
AS INSTRUCTIONAL LEADERS**

We represent to Sage Graduate School that this thesis/dissertation and abstract are the original work of the author(s) and do not infringe on the copyright or other rights of others.

Aaron T. Bochniak

11/8/2017
Date of Signature

Deborah Shea, Ed. D.

Assistant Professor of Education

Doctoral Research Committee Chair

11/8/2017
Date of Signature

The Sage Colleges
Ed.D. in Educational Leadership

Final Approval of the Individual Doctoral Research Report
In Partial Fulfillment of the Requirements for the
Ed.D in Educational Leadership

Date 8/21/17

Candidate's Name Aaron Bochniak

Candidate's Sage ID Number

Title of Final Doctoral Research Report

PARTICIPATION IN DIGITAL PROFESSIONAL LEARNING NETWORKS AS A MEANS FOR SUPERINTENDENTS TO FULFILL THEIR RESPONSIBILITIES AS INSTRUCTIONAL LEADERS

The Doctoral Research Committee for the above named Doctoral Candidate gives final approval of the Individual Doctoral Research Report.

Signature

Chair

Signature

Member

Signature

Member

Signature

Member

Copies to: Graduate Dean, SOE Dean, Program Director, Director of Research,
Members of Doctoral Research Committee, Candidate and Candidate's File

Last modified: July 1, 2009

© Copyright by Aaron T. Bochniak, 2017

All Rights Reserved

Acknowledgements

The maxim, motto or slogan I have lived by over the past ten or more years was inspired from the last two words of the Capital Region BOCES mission statement, “impossible apart.” They became my words to live by. I strive and recommit daily to work in partnership with others to make things happen that would otherwise be impossible apart – so that together we can improve. This dissertation and doctoral program is the epitome of “impossible apart.”

First, this work would not have been possible if it were not for the encouragement of my friends and colleagues at Capital Region BOCES and Schenectady City School District. Their daily drive and passion, for our work as educators, provided me the necessary on-going reflection, renewal and commitment to this process and to the students we serve.

Second, to the members of Sage Cohort IX, thank you for working in partnership since day one – we took this journey together! We provided each other with constant reminders to “do the work!” We contributed in different, but very important ways to cheering each other on and conquering the unsurmountable. There were daily 5:00 a.m. inspirational text messages, never-ending encouragement, panicked phone calls, limitless humor, perhaps a cocktail or two, and a deep care and concern for one another that is incomparable. Through this journey, we each encountered various stressors, strains and life-changing events, some of which could have caused even the most resilient of people to throw in the towel, but together we persevered, because we recognized it is impossible apart. We are a resilient group, and together we improved.

Third, the encouragement, guidance, challenge and support of the faculty at the Sage Colleges is without bounds. This program of study would not be possible if it weren’t for the work of a dedicated group of professors and practitioners who spend their days, evenings and weekends inspiring, urging and guiding our work. To each of you, I owe my deepest gratitude. I

am most appreciative of my doctoral research committee and, in particular, my doctoral chair, Dr. Deborah Shea, for her never-ending cheer, wisdom and motivation.

Lastly, but perhaps most importantly, to my friends and family – thank you for putting up with me for the past 27 months. Don and Tony – you were always there for recreation and relaxation, even when I should have been doing the work! Mom, our early morning phone calls kept me going – thank you for your prayers and support. Above all else, to my husband Jay – I could never thank you enough for your sacrifices to this process. You have proofread hundreds of papers and drafts. You prevented me from quitting no less than 27,363 times, and kept reiterating that I could do this. Jay, it is to you in which I owe the most, for always being at my side, being my biggest cheerleader, and muse. Truly, this otherwise would have been impossible apart from you!

Abstract

PARTICIPATION IN PROFESSIONAL LEARNING NETWORKS AS A MEANS FOR SUPERINTENDENTS TO FULFILL THEIR RESPONSIBILITIES AS INSTRUCTIONAL LEADER

Aaron T. Bochniak,

The Sage Colleges, Esteves School of Education, 2017

Dissertation Chair: Deborah Shea, Ed. D.

This quantitative study examined the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader. All 692 superintendents of public schools in New York State, excluding New York City, were surveyed to assess their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership as defined by Waters and Marzano (2006) and their participation in digital professional learning networks.

This study was intended to provide insight to superintendents and district level leaders, as well as boards of education, educational service organizations, and state agencies, regarding alternative venues and opportunities for professional learning. Less traditional venues for professional development may serve as an effective and efficient means of assisting instructional leaders with school improvement (Mackey & Evans, 2011). Digital professional learning networks may significantly reduce cost and increase time on task, while providing access to timely and relevant topics that can be contextualized as a part of a leader's daily work and customized to their interests and immediate needs.

A quantitative survey was developed and electronically distributed to all 692 superintendents of public schools in New York State (exclusive of New York City) to assess their participation in digital professional learning networks and their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership as defined by Waters & Marzano (2006). There were 134 respondents to the survey.

The data collected from the survey found that more than half of superintendents in New York State access Facebook and/or Twitter as a digital professional learning network, of which Twitter tends to be a more popular choice. On average, slightly over one-third of those superintendents, when they do access Facebook and/or Twitter, do so for both social and professional purposes. Additionally, a majority of superintendents in New York State believe that they are both creating and monitoring goals for achievement and instruction (more than occasionally, but less than almost always).

In looking at the relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill the responsibilities of an instructional leader, the study revealed that while there was a statistically significant relationship for four out of 14 of the practices associated with these responsibilities, it is not strong enough to overwhelmingly prove that there is a compelling, direct relationship between these variables.

Keywords: superintendent, instructional leadership, instructional leadership responsibilities, instructional leadership practices, digital professional learning networks

Table of Contents

Abstract	iii
Table of Contents	v
List of Tables	ix
Chapter One: Introduction	1
Background of the Problem.....	1
Purpose of the Study	2
Research Questions	4
Significance of the Study	4
Definition of Terms	5
Digital professional learning network	5
Professional development.....	6
Instructional leadership.	6
Educational service agency.	6
Assumptions, Limitations, and Delimitations	6
Assumptions	6
Limitations.....	7
Delimitations	7
Organization of the Study	8
Chapter Two: Literature Review	10

Introduction	10
Responsibilities of the Superintendent as Instructional Leader	12
Creating goals for student achievement	16
Monitoring goals for student achievement	17
Influence of superintendents' experience on student achievement.	20
Digital Professional Learning Networks	21
Professional development standards and the use of online communities in the development of professionals.....	21
Blended models of professional development.....	24
Use of Twitter and social media in the professional development of educators	25
Social and adult learning theories.....	28
Summary	30
Chapter Three: Methodology.....	31
Introduction	31
Purpose	31
Research Questions	32
Research Design	32
Sample and Sampling Procedures	33
Instrumentation.....	34
Data Collection.....	35

Data Analysis	36
Researcher bias.....	37
Reliability and Validity	38
Conclusion.....	39
Chapter Four: Analysis	41
Introduction	41
Research Questions	42
Descriptive Analysis of the Sample	43
Summary	56
Chapter Five: Discussion	58
Introduction	58
Purpose of the Study	59
Research Questions	59
Summary of Findings	60
Finding #1.....	61
Finding #2.....	61
Finding #3.....	62
Finding #4.....	62
Finding #5.....	64
Finding #6.....	65

Finding #7.....	67
Conclusions.....	67
Recommendations for Policy and Practice.....	69
Recommendations for policy.....	70
Recommendations for practice.....	70
Recommendations for future research.....	72
References.....	74
Appendix A: Survey Instrument.....	82
Appendix B: IRB Approval Letter.....	96

List of Tables

Table 1: Respondents' Gender, Race and Age	44
Table 2: Respondents' Certifications, Educational Experience and Professional Experience	45
Table 3: Number of Students Enrolled at Respondents' School Districts	46
Table 4: Approximate Total Employees Working at School District.....	47
Table 5: How often Facebook is Viewed or Accessed	48
Table 6: Practices related to creating non-negotiable goals for achievement and instruction.....	51
Table 7: Practices related to monitoring goals for achievement and instruction.....	52
Table 8: Combined practices and correlation coefficient	54

Chapter One: Introduction

Background of the Problem

The on-going, timely professional development of educators is an essential element in student achievement and instruction (Waters & Marzano, 2006). According to the organization, Learning Forward (2010), in its publication *Why Professional Development Matters*, it is important for school leaders to attend and participate in professional development with teachers, so that they can support its outcomes. However, school district professional development plans will often focus solely on the professional development needs of teachers, especially since teachers are considered to be the staff that is most closely involved in the direct instruction of students. As a result, many school leaders do not have adequate access to professional development specifically related to their leadership roles (Mizell, 2010).

Several studies have concluded that leadership also matters in the instruction of students. Albeit an indirect relationship, the instructional leadership practices of superintendents have a statistically significant impact on student achievement (Waters & Marzano, 2006; Dufour & Marzano, 2011). As a result, superintendents have instructional leadership responsibilities that require them to engage in professional development that will support the outcomes of teaching and learning (Waters & Marzano, 2006; Dufour & Marzano, 2011).

However, time and budget constraints, as well as access to relevant and adequate professional development often serve as barriers (Hardy, 2014). Consequently, traditional ‘sit and get’ venues for professional development, such as conferences, workshops, in-services and/or educational service agency providers may not be within reach (Hardy, 2014). With a clear need for on-going professional development for superintendents as instructional leaders, digital professional learning networks have emerged in the past several years as a means for on-

going access to relevant and timely information (Flannigan, 2012; Mackey, 2011; Carpenter, 2015).

This research was also inspired by two authors, Simon Sinek (2009), in his book *Start With Why: How Great Leaders Inspire Everyone to Take Action* and Dennis Cheesebrow (2012) in his book *Partnership: Redefined Leadership Through the Power of &*. Sinek (2009) inspires leaders to start with and articulate why we do what we do. This is the very essence of a hashtag in social media – a quick and succinct word or string of words meant to highlight the essence of a discussion. Cheesebrow (2012) emphasizes the importance of creating partnerships as leaders and emphasizes that it is through these relationships that we maximize our collective potential and in turn accomplish things that would otherwise be impossible apart. Partnerships are the very essence of digital professional learning networks and online discussion groups. It is the ability to connect to others so that together we can improve. While Cheesebrow (2012) does not speak specifically to the ability for these partnerships to be created virtually, digital professional learning networks are intended to connect individuals to share and learn together.

Purpose of the Study

It is the responsibility of superintendents to create non-negotiable goals for student achievement and instruction, which are monitored on an on-going basis (Waters & Marzano, 2006). Access to relevant professional development opportunities for superintendents that expand the knowledge and ability of instructional leaders in fulfilling these responsibilities can be limited due to constraints of both time and budget (Hardy, 2014). In an effort to fulfill their responsibilities as instructional leaders, some superintendents have turned to digital professional learning networks as a means of dialoguing with experts and peers across the globe (Ross, Maninger, LaPrairie, & Sullivan, 2015). The internet has expanded the venue for professional

development beyond the confines of four walls (Ross et al., 2015). It is important to understand if digital professional learning networks, as a means to accessing professional development, aids and assists educational leaders in fulfilling one of the most salient responsibilities of instructional leadership. Since social media and online venues may be perceived as non-traditional or non-conventional means of networking and contributing to professional development, it is important to understand whether or not digital professional learning networks can serve as an effective means in fulfilling the responsibilities of an instructional leader (Ross et al., 2015).

The purpose of this quantitative study was to examine the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006). This study focused on two of the five high-leverage responsibilities: "Non-negotiable goals for achievement and instruction," and "Monitoring goals for achievement and instruction" (Waters & Marzano, 2006). Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). All superintendents of public schools in New York State, excluding New York City, were surveyed to assess their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership and their participation in digital professional learning networks.

The independent variable in this study is participation in digital professional learning networks; the dependent variable is the school leaders' ability to fulfill the two specific responsibilities of effective school leadership. Intervening variables studied include geographic region and access to professional development, due to presumed limits of internet connectivity

and geographic isolation, as well as the frequency and duration of access to digital professional learning networks. The unit of analysis is the superintendent and data analysis includes descriptive and inferential statistics using data gathered via electronically distributed survey using Survey Monkey.

Research Questions

1. Do superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent?
2. Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:
 - a. Creating non-negotiable goals for achievement and instruction
 - b. Monitoring goals for achievement and instruction
3. Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

Significance of the Study

Limitations on both time and budget impact the ability for superintendents to access relevant and adequate professional development (Bredeson, 1995; Waldron & McLeskey; 2010). Consequently, traditional 'sit and get' venues for professional development, such as conferences, workshops, in-services and/or educational service agency providers may not be a match for the specific and timely needs facing superintendents (Hardy, 2014). With a clear need for on-going professional development for instructional leaders, digital professional learning networks have emerged in the past several years as a means for on-going access to relevant and timely information (Flannigan, 2012; Mackey, 2011; Carpenter, 2015). This research will be of benefit

to superintendents and district level leaders, as well as boards of education, educational service organizations, and state agencies, as a means to identify alternative venues and opportunities for professional learning. Less traditional venues for professional development may serve as an effective and efficient means of assisting instructional leaders with school improvement (Mackey & Evans, 2011). Digital professional learning networks may significantly reduce cost and increase time on task, while providing access to timely and relevant topics that can be contextualized as a part of a leader's daily work and customized to their interests and immediate needs.

This study is guided by the framework of Waters and Marzano (2006) and the specific responsibilities and practices they outlined as the most salient and high-leverage responsibilities for school leaders. In addition, social learning theory (Bandura, 1977) and social development theory (Vygotsky, 1978), will also serve as lenses to look at environments and alternative means of professional development, in that socialization affects the learning process of an individual. Digital professional learning networks may well prove themselves to be capable of expanding the boundaries of traditional learning environments and serve as an alternative means in aiding leaders in fulfilling their responsibilities and practices as outlined by Waters & Marzano (2006).

Definition of Terms

In an effort provide a clear understanding of terms, expressions and phrases used throughout this study, the following definitions will apply:

Digital professional learning network. A digital professional learning network (PLN) can also be referred to as a Digital PLN, or a Virtual PLN. A digital professional learning network allows educators across the globe to engage in discussions with colleagues through

online communities that allow for the sharing and collaboration of ideas that support teaching and learning (Flannigan, 2011).

Professional development. Professional development is defined as the framework for providing educators with information and skills needed in order to help students succeed; it improves and increases educators' knowledge; allows for educators to tailor learning specific to individualized needs, based on setting and allows for on-going feedback (National Staff Development Council, 2008).

Instructional leadership. The critical component of school leadership that ensures all students receive exceptional, high-quality instruction each day; leaders that lead for the ongoing improvement of teaching and learning (Center for Educational Leadership, 2015)

Educational service agency. In the State of New York, educational service agencies are commonly referred to as Boards of Cooperative Educational Services (BOCES). Similar educational service agencies operate in other states. These service agencies allow schools to share in collaborative and innovative educational programs and services within their region ("About BOCES," n.d.).

Assumptions, Limitations, and Delimitations

This study acknowledges that there are assumptions, limitations and delimitations to the frameworks of professional development, research methodology, acquisition of data and statistical analysis.

Assumptions. Assumptions are "statements about observations and experiences related to the study that are taken for granted or are assumed to be true" (Nenty, 2009, p. 24). This study assumes that the research instrument has been properly designed in such a way as to best answer the research questions. A second assumption is that superintendents perceive their ability to

fulfill the practices associated with the responsibilities of an instructional leader effectively. In addition, this study assumes that respondents to the survey are answering questions with an understanding of the definition of digital professional learning networks and instructional leadership as described within the instrument. Lastly, it is assumed that the literature reviewed is the most relevant and germane research pertinent to the areas of study.

Limitations. Limitations are those things not within control of the researcher surrounding the study and by which the conclusions to the study must be confined (Nenty, 2009). The respondents to this study are indicative of the larger population of superintendents in New York State, however, a limitation is that this study may have yielded results that are only generalizable to New York State. If the study were expanded to other states, where additional time or budget is dedicated to professional development, or where access is more readily available, different responses may have been received. Additionally, there was a relatively low response rate that included 19% of the sample. Also, because the survey was administered electronically, there is a possibility of it being overlooked due to volume of email received and spam filters. Other methods of survey distribution, such as paper or manning a table at a trade conference, may have led to a higher response rate. Furthermore, another doctoral cohort member launched their survey on the same date and time that included the same population and same electronic distribution method. This could have also led to the low response rate.

Delimitations. Delimitations are self-imposed factors that have narrowed the scope of the study (Nenty, 2009). This study acknowledges that professional learning networks also exist in other face-to-face formats, however the intent of the study was to look solely at those professional learning networks that are created online, in virtual environments. This study examined superintendents. Due to the target audience of superintendents, a delimitation of the

study is that it was not inclusive of other district or building leaders. Additionally, New York City superintendents were excluded from this study due the vast differences in the governance structure of schools in New York City versus the rest of New York State (“DOE Leadership,” n.d.). In particular, this study surveyed superintendents and collected data for a four-week period beginning January 28 and continued through February 21, 2017. A longer period of data collection may have led to an increased response rate.

As a result of this being a quantitative study, it may have limited the types of responses received. If the survey were conducted in a qualitative fashion utilizing personal interviews, different viewpoints may have been elicited.

Lastly, this research focused only on superintendents in New York State. Since much of the research around instructional leadership is from other areas of the country, as well as other countries, this researcher is unclear if a wider population would have yielded different results – especially since instructional leadership and professional learning networks are not limited solely to superintendents, nor the boundaries of New York State (Hallinger & Murphy, 1982; Murphy & Hallinger, 1986; Cuban, 1988; Pajak & Glickman, 1989; Cuban, 2001; Waters & Marzano, 2006; Lewis, Rice & Rice, Jr., 2011; Chingos, Whitehurst & Lindquist, 2014).

Organization of the Study

This study is organized in five chapters. Chapter One serves as an introduction to the research and provides a background to the study, statement of the problem, research questions, significance of the study as well as definitions to key terms. Chapter Two is a review of the literature, describes the problem, hypothesis and underlying assumptions for this study. Chapter Three outlines a plan for addressing the research questions, the methodology used and procedures followed for conducting this study. Chapter Four is an analysis and presentation of

the data collected. Chapter Five provides for a summary of key discoveries, conclusions and recommendations relative to the research questions.

Chapter Two: Literature Review

Introduction

The purpose of this quantitative study is to examine the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006). This study will focus on two of those five high-leverage responsibilities: "Non-negotiable goals for achievement and instruction," and "Monitoring goals for achievement and instruction" (Waters & Marzano, 2006, p. 4). Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) in an effort to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). All superintendents of public schools in New York State, excluding New York City, were surveyed to assess their participation in digital professional learning networks and their perceptions about their ability to fulfill the two specific responsibilities of instructional leadership.

This chapter explores the literature and analyzes the germane research relevant to these two main topics of the study: superintendents' responsibilities as an instructional leader and digital professional learning networks. The on-going, timely professional development of educators is an essential element in student achievement and instruction (Waters & Marzano, 2007). School district professional development plans often focus on the professional development needs of teachers, especially since they are most closely involved in the direct instruction of students. However, several studies have concluded that leadership also matters, and it has a statistically significant impact on student achievement (Waters & Marzano, 2006). Thus, superintendents, as instructional leaders, have a responsibility to engage in professional

development that will support the outcomes of teaching and learning (Mizell, 2010). Yet time and budget constraints, as well as access to relevant and adequate professional development often serve as barriers for school district leaders (Bredeson, 1995; Waldron & McLeskey, 2010). Consequently, traditional ‘sit and get’ venues for professional development, such as conferences, workshops, in-services and/or educational service agency providers may not be within a match for the specific and timely needs facing superintendents (Hardy, 2014). With a clear need for on-going professional development for instructional leaders, digital professional learning networks have emerged in the past several years as a means for on-going access to relevant and timely information (Flannigan, 2012; Mackey, 2011; Carpenter, 2015).

The organization of this chapter is divided into two main sections: superintendents’ responsibilities as an instructional leader and digital professional learning networks. The first section begins with an overview of the responsibilities of the superintendent as an instructional leader. It describes the relevant subjects around the professional development of a superintendent to support teaching and learning, their responsibility for creating and monitoring goals for academic achievement, as well as examines the influence of a superintendent on student achievement. The second section probes into professional learning networks, in particular, professional networks and communities that are created by digital means. It illustrates existing standards surrounding professional development and delves into those standards necessary for blended and online models to be successful. It also investigates adult and social learning theories and the role and impact of those theories on the professional development and learning of superintendents. This chapter concludes by summarizing the literature reviewed and identifies existing gaps that highlight the importance for the topic of research.

Responsibilities of the Superintendent as Instructional Leader

Several studies focus on varying roles of superintendent leadership. Amongst the various descriptions of leaders, the superintendent can be considered a transformational leader (Fenn & Mixon, 2011), ethical leader (Fowler & Johnson, 2014), supervisor (Fullan, Park & Williams, 1987), and/or a collaborative leader (King, 2002). This study focuses specifically on the role and responsibilities of the superintendent as an instructional leader.

Former United States Secretary of Education William Bennet, in response to “A Nation at Risk,” the 1983 study done by the National Commission on Excellence in Education, referred to district staff as inconsequential and part of the “amorphous blob” (Bennett, 1988). Over the decades, those working in education, other than teachers, tended to be scrutinized as to their contribution to student success (Murphy & Hallinger, 1986; Cuban, 1988; Chingos, Whitehurst & Lindquist, 2014). Waters and Marzano (2006) collected data as a part of a meta-analysis to demonstrate the contrary, which is that leadership at the district level does make a difference. Thus, perhaps more than ever, it is important to professionally prepare, select, recruit, and sustain superintendents and other educators who can be empowered to mobilize the responsibilities as outlined by Waters and Marzano (2006).

The meta-analysis of research conducted by Waters and Marzano (2006) focused on the relationship between district level leadership and student achievement. In particular, their study revealed four major findings relative to the correlation between superintendent leadership and student achievement: (1) the impact of district leadership on student achievement; (2) district leadership responsibilities correlated with student achievement; (3) defined autonomy; and (4) correlations between superintendent tenure and student academic achievement. Their meta-analysis is one of the largest of its kind, looking at 27 studies conducted, dating back to 1970

(Waters & Marzano, 2006). “Altogether, these studies involved 2,817 districts and the achievement scores of 3.4 million students, resulting in what McREL researchers believe to be the largest-ever quantitative examination of research on superintendents” (Waters & Marzano, 2006, p. 3). The findings of Waters and Marzano (2006) support those found in previous studies: leadership does matter and there is a link to student achievement.

In 1982, a study conducted by Hallinger and Murphy examined the superintendent’s role in fostering and upholding instructional leadership within their district. Their findings, in perhaps one of the earliest studies done of superintendents as instructional leaders, found that there was a higher degree of instructional leadership practiced in those districts where superintendents’ policies and practices promoted instructional leadership (Hallinger & Murphy, 1982). In a subsequent study conducted by Murphy and Hallinger (1986) six major functions were identified that distinguished superintendents as instructional leaders from their colleagues that were less involved in instruction. Those functions include: “setting goals and establishing expectations and standards, selecting staff, supervising and evaluating staff, establishing an instructional and curricular focus, ensuring consistency in technical core operations, and monitoring curriculum and instruction” (Murphy & Hallinger, 1986, p. 213).

In a study conducted by Pajak and Glickman, “In each of the districts we found that the superintendent and central office supervisors were key figures in stimulating and facilitating efforts to maintain and improve the quality of instruction” (1989, p. 61). In particular, Pajak and Glickman (1989) found major dimensions linked to improving instruction: (1) an instructional dialogue; (2) an infrastructure of support that promoted the dialogue; and (3) varied sources of instructional leadership” (1989, p. 62). Of particular importance, Pajak and Glickman (1989)

called upon superintendents and other district office staff to create a common dialogue around instruction that shares an inventiveness and commitment to school improvement.

Cuban (2001), in response to early 21st century education reform agendas supported by President Bush and other political and business leaders, reiterated the need for superintendents to be leaders in instructional matters. Cuban (2001) acknowledged the necessity for superintendents to mobilize the efforts of principals, teachers, parents and students around instruction, but also recognized the approach to school improvement might vary dependent upon the setting (rural, urban, suburban, etc.). Cuban (2001) purported that a community-based strategy, orchestrated by the superintendent, was key to holding stakeholders responsible for achieving school improvement goals.

A research review that summarized a broad range of empirical research and literature, conducted by Leithwood, Seashore Louis, Anderson and Wahlstrom (2004), determined, “Of all the factors that contribute to what students learn at school, present evidence led us to the conclusion that leadership is second in strength only to classroom instruction” (p. 70). Similar to Pajak and Glickman (1989), as noted above, Leithwood, et al. (2004) echoed that effective superintendent leadership relied on mobilizing the efforts of parents, the community and other staff from central office and the schools, as well as elected board members, to enhance their influence around student achievement and instruction.

In more current studies that are subsequent to the meta-analysis conducted by Waters and Marzano (2006), which is seminal to this study, Lewis, Rice and Rice, Jr. (2011) summarized that, “Superintendents are the key to successful implementation of instructional standards designed to increase student achievement. A school superintendent provides the vision and plan for accomplishing goals for the entire organization (2011, p. 11).

In qualitative study conducted by Townsend, Acker-Hocevar, Ballenger and Place (2013), factors related to the instructional leadership of a superintendent were explored. Their study collected data over a three-year period, from 2004-2006, during the implementation of *No Child Left Behind (NCLB)*. The focus of the study was on the shift of the role of superintendent since the implementation of NCLB and their need to create and adopt a leadership for learning philosophy within their district (Townsend, et al., 2013). The work of Townsend, et al., (2013) argues for an increased focus on instructional leadership and the need for adopting a leadership for learning philosophy that can lead schools into the future. Townsend et al. (2013) argued for an increased focus on learning and instructional leadership.

While as indicated above, several studies support the role and development of the superintendent as instructional leaders, there are other studies that contradict the value of the role and their impact on student achievement (Samuels 2011; Whitehurst, Chingos & Gallaher, 2013; Chingos, Whitehurst & Lindquist, 2014). In particular, Chingos, Whitehurst and Lindquist (2014) found, “Hiring a superintendent is not associated with higher student achievement” (p. 9). Chingos et al. (2014) also found that superintendents only count for a small fraction of student achievement and even when there is a correlation, those superintendents who have an exceptional impact cannot be reliably identified.

The meta-analysis and research conducted by Waters and Marzano (2006), however, is seminal to this study. Their findings also included specific practices used by superintendents in fulfilling their leadership responsibilities. As discussed later in Chapter 3, foundational to the design of questions for the survey used in this study, was two of those five high-leverage responsibilities: “Non-negotiable goals for achievement and instruction,” and “Monitoring goals for achievement and instruction” (Waters & Marzano, 2006, p. 4).

Creating goals for student achievement. Supporting the need for superintendents to create non-negotiable goals for achievement and instruction, as described as a particular responsibility by Waters and Marzano (2006), is also present in other studies. In an earlier study, Bjork (1993) in an article entitled, *Effective Schools—Effective Superintendents: The Emerging Instructional Leadership Role*, highlighted an important aspect of goal setting for a superintendent,

Leadership at this level involves sending messages and role cues to participants at the lower levels in the organization, not only through clearly stating the organization’s goals, but also demonstrating their importance by making important instructional changes and rewarding participants who support these goals. (Bjork, 1993, p. 251)

Bjork goes on to suggest, “Clearly stated instructional goals are an essential part of the superintendent’s vision for the future of the school district” (1993, p. 253).

More recently, Leithwood, Patten and Jantzi (2010), discuss the powerful effects school leaders have on student learning and improvement. In particular, establishing, creating, and clarifying shared goals relative to student academic achievement is an essential contribution to the path of school improvement (Leithwood, Patten and Jantzi, 2010). Hough (2014) identified that superintendents of high-achieving districts develop collaborative goals to evaluate the effectiveness of instruction. “Even after a common understanding of goals and values are developed, superintendents must take action to show the importance of accountability” (Hough, 2014, p. 51).

Bjork, Browne-Ferrigno and Kowalski (2014) argue that the educational reform in the United States, especially over the last two decades, has dramatically changed the role of the superintendent. “As a consequence, superintendents are being viewed as pivotal actors in the

complex algorithm for managing districts and leading policy implementation efforts” (Bjork, Browne-Ferrigno & Kowalski, 2014, p. 444). Bjork, et al. (2014) highlights that the role of superintendent, as teacher-scholar, can be traced back to scholarly reports as early as 1890. By the 1920s, school boards became more business dominated. During this time, the role of superintendent as manager and CEO became more prevalent (Bjork, et al., 2014). Functions such as democratic-political leader, applied social scientist, and communicator also emerged as important facets to the role of superintendent. Each of these roles, including that of instructional leader, has been affirmed as being a part of a set of interdependent roles and functions of a superintendent. Bjork, Browne-Ferrigno and Kowalski (2014), highlighted the role of superintendent as instructional leader, in particular—especially as expectations for public schools have increased. Perhaps other more managerial roles, while still necessary, have become more latent with an increased need for the superintendent to lead instructionally—by specifying goals to assess their success (Bjork, Browne-Ferrigno & Kowalski, 2014).

Monitoring goals for student achievement. As recommended by Waters and Marzano (2006), another responsibility of superintendents is to monitor goals for student achievement. Simply creating goals is not sufficient, as outlined by Waters and Marzano (2006). To be most effective, superintendents must also continually monitor goals for student achievement. In the earlier study conducted by Murphy and Hallinger (1986), they concluded that simply establishing goals for student achievement was not enough, but instead they must be monitored, district-wide. In their study, Murphy and Hallinger (1986) found that successful superintendents reported that they regularly monitored curriculum and instruction, and did so in a distributive fashion, meaning that they set clear, non-negotiable goals for learning and instruction, yet provided autonomy and allowed building-level leadership teams to determine how to best meet

these goals. This included creating the competency in other central office administrators to monitor these goals continually (Murphy & Hallinger, 1986).

In a paper presented at the Annual Meeting of the American Educational Research Association in 1995, Bredeson reported that successful superintendents emphasize the importance of instructional leadership by continually monitoring instructional goals and activities. His findings indicate, “They monitored activities, kept the school board apprised of important issues, coordinated district processes, ‘hired good people’ to do curriculum and instruction work and ‘let them carry the ball’” (Bredeson, 1995, p. 8). Bredeson found that empowering of others and monitoring progress were essential elements of the role of superintendent as it pertains to curriculum development and instructional leadership (Bredeson, 1995).

Peterson (1999) purported that effective superintendents also monitor the success of instructional goals by giving the autonomy and authority to principals by allowing them to, with key check points, continually promote district instructional goals. Often these goals might have been co-established with the superintendent and the principal as a part of the goals and objectives constructed as a part of the school site plan (Peterson, 1999). Peterson (1999) concluded that the superintendent, as a part of creating a vision and organizational structure, must also adapt the structure to constantly assess and evaluate the districts’ progress toward meeting goals and objectives.

Sullivan and Shulman (2007) argue that the constant monitoring of initiatives is what allows leaders to not only experiment, but also modify goals when they are not meeting expectations. This also includes the close monitoring and empowerment of other leaders that

assist in fulfilling the instructional goals through close monitoring of quality leadership and instruction (Sullivan & Shulman, 2007).

In a more recent study conducted by Waldrom and McLeskey (2010), the authors highlighted the need to create a collaborative culture. This happens when goals are created for school improvement, they are continually monitored and data is presented, but that they are adjusted along the way if they are not working (Waldron & McLeskey, 2010). This is supported by DuFour and Marzano (2011) in their book *Leaders of Learning: How District, School, and Classroom Leaders Improve Learning*. In this book, an entire chapter was devoted to the ongoing monitoring of student learning (DuFour & Marzano, 2011). As found in the above studies regarding the superintendent as instructional leader, DuFour and Marzano (2011) also stress the importance of collaborative leadership and partnership with other stakeholders in order to ensure student learning.

Lastly, in support of the importance of monitoring goals for student achievement, Hough (2014) found, “The agreement of superintendents and central office administrators concerning accountability may indicate commonly understood goals and a common understanding of how those goals are monitored with in a school district” (p. 48). Hough (2014) concluded that organizations are more likely to be able to accomplish goals when they are monitoring key indicators and on-going progress.

To underscore the importance of monitoring goals, Waters and Marzano (2006) stated, “If not monitored continually, district goals can become little more than pithy refrains that are spoken at district and school events and highlighted written reports” (p. 12). Waters and Marzano (2006) highlighted the significance of monitoring and examining goals in such a way that they are also being adjusted to continually meet the instructional needs of students.

“Effective superintendents ensure that each school regularly examines the extent to which it is meeting achievement targets” (Waters & Marzano, 2006, p. 12).

Influence of superintendents’ experience on student achievement. Plotts and Gutmore (2014) found data that suggests that, “experienced superintendents can have a positive influence on achievement.” The more experience a superintendent has within their state, the more influence and positive impact they appeared to have on student performance (Plotts & Gutmore, 2014). Sullivan and Shulman (2005) also concluded that student achievement tends to improve during the last years of a superintendent’s administration. It is unclear if this increase in student achievement is related to the relationships built during the superintendent’s time at the district, preparation for a next job, or overall experience (Sullivan and Shulman, 2005). Conversely, Chingos, Whitehurst and Lindquist (2014) found “Student achievement does not improve with longevity of superintendent service within their districts” (p. 8).

In a study conducted by Hough (2014), the researcher found that one of the largest reasons why a superintendent accepted their position was to have a bigger impact on student achievement. In addition, “As CEOs of school districts, superintendents provide leadership that is critical to student success” (Hough, 2014, p. 32). Yet, Glass and Franceschini (2007) found in a similar study that only 42.5% of superintendents felt as though they were effective at having a positive impact on student achievement.

On the converse, Chingos, Whitehurst and Lindquist (2014), found that there is not a real link between length of service and student achievement. There was not a significant difference between new superintendents, nor those that served for long periods of time. In fact, the typical tenure of a superintendent within a district is usually only three to four years. In particular,

“Superintendents account for a small fraction of a percent (0.3 percent) of student differences in achievement” (p. 1).

As indicated by the above research, superintendents have a responsibility to be an instructional leader. Those that are most successful create goals for achievement and instruction and then monitor them on an on-going basis. Lastly, the amount of experience a superintendent has also contributes to their overall success in impacting student achievement.

Digital Professional Learning Networks

Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). Flanigan (2011) stated:

As budget cuts continue to limit district-level training opportunities PLNs take an organic, grassroots approach to professional development. Administrators and teachers say such networks reduce isolation, promote autonomy, and provide inspiration by offering access to support and information not only within the walls of a school but also around the globe. (p. 1)

Trust (2012) indicated that the way individuals learn has changed. PLNs provide adaptive, flexible, online spaces to learn new information and connect with other professionals worldwide (Trust, 2012). The next section explores professional development standards and the use of online communities for professional development.

Professional development standards and the use of online communities in the development of professionals. Learning Forward (2015), (formerly the National Staff Development Council) is an international association dedicated to the professional learning and

development of educators. As a part of the Standards for Professional Learning, professional development “increases educator effectiveness and results for all students [and] occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment” (“Standards for Professional,” 2015). Learning Forward recognizes that professional development occurs in face-to-face, online, and blended models. The organization, as a part of these standards states:

Technology is rapidly enhancing and extending opportunities for professional learning. It particularly facilitates access to, sharing, construction, and analysis of information to enhance practice. Technology exponentially increases possibilities for personalizing, differentiating, and deepening learning, especially for educators who have limited access to on-site professional learning or who are eager to reach beyond the boundaries of their own work setting to join local or global networks to enrich their learning. (“Standards for Professional,” 2015)

The Learning Forward standards make explicit what educators need to help students by focusing on the elements of professional learning.

In a study conducted by Spanneut, Tobin and Ayers (2011), superintendents self-identified areas for continued professional and leadership development. Their study focused exclusively on superintendents and their professional development needs based on the six Educational Policy Standards as cited in the 2008 ISLLC standards. This study found that superintendents have a high interest in their own professional development. The study also cited that, “While principals are central for leading instructional improvements at school building levels, the instructional leadership of superintendents is essential for those improvements to occur throughout their school systems” (Spanneut et al., 2011, p. 13).

Reeves and Berry (2009) looked closer at educational administration preparation programs. They point out that certification and professional development of school administrators were not monitored by state departments of education until the 20th century. As states began to assume responsibility, they still relied heavily on universities as a primary source for professional development and performance (Reeves & Berry, 2009). Of significance, their study calls for stronger professional development standards that focus on instructional leadership and improvement (Reeves & Berry, 2009).

Dimmock (2014) argues for the need to create better frameworks that connect research and practice to professional development. Dimmock (2014) also proposes that models of professional development should be designed and mobilized in a high-quality and relevant way. One such way that has proven successful is through the creation of professional learning communities (PLCs) that provide social learning contexts to research-engaged practices (Dimmock, 2014).

Professional learning networks (PLNs) as proposed by Perez (2012), offer a way for leaders to get access to the most current of information. Perez (2012) acknowledges that there are varied definitions of PLNs, but at the very least, they “involve sharing work-related ideas with a network of colleagues via various digital communication (and even face-to-face) for the betterment of one’s professional practice” (p. 20). The other added benefit of PLNs is that it allows participants to help each other through the collaboration and thinking with colleagues, while gaining access to timely information and communicate about events. Perez (2012) highlights that PLNs are robust because they are offered in a variety of technologies, each which may appeal to a different audience or meet a particular need. While not specifically speaking to the professional development of superintendents, Learning Forward advocates for “at least 30%

of the technology budget be devoted to teacher development” (Mizell, 2010, p. 14). Mackey and Evans (2011) suggest that the most effective and connected professional learning network models blend online and offline interactions. The next section explores professional development in a blended model. That is professional development that incorporates traditional venues with components of online communities.

Blended models of professional development. Blended models of professional development involve interweaving both in-person and online sessions. Sometimes the online sessions might occur after a face-to-face orientation, but that is not always the case (Fishman, et al., 2013). The Fishman et al. (2013) study found that online professional development can be just as impactful on practices and student learning as face-to-face modalities. Li and Greenhow (2015) explored how the use of Twitter at conferences, as well as other backchannels, have a positive impact on conference participation and reinforce the dissemination of information. Li and Greenhow (2015) define a backchannel as an online space that provides parallel, unofficial means of communication that are still central to the themes of the conference, but might allow for opportunities for expanded learning. The researchers suggest that backchannels allow for conference feedback, encourage participation of those that might not otherwise speak in a formal setting, they extend the conversation beyond that of just a single speaker, as well as encourage engagement of both new and veteran members to the conference community or association (Li & Greenhow, 2015).

While not specifically a study on superintendents, research by Cochrane and Narayan (2012), proposed that social learning technologies be incorporated into the professional development of teachers. In particular, Cochrane and Narayan (2012) found that the use of social media and social learning technologies aids in the creation of communities of practice

(COP) that allows learners to investigate and explore course content in a social context. The main difference between traditional (didactic) environments and a COP is that COP, by their nature, tend to continually evolve, explore and cultivate concepts (Cochrane & Narayan, 2012).

Ross, Maninger, LaPrairie and Sullivan (2015) conducted a mixed method study to examine how educators are using Twitter to expand their professional development opportunities beyond traditional venues. The population for their study was limited to Twitter because of its ability to connect users worldwide for professional growth, support and feedback (Ross et al., 2015). Ross et al. (2015) found that educators are already using, or want to use, Twitter for professional development. “Survey responses from 160 educators, all accessed through education related hashtags used specifically to facilitate education related discussion, showed that 94% are actively using Twitter to engage with their PLNs in professional learning” (Ross et al., 2015, p. 73). However, the researchers also suggest that further studies should be conducted on the use of social media for professional development, and in particular, blended methods of professional development, that use social networking (Ross et al., 2015). The next section explores the use of social media as a means of professional development.

Use of Twitter and social media in the professional development of educators. In a study conducted by Sauers and Richardson (2015), an analysis of over 180,000 tweets by 115 educators, concluded that Twitter was being used as a mechanism for creating communities of professionals. While Sauers and Richardson (2015) acknowledge that other social media tools such as Facebook, wikis and blogs are utilized to connect, Twitter appears to be the most popular choice among educational leaders. “The results of this study indicated that school leaders overwhelmingly used Twitter for educational purposes and to create communities of practice focused on educational issues” (Sauers and Richardson, 2015, p. 127). Sauers and Richardson

(2015) argue that the use of Twitter by educational leaders allows for the creation of networks of school leaders as a source of professional development, learning and growth that would otherwise not be possible due to issues of geography and proximity.

In a study conducted by Fucoloro (2012), the researcher investigated the use of online professional development networks, by educators, as a means for collaborating with other professionals to advance their own learning and that of their students. Fucoloro found, “Educators used Twitter significantly more than most other social media for informal, online professional development and overwhelmingly indicated that Twitter was their favorite social media application for informal professional development” (2012, p. 172). Fucoloro (2012) also reported that the use of social media by educators provided them a means to participate in professional development and create connections that would have otherwise been impossible. Fucoloro (2012) discovered that educators that participated in online professional development using social media felt that it was more effective than professional development provided to them by their employer. Fucoloro (2012) uncovered that the reasons why educators overwhelmingly preferred Twitter was related to the following themes: “community, convenience, sharing, informal learning, professional improvement and isolation reduction” (p. 175).

In a qualitative study conducted by Brauer (2014), the researcher found superordinate themes of educators that participated in online professional learning networks. It was found that first, there is an inherent need for educators to participate in an environment in which they can share, exchange resources and help others grow. Second, that social networking was a powerful tool that allowed educators to make connections, share and collaborate, and it was through this process of sharing and participating that allowed them to be a more effective educator. Lastly,

artifacts shared and published online, because they are a permanent part of a professional's digital footprint, are likely to be of high caliber and reliable. One of Brauer's interviewees dubbed posting something online as the 'Grandma Rule.' This rule was developed under the premise, "If he was proud enough to repeat this information to his grandmother, then he believed it was worthy of publishing it online" (Brauer, 2014, p. 131). As noted by Brauer (2014), this does not obviate responsibility on the part of the other members of the digital professional learning network in using sound professional judgment in considering sources and conducting subsequent research relevant to the information they are consuming.

Zellmer (2014) looked at one particular subnetwork of Twitter, #IAedchat, and the role it played in the professional learning and development of educational leaders. As a part of this phenomenological qualitative study, the researcher found that the following themes emerged: "Networking, sharing knowledge and resources, starting and extending dialogue, sense of belonging, reflective thinking, inspiration, benefits of #IAedchat, and drawbacks of #IAedchat (Zellmer, 2014, pp. 89-94). In totality, Zellmer (2014) found of the subnetworks that he studied, the benefits of an online community far outweighed the drawbacks in helping educational leaders deal with their ever-changing and demanding careers in educational administration.

Hardy (2014) purports that social media has opened up many new possibilities for educators to communicate. Not only does it allow educators to follow and explore areas of interest for professional development, it also serves as a mode of advocacy. Hardy reports that, "It appears that most teaching trade unions, the Department for Education and education publishing houses are all aware of the hunger [...] to collaborate, share develop and meet (2014, p. 274). The author proposes that perhaps this could be because social media provides a more engaging, on-your-time venue that does not require travel, a hotel stay or a registration fee

(Hardy, 2014). “There are no financial costs, and the technology is, by and large, easy. Nor are there gatekeepers who might prevent teachers taking to cyberspace” (Hardy, 2014, p. 268). To better understand the role social media can play in the professional development of adults, the next section explores social and adult learning theories.

Social and adult learning theories. Lev Vygotsky (1978) stressed the importance of social interaction in children as a way of making meaning of the world around them. Vygotsky (1978) argued that social interaction was an integral part of the learning process and the way in which knowledge is acquired. Vygotsky also devised the “zone of proximal development” to describe that area in which goes beyond what a child can do independently versus doing interdependently or with others. Albert Bandura (1977) posited that learning, while a cognitive process, occurs in a social context by observing others. It is through this process of observation and interaction in which learning occurs (Bandura, 1977). Vygotsky’s and Bandura’s research has served as constructs and theoretical lenses for educators, and has direct implications to the teaching and learning of children (MacLeod & Golby, 2003).

Malcolm Knowles (1980), in a book entitled *The Modern Practice of Adult Education: From Pedagogy to Andragogy* differentiates between pedagogy and andragogy. “Pedagogy” means, literally, the art and science of teaching children” (p. 40). Andragogy, in contrast, is “the art and science of helping adults learn” (Knowles, 1980, p. 43). Knowles predicated his work on andragogy upon four crucial assumptions about learners as they mature that differentiates itself from traditional pedagogy:

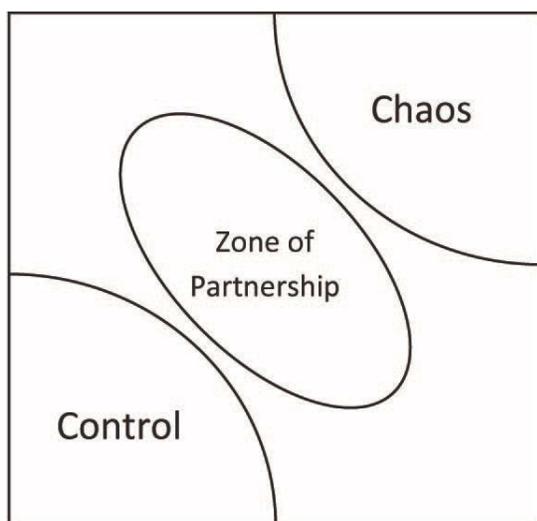
- 1) Their self-concept moves from one being a dependent personality toward being a self-directed human being;
- 2) they accumulate a growing reservoir of experience that becomes increasingly rich resource for learning;
- 3) their readiness to learn becomes

oriented increasingly to the developmental tasks of their social roles; and 4) their time perspective changes from one of postponed application of knowledge to immediacy of application and accordingly, their orientation toward learning shifts from one of subject-centeredness to one of performance-centeredness (Knowles, 1980, pp. 44-45).

Tinsley and Lebak (2009) conducted a study that built on Vygotsky's (1978) "zone of proximal development." The researchers coined the term "zone of reflective capacity" (Tinsley & Lebak, 2009). In particular, this is the ability for adults to expand their capacity for reflection and learning when they are collaborating with others that share the same goals (Tinsley & Lebak, 2009). Taking this a step further, Cheesebrow (2012) introduced the "Zone of Partnership" (p. 4). It is within the zone of partnership that critical reflection occurs based on people's trust and understanding of each other. Cheesebrow (2012), as depicted in Figure 1, argues, "Between chaos and control is an area where human inventiveness, creativity, productivity, and ownership flourish" (p. 5).

Figure 1

Zone of Partnership



Fucoloro emphasizes that adults require as learners, a “need for control, flexibility, feedback, and self-direction (2012, p. 5). Liou and Daly (2014) suggest that professional learning communities can play a significant role in creating the trust and dialogue required as an important approach to making changes to teaching and learning. “An increasing number of studies call for needs to transform schools in to PLCs to better improve teachers’ instructional practices and capacity for teaching and learning” (Liou & Daly, 2014, p. 782). This approach allows educators the ability to collaborate and in return learn and build a professional community (Liou & Daly, 2014). Collectively the theories around social and adult learning theories align with the constructs behind digital professional learning networks.

Summary

Chapter Two reviewed the literature and analyzed the germane research relevant to the superintendents’ responsibilities as an instructional leader, participation in digital professional learning networks and the use of social media as a means for professional development. However, a gap exists in the research that connects participation in digital professional learning networks and superintendents’ abilities to fulfill their responsibilities as an instructional leader. This study focused on a gap in the literature that examines the potential relationship between participation in digital PLNs and the ability for superintendents to fulfill their responsibilities as an instructional leader. Chapter Three describes the methodology used in the study, including how the research was designed, the population and sample were selected, instrumentation, data collection and analysis.

Chapter Three: Methodology

Introduction

This chapter describes how this research study was designed, including the procedures by which the population and sample were selected, instrumentation that was used, and how the data was collected and analyzed. In addition, this chapter explores potential bias in the research, as well as measures this study took to ensure validity and reliability.

Previous literature examines whether the leadership of the superintendent has an impact on student achievement (Björk & Kowalski, 2005; Waters & Marzano, 2006; Leithwood, Patten & Jantzi, 2010; Waldron & McLeske, 2010; Waldron & McLeskey, 2010; Chingos, Whitehurst & Lindquist, 2014; Björk, Browne-Ferrigno & Kowalski, 2014; Hough, 2014). To an increasing degree, literature has begun to explore how leadership networks establish themselves in digital spaces as a means of impacting practice and focusing on issues surrounding education (Sauers & Richardson, 2015; Li & Greenhow, 2015; Carpenter and Krutka, 2015; Ross, Maninger, LaPrairie & Sullivan, 2015). This study focused on a gap in the literature that examines the potential relationship between school district superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader.

Purpose

The purpose of this quantitative study was to examine the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006). This study focused on two of the five high-leverage responsibilities: "Non-negotiable goals for achievement and instruction," and "Monitoring goals for achievement and

instruction” (Waters & Marzano, 2006, p. 6). Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). All superintendents of public schools in New York State were surveyed to assess their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership and their participation in digital professional learning networks.

Research Questions

1. Do superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent?
2. Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:
 - a. Creating non-negotiable goals for achievement and instruction
 - b. Monitoring goals for achievement and instruction
3. Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

Research Design

This study utilized a nonexperimental design approach, using a survey as a means of data collection (Creswell, 2014). This approach allowed for the ability to look for trends within the population of New York State superintendents about their opinions and attitudes regarding digital professional learning networks, as well as identify their self-reported behaviors relative to their practices as an instructional leader. In addition, correlational research design allowed this

researcher to explore if there is an association among variables in a way that might better explain their prospective relationship (Creswell, 2015). This method assisted in establishing if there is a relationship between New York State superintendents' participation in digital professional learning networks and their self-reported practices to fulfill their responsibilities as an instructional leader.

The quantitative approach to data collection also allowed for the coding of data in a way that best answers the research questions (Vogt, Gardner & Haeffele, 2012). The conceptual framework of instructional leadership as developed by Waters and Marzano (2006) and the frameworks of Flanigan (2011) and Trust (2012) guided and defined digital professional learning networks. In addition, the worldview this research used to better explore this study is postpositive in nature (Creswell, 2014). This is because the philosophical approach of the postpositivism worldview lends itself to answering the research questions of this study, quantitatively, while providing objective evidence of something that might otherwise be considered subjective in nature (Creswell 2014; Creswell 2015). As such, this researcher relied on the complexity of views, actions and behaviors of superintendents and their interactions with others through their participation in digital professional learning networks, but allowed for the data collected to be coded and quantified (Creswell, 2014).

Sample and Sampling Procedures

The population for this study included all New York State public school superintendents, excluding New York City. Superintendents were chosen as a population for the study as a result of readily available lists published by the New York State Education Department. The sampling design was done in a single-stage. The sample was limited to just New York State

superintendents to serve as a representative group of school district leaders due to the limited timeframe for the program of study.

According to the *Directory of Public and Non-Public Schools and Administrators in New York State*, as compiled and published by the New York State Education Department (2016), there are 733 public school districts. Included in the 733 are 37 school districts that are a component of the New York City Education system, as well as three school districts that contract out 100% of their students to neighboring districts. Exclusive of New York City and the three-100% contract districts, 692 public school district superintendents were included in the study in an effort to obtain a representative, generalized sample of superintendents in New York State (Creswell, 2014; Creswell, 2015). Furthermore, all school district superintendents were included in the sample in an effort to remove bias from the selection and maximize validity (Vogt, Gardner & Haefele, 2012). Due to the vast differences in school governance, superintendents in New York City were excluded from this study (DOE Leadership, n.d.).

Instrumentation

Survey questions were developed by this researcher, for the purposes of this study, in consultation with the dissertation chair and the professors of research at the Sage Colleges (Creswell, 2015). In addition to obtaining demographic and geographic information, the major content sections in the survey were driven from the research reviewed in Chapter Two and focused on participation in digital professional learning networks and the responsibilities of a superintendent as an instructional leader. Structured questions in both continuous and categorical scales were used as a part of the survey (Vogt, Gardner & Haefele, 2012; Creswell, 2014). The complete survey is attached and found in Appendix A.

In order to collect information to best answer the research questions, this researcher developed a content mapping matrix that led the review of literature and also guided the development of survey questions. The survey questions contained the following categories: demographics, professional networks, participation in digital professional learning networks including means of participation and extent, as well as their self-reported ability to fulfill the specific practices of an instructional leaders as defined by Waters and Marzano (2006). In creating the survey, this researcher used the practices outlined by Waters and Marzano (2006) as a foundation and structure to formulate questions related to instructional leadership. Likewise, the characteristics of digital professional learning networks, as described by Flannigan (2011) and Trust (2012), were used as a means for constructing questions to assess superintendents' participation in digital PLNs.

The content mapping matrix also assisted in assuring that each of the components of the research questions were addressed, as well as equally balanced across the survey (i.e. one component of the survey was being more heavily assessed than another). Lastly, the content mapping matrix also aligned the research topics, research questions and survey questions in order to provide a clear connection to the intended contents/items for the instrument (Alemu, 2016).

Data Collection

This researcher applied to the Institutional Review Board of the Sage Colleges on November 3, 2016, and received approval from the institution on December 2, 2016, to conduct this study. An invitation to complete the survey was emailed to all public-school superintendents in New York State, excluding New York City. The survey was distributed electronically using Survey Monkey and self-administered. Included in the invitation was a description of the purpose of the survey, as well as a link to Survey Monkey. The first page of the survey provided

information about confidentiality, informed consent to the survey, as well as an opportunity to opt-out. Furthermore, Survey Monkey, as a part of their privacy policy, agreed to safeguard respondents' information. As a part of the Privacy Policy of Survey Monkey, the data collected as a part of this survey is owned by this researcher ("Privacy Policy," 2016).

In addition to obtaining demographic and geographic information, the major content sections in the survey focused on participation in digital professional learning networks and the responsibilities of a superintendent as an instructional leader. Structured questions in both continuous and categorical scales were used as a part of the survey (Vogt, Gardner & Haeffele, 2012; Creswell, 2014). The complete survey is attached and found in Appendix A.

The survey was opened on Saturday, January 28, 2017, and closed on Tuesday, February 21, 2017. During the window that the survey was open, three email reminders were sent to non-respondents in an effort to increase response rate and ensure nonresponse bias (Vogt, Gardner & Haeffele, 2012). Upon closing the survey, 134 superintendents (19.36%), of the 692 included in the sample, responded. Three of the respondents opted out of midway or exited the survey prior to completion. This led to a total of 131 valid responses (18.93%).

Data Analysis

The data was exported from Survey Monkey and transferred into *Statistical Package for the Social Sciences* (SPSS) for further analysis, which included descriptive and inferential statistics (IBM, 2015). All analyzed data is being kept within the guidelines as set forth by the Institutional Review Board (Creswell, 2015). The data analysis included all raw data, the percentage of the respondents of the survey, as well as non-respondents (Creswell, 2014). SPSS was used as a means of quantifying and providing a descriptive analysis of the independent and dependent variables (Creswell, 2014). The first level of analysis was descriptive, to provide a

summary of the responses from the sample, including basic characteristics of the distribution of responses (Bernhardt, 2013). The analysis function of SPSS was used to create frequencies of nominal-level and interval-level variables (IBM, 2015). This also allowed for the ability to collapse items into scales (Creswell, 2014).

The second level of analysis included inferential statistics to draw conclusions about the sample. Conducting an inferential analysis of the relationship among the variables also allowed for hypothesis testing, the creation of a confidence interval of the scores and use of the effect size approach in determining significance of the data collected (Creswell, 2015). This was done by using SPSS to run a nonparametric correlation between those respondents that accessed a digital professional learning network and their self-reported ability to fulfill the responsibilities of an instructional leader as defined by Waters and Marzano (2006). In particular, this was achieved by using the Kendall's tau-b (τ_b) correlation coefficient to determine the strength of the relationship between the variables. Kendall's tau-b was used as the chosen measure due to the small sample size (*Laerd Statistics*, n.d.). Furthermore, these approaches allowed for testing of the null hypothesis (Creswell, 2014; Creswell 2015).

Researcher bias

All superintendents of the 692 public school districts were emailed and asked to participate in the survey to obtain a representative, generalized sample of superintendents in New York State (Creswell, 2014; Creswell, 2015). Furthermore, this sampling method allowed bias to be removed from the selection and maximize validity (Vogt, Gardner & Haeffele, 2012). Other than the doctoral dissertation chair and research professors, this researcher did not involve others in the collection, coding or analysis of data.

Nonetheless, it is important to note that this researcher has identified this area of study because of his inherent belief that participation in digital professional learning networks has a positive influence on the ability of a superintendent to fulfill their responsibilities as an instructional leader. That is the notion that networks of people who come together, regardless of boundaries still have a positive impact on practice. Substantiating the survey questions with use of the foundations created by Waters and Marzano (2006) and Flannigan (2011) and Trust (2012) are an attempt to remove any bias and preconceived notions this researcher may bring to the study.

Reliability and Validity

Reliability is defined by Alemu (2016) as being “free from measurement error” (p. 53). To ensure reliability of the study, this researcher utilized a self-administered mode of survey administration so that all respondents received exactly the same set of survey questions (Vogt, Gardner & Haeffele, 2012). This method of survey administration also allowed for a low probability of being able to identify respondents (Vogt, Gardner & Haeffele, 2012). As noted by Alemu (2016), “Consistency doesn’t guarantee accuracy! ...That is why we need another measure to make sure the results are accurate—which is validity” (p. 55).

Validity in quantitative research is defined by Creswell as, “whether one can draw meaningful and useful inferences from scores on the instruments” (2014, p. 160), ensured by looking at the validity of the content of the instrument. In the case of this study, the instrument is the survey and inferences are how respondents interpret the questions.

Construct validity was addressed by using the responsibilities and associated practices of an instructional leader as outlined by Waters and Marzano (2006). In addition, respondents were

provided with a definition of a digital professional learning network as defined by Flannigan (2011) and Trust (2012).

In an effort to ensure content validity, as well as improve the quality of the questions, format and scales, the survey was pre-tested with ten fellow doctoral students. Their comments were used to eliminate any misunderstandings and clarify wording. The comments and feedback received were incorporated into the survey. The revised survey was then pilot tested with three school administrators as a way to identify any issues undetected during the pre-test and as a means to create the final instrument for electronic distribution to New York State superintendents (Alemu 2016; Creswell, 2014; Creswell 2015).

To ensure external validity of the study, and in an effort to remove bias from the selection, the entire population of New York State superintendents, excluding New York City, were sampled (Vogt, Gardner & Haeffele, 2012). The demographic information collected from the sample was then compared against the most recent snapshot of superintendents in New York as published in “Snapshot IX: The 9th Triennial Study of the Superintendency in New York State” by the New York State Council of School Superintendents (NYSCOSS, 2016). This was done in order to ensure the validity of the sample in this study was indicative of the larger population of superintendents in New York State.

Conclusion

Chapter Three described how the research was designed, including the procedures by which the population and sample were selected, instrumentation that was used, and how the data was collected and analyzed. In addition, this chapter explored potential bias in the research, as well as measures this study took to ensure validity and reliability. Chapter Four will provide

descriptive information about the study, including characteristics of the sample, evidence collected from the data to answer the research questions, and a summary of the findings.

Chapter Four: Analysis

Introduction

School district leaders continually respond to the evolving landscape of technology, generally as it pertains to the use of technology within their district (Bjork, Browne-Ferrigno & Kowalski, 2014). Digital learning networks, a growing subset of technology, and the effectiveness of these structures as they apply to the superintendent, are worthy of closer research.

The on-going, timely professional development of educators is an essential element in student achievement and instruction (Waters & Marzano, 2007). According to the organization, Learning Forward (2010), in its publication *Why Professional Development Matters*, it is important for school leaders to attend and participate in professional development with teachers, so that they can support its outcomes. However, school district professional development plans will often focus solely on the professional development needs of teachers, especially since teachers are considered to be the staff that is most closely involved in the direct instruction of students. As a result, many school leaders do not have adequate access to professional development specifically related to their leadership roles (Mizell, 2010). More importantly, several studies have concluded that leadership of superintendents also matters. Albeit an indirect relationship, the instructional leadership practices of superintendents have a statistically significant impact on student achievement (Waters & Marzano, 2006; Dufour & Marzano, 2011).

As a result, superintendents have instructional leadership responsibilities that require them to engage in professional development that will support the outcomes of teaching and learning (Waters & Marzano, 2006; Dufour & Marzano, 2011). Yet, time and budget constraints, as well as access to relevant and adequate professional development often serve as

barriers (Hardy, 2014). Consequently, traditional ‘sit and get’ venues for professional development, such as conferences, workshops, in-services and/or educational service agency providers may not be within reach (Hardy, 2014). With a clear need for on-going professional development for superintendents as instructional leaders, digital professional learning networks have emerged in the past several years as a means for on-going access to relevant and timely information (Flannigan, 2012; Mackey, 2011; Carpenter, 2015).

This study focused on a gap in the literature that examines the potential relationship between school district superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader. The purpose of this quantitative study was to examine the relationship between New York State superintendents’ participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006).

Research Questions

1. Do superintendents in New York State participate in digital professional learning networks as defined by Flannigan (2011) and Trust (2012), and if so, to what extent?
2. Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:
 - a. Creating non-negotiable goals for achievement and instruction
 - b. Monitoring goals for achievement and instruction
3. Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

To answer the research questions, all 692 superintendents of public schools in New York State were surveyed to assess their participation in digital professional learning networks and their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership as defined by Waters & Marzano (2006). This sample was exclusive of New York City and districts that contract out 100% of their students.

The survey was designed to find out if superintendents in New York State (1) participate in digital professional learning networks; (2) fulfill the responsibilities of an instructional leader; and (3) if there is a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader. This chapter describes and analyzes the data collected from the survey. It begins with an overview of the survey participants and then addresses each of the three research questions.

Descriptive Analysis of the Sample

The population for this study included all superintendents of New York State public schools, excluding New York City. An invitation to complete the anonymous survey was emailed to 692 superintendents. Included in the invitation was a brief description of the purpose of the survey, as well as a link to the online survey on Survey Monkey. 134 superintendents responded to the survey, three opted out prior to completing the survey, for a total of 131 respondents (19%). This sample included 86 males (66%) and 45 females (34%). 97% of the superintendents in the sample identified as being white, the remaining superintendents identified as Black or African-American (2%) or as being from multiple races (1%), one person declined to identify with a race. The ages of the sample were predominantly between 45-54 years old (47%) or between 55-64 years old (33%). 8% of the sample were between 65-74 years old. Table 1

depicts the gender, race and ages of the superintendent respondents as compared to New York State where similar data points were available (NYSCOSS, 2016).

According to the most recent snapshot of superintendents in New York as published in “Snapshot IX: The 9th Triennial Study of the Superintendency in New York State” by the New York State Council of School Superintendents (NYSCOSS), “The mean age of chief school officers was 53.5 years overall” (2016, p. 10). The sample for this study indicated a mean age of 45-54 years. In addition, NYSCOSS (2016) published that 30% of superintendents in New York State are women and the number of women in the profession is increasing. This study was comprised of 34% women. NYSCOSS (2016) also reported 95% of the respondents to their survey were white, 2% were African American, with a trend toward increasing diversity. In this sample, 97% of the superintendents identified as being white, the remaining superintendents identified as Black or African-American (2%) or as being from multiple races (1%). Overall, the sample in this study is indicative of the population of superintendents in New York State based on data published by NYSCOSS in their “Snapshot IX” (2016).

Table 1

Respondents’ Gender, Race and Age

Sample (n=131)	Percentage of Sample	Comparison to NYS	
Gender			
Males	65.65%		70.00%
Females	34.35%		30.00%
Race		<u>Females</u>	<u>Males</u>
White	96.97%	93.60%	96.90%
Black or African American	1.52%	3.20%	1.20%
From multiple races	0.76%		
Age			
18-24 years old	0.00%		
25-34 years old	0.76%		
35-44 years old	12.12%		
45-54 years old	46.97%		
55-64 years old	32.58%		

65-74 years old	7.58%	
75 years old or older	0.00%	

All respondents had at least ten years of experience in the field of education as a whole, which is inclusive of teaching and educational administration experience. The majority (93%) had 20 or more years of experience, with 21% of that group having had 35 or more years of experience. Of the respondents, 44% of the sample had already obtained a doctoral degree and eight percent are currently in the process of working on their doctorate. Of the 131 superintendents, only twenty (15%) have worked in a state other than New York at some period in their career. Table 2 depicts the certifications, level of education and professional experience in the field of education for the sample. Relative to certifications in particular, respondents could choose more than one certification and some are equivalent certifications (e.g. School District Leader and School District Administrator) and dependent upon the year in which it was granted by the New York State Education Department.

Table 2

Respondents' Certifications, Educational Experience and Professional Experience

Sample (n=131)	Percentage of Sample
NYS Certifications	
School Administrator/Supervisor (SAS)	57.58%
School District Administrator (SDA)	92.42%
School Business Administrator (SBA)	5.30%
School District Leader (SDL)	12.12%
School Building Leader	9.85%
School District Building Leader (SDBL)	0.76%
Educational Experience	
Obtained doctoral degree	43.18%
No doctoral degree	51.52%
Doctoral degree in progress	6.06%
Professional Experience in education	
Less than 10 years	0.00%
At least 10 years but less than 15 years	0.76%

At least 15 years but less than 20 years	6.06%
At least 20 years but less than 25 years	27.27%
At least 25 years but less than 30 years	26.52%
At least 30 years but less than 35 years	18.18%
35 years or more	21.21%

All of the superintendents that responded were from districts of less than 10,000 students, as depicted in Table 3. The highest percentage of respondents (34.09%) were employed by smaller school districts that enrolled between 250-999 students. In addition, the highest percentage of superintendent respondents (43.94%) were from districts categorized by the New York State Education Department as being from average needs/resource capacity, the second largest group (30.30%) were categorized as being from rural districts in the high needs/resource capacity index. Based on public school enrollment information obtained from the Information and Reporting Services department of the New York State Education Department, the sample is closely representative to the enrollment of the entire population included in this study as compared in Table 3 (New York State Education Department, 2017).

Table 3

Number of Students Enrolled at Respondents' School Districts

Number of Students Enrolled	Percentage of Sample	Comparison to NYS
Less than 250	3.03%	6.83%
250-999	34.09%	31.69%
1,000-1,999	30.30%	25.58%
2,000-4,999	22.73%	24.85%
5,000-9,999	9.85%	9.16%
10,000 or more	0.00%	1.89%

Of the respondents, the highest percentage (46.15%) of respondents worked in districts that employed approximately 100-300 people as depicted in Table 4.

Table 4

Approximate Total Employees Working at School District

Total Employees	Percentage of Sample
Less than 100	14.62%
101-200	25.38%
201-300	20.77%
301-400	10%
401-500	4.62%
501-600	6.15%
601-700	3.08%
701-800	2.31%
801-900	0.77%
901-1,000	2.31%
1,001-1,100	2.31%
1,101-1,200	2.31%
1,201-1,300	0.77%
1,301-1,400	0%
1,401-1,500	0.77%
More than 1,500	3.83%

Research Question #1: Do superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent?

The first research question was to determine if superintendents in New York State participate in digital professional learning networks, and if so, to what extent. In order to address this research question, the survey asked superintendents 19 questions regarding digital professional learning networks, which also questioned the purpose and extent of their participation. The 19 questions are numbered 13 through 31 in the attached survey found in Appendix A. Prior to this section, found on page three of the survey, participants were provided with a definition of digital professional learning networks. In particular, digital professional learning networks are defined as groups of individuals who participate in an online professional

learning community (e.g. social media or other online discussion groups) in an effort to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). The questions asked were related to their use of social media for both professional and social purposes.

Of the respondents, 60% indicated they have a Facebook account, 64% indicated they have a Twitter account, and 17% selected that they participate on some other digital professional learning network. Other digital professional learning network included LinkedIn, Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community.

43% of the superintendents that have a Facebook account answered that they view or access Facebook at least once a day or multiple times a day as demonstrated in Table 5.

Approximately one-quarter (26%) indicated that they do not access or view Facebook at all.

Table 5

How often Facebook is Viewed or Accessed

Frequency	Percentage of Sample
Multiple times a day	24.58%
Once a day	18.64%
A few times a week	15.25%
A few times a month	9.32%
Less than once a month	7.63%
Not at all	24.58%

Of those that accessed Facebook, on average, 40% of the time it was for professional purposes, 42% was for social purposes, and 33% of the time it was for both professional and social purposes.

An increased number, almost two-thirds (64%) of the superintendent respondents, answered that they have a Twitter account, for which 41% access one or more times per day.

Those superintendents that access or view Twitter indicated, on average, they did so for professional purposes 63% of the time, for social purposes 13% of the time, and for both professional and social purposes 36% of the time.

While fewer superintendents (17%) indicated they have an account on some other type of digital professional learning network (such as LinkedIn, Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community), those who did have some other type of account also indicated that they only accessed it a few times a week or a few times a month. Additionally, the respondents accessed these other digital networks predominantly for professional purposes.

Based on the above descriptive analysis, superintendents in New York State do access digital professional learning networks. In addition, those that do access digital networks appear to do so one or more times a day for both professional and social purposes.

Research Question #2: Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:

- a. Creating non-negotiable goals for achievement and instruction**
- b. Monitoring goals for achievement and instruction**

The second question sought to determine the extent to which superintendents self-reported their ability to fulfill two of the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006). In order to address this research question, two questions, each with multiple subparts, were asked on the survey. The two questions are numbered 32 and 33 and are found on page four of the survey located in Appendix A.

Question 32 asked participants to rank each of the practices Waters and Marzano (2006) linked to direct or indirect leadership as it pertains to the first half of Research Question #2: Creating non-negotiable goals for achievement and instruction. Superintendents ranked their ability to fulfill each particular practice on a scale of: almost never, seldom, occasionally, frequently, almost always or not applicable. Table 6 depicts the percentage and ranges in which 116 superintendents self-reported fulfilling these practices. Each of the frequencies were also assigned a weighted value, as indicated by the parenthetical number displayed after the frequency in Table 6. The weighting was used to calculate a mean or central tendency for each of the practices for the sample.

As indicated in Table 6, the respondents rated their ability to fulfill the six practices associated with creating non-negotiable goals achievement and instruction (Waters & Marzano, 2006), based on the mean, as more than occasionally (> 3), but less than almost always (< 5). These ratings suggest that the superintendent respondents overwhelmingly believe that they are accomplishing those tasks necessary for fulfilling this particular responsibility as defined by Waters and Marzano (2006).

Question 33 asked participants to rank each of the practices Waters and Marzano (2006) linked to direct or indirect leadership as it pertains to the second half of Research Question #2: Monitoring goals for achievement and instruction. Superintendents ranked their ability to fulfill

Table 6

Practices related to creating non-negotiable goals for achievement and instruction

Practice	Almost Never (1)	Seldom (2)	Occasionally (3)	Frequently (4)	Almost Always (5)	N/A	Mean
Modeling instructional design	0%	3.45%	24.14%	54.31%	18.10%	0%	3.87
Establishing clear priorities	0%	0%	2.59%	42.24%	55.17%	0%	4.53
Adopting instructional methodologies	0%	0.86%	17.24%	56.90%	25%	0%	4.06
Incorporating instructional methodologies	0%	8.62%	24.14%	42.24%	21.55%	3.45%	3.79
Adopting multi- year, non- negotiable goals	1.72%	4.31%	9.48%	37.07%	46.55%	0.86%	4.23
Ensuring instructional program	0%	4.31%	17.24%	45.69%	32.76%	0%	4.07

each particular practice on a scale of: almost never, seldom, occasionally, frequently, almost always or not applicable. Table 7 depicts the percentage and ranges in which 114 superintendents self-reported fulfilling these practices.

Like question 32, in question 33 each of the frequencies were also assigned a weight, as indicated by the parenthetical number displayed after the frequency in Table 7. The value was used to calculate a mean or central tendency for each of the practices for the sample.

Table 7

Practices related to monitoring goals for achievement and instruction

Practice	Almost Never (1)	Seldom (2)	Occasionally (3)	Frequently (4)	Almost Always (5)	N/A	Mean
Using an evaluation program	0.88%	3.51%	28.07%	38.50%	28.07%	0.88%	3.90
Monitoring achievement	0.88%	3.51%	13.16%	47.37%	34.21%	0.88%	4.12
System to manage change	1.77%	2.65%	17.70%	49.56%	28.32%	0%	4.00
Annually evaluating principals	0%	0.89%	7.14%	26.79%	64.29%	0.89%	4.56
Reporting student achievement data	0.89%	1.79%	11.61%	42.86%	42.86%	0%	4.25
Ensuring that the curricular needs are met	0%	0%	9.73%	46.90%	43.36%	0%	4.34
Observing classrooms	0%	3.54%	17.70%	39.82%	38.05%	0.88%	4.13
Coordinating efforts	0%	0.88%	16.81%	50.44%	31.86%	0%	4.13

Similarly as found in question 32 (Table 6), the respondents to question 33 (Table 7) rated their ability to fulfill the eight practices Waters and Marzano (2006) associated with monitoring goals for achievement and instruction, based on the mean, as more than occasionally (> 3), but less than almost always (< 5). These ratings suggest that the superintendent

respondents overwhelmingly believe that they are accomplishing those tasks necessary for fulfilling this particular responsibility as defined by Waters and Marzano (2006).

Research Question #3: Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

The third research question was designed to determine if there was a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader. In order to answer this research question, a nonparametric correlation coefficient was determined between those who participate in digital professional learning networks and their self-reported ability to fulfill the responsibilities of an instructional leader as defined by Waters and Marzano (2006).

A Kendall's tau-b (τ_b) correlation was used to determine if there is a statistically significant relationship ($\tau_b < .05$) between superintendents that participate in digital professional learning networks and their self-reported ability to fulfill their responsibilities as an instructional leader. Kendall's tau-b was used as the chosen measure due to the small sample size (*Laerd Statistics*, n.d.). Furthermore, these approaches allowed for the testing of the null hypothesis, which is, participation in digital professional learning networks has no impact on the sample's ability to fulfill their responsibilities as an instructional leader (Creswell, 2014; Creswell 2015).

As indicated in Table 8, of the combined practices, there was statistical significance for only two of the practices for those that participate in digital professional learning networks with Facebook and two discretely different practices for those that participate with Twitter. The strength of the association between the two variables in each of the correlations is low and weakly indicates a relationship between the variables. Correlation is significant at the 0.05 level.

There was no statistical significance of the relationship between any of the practices for those superintendents that participate in other forms of digital professional learning networks such as LinkedIn, Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community.

Table 8

Combined practices and correlation coefficient

Practice	Facebook	Twitter	Other PLN
Creating non-negotiable goals			
Modeling instructional design	.111	.056	-.034
Establishing clear priorities	.024	.134	-.036
Adopting instructional methodologies	.118	-.023	-.101
Incorporating instructional methodologies	.097	-.011	-.091
Adopting multi-year, non-negotiable goals	.018	.190*	-.089
Ensuring instructional program	.045	.012	.107
Monitoring goals			
Using an evaluation program	.221*	-.095	-.002
Monitoring achievement	-.029	-.034	.039
System to manage change	.031	.233*	.141
Annually evaluating principals	.071	.031	-.087
Reporting student achievement data	.026	.038	.251
Ensuring that the curricular needs are met	.186*	-.189	.069
Observing classrooms	.015	.043	-.154
Coordinating efforts	.015	.096	-.106

*Correlation is significant at the 0.05 level.

In the case of those superintendents that access Facebook as a digital professional learning network (n=73), there was a statistically significant relationship in using an instructional evaluation program that accurately monitors implementation of the district's instructional program ($\tau_b = .221$, $p < .016$) and ensuring that the curricular needs of all student populations are met ($\tau_b = .186$, $p < .049$). The correlation coefficient was .221 for respondents that monitor goals by using an evaluation program and .186 for those respondents that monitor goals by ensuring curricular needs are met. There were no other statistically significant relationships between any

of the other practices and those superintendents that access Facebook as a digital professional learning network.

In the case of those superintendents that access Twitter as a digital professional learning network (n=80), there was a statistically significant relationship in adopting multi-year, non-negotiable goals for achievement and instruction ($\tau_b = .190$, $p < .046$) and having a system in place to manage instructional change (action plan, project plan, etc.) ($\tau_b = .233$, $p < .014$). In the case of those respondents that access Twitter, there was a correlation coefficient of .190 of those creating goals by adopting multi-year, non-negotiable goals and .233 of those monitoring goals and using them as a system to manage change. There were no other statistically significant relationships between any of the other practices and those superintendents that access Twitter as a digital professional learning network.

For those superintendents that participate in other forms of digital professional learning networks such as LinkedIn, Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community, none of the correlation coefficients resulted in statistically significant relationship for any of the variables.

Based on the Kendall's tau-b correlation, in looking at all fourteen practices, there is a statistically significant relationship ($\tau_b < .05$) between superintendents that participate in digital professional learning networks and their self-reported ability to fulfill their responsibilities as an instructional leader for four (29%) of the fourteen practices. Breaking it down further, only two out of 14 practices were significant for Facebook (14%) and two out of the 14 practices were significant for Twitter (14%). As mentioned above, the strength of the association between the two variables in each of these correlations is low and the relationship between the variables is weak. There was no significance (0%) amongst any of the variables and those respondents that

accessed some other type of digital professional learning network. This does not allow the null hypothesis to be rejected, which is, participation in digital professional learning networks has no impact on the ability of a superintendent to fulfill their responsibilities as an instructional leader.

Summary

Chapter Four described and analyzed the data collected from the survey. It provided an overview of the survey participants and then addressed each of the three research questions. The purpose was to examine the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006).

Regarding research question one, the analysis demonstrates that superintendents in New York State do participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012). Those who do access digital networks appear to do so one or more times a day for both professional and social purposes. Pertaining to research question two, the analysis exhibits that superintendents in New York State self-report that they work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006). Based on the mean, superintendents frequently work to create non-negotiable goals for achievement and instruction and are also frequently monitoring goals for achievement and instruction.

Lastly, concerning research question three, Kendall's tau-b coefficients determined that there is a statistically significant relationship among some of the practices associated with the dependent variables (the school leaders' ability to fulfill the two specific responsibilities of an instructional leader) and the independent variables (participation in digital professional learning networks). This does not allow the null hypothesis to be rejected; that participation in digital professional learning networks have no impact on the sample's ability to fulfill their

responsibilities as an instructional leader. Chapter Five provides conclusions and explores implications for the practice of superintendents based on these findings.

Chapter Five: Discussion

Introduction

This chapter begins by providing a summary of findings. It then presents conclusions drawn as a result of the study. Lastly, recommendations are made for practice, policy and future research.

The on-going, timely professional development of educators is an essential element in student achievement and instruction (Waters & Marzano, 2007). School district professional development plans often focus on the professional development needs of teachers, especially since they are most closely involved in the direct instruction of students. However, several studies have concluded that leadership also matters, and it has a statistically significant impact on student achievement (Waters & Marzano, 2006). Thus, superintendents, as instructional leaders, have a responsibility to engage in professional development that will support the outcomes of teaching and learning (Mizell, 2010). Yet time and budget constraints, as well as access to relevant and adequate professional development, often serve as barriers for school district leaders (Bredeson, 1995; Waldron & McLeskey; 2010). Consequently, traditional ‘sit and get’ venues for professional development, such as conferences, workshops, in-services and/or educational service agency providers may not be within reach for the specific and timely needs facing superintendents (Hardy, 2014). With a clear need for on-going professional development for instructional leaders, digital professional learning networks have emerged in the past several years as a means for on-going access to relevant and timely information (Flannigan, 2012; Mackey, 2011; Carpenter, 2015).

Purpose of the Study

The purpose of this quantitative study was to examine the relationship between New York State superintendents' participation in digital professional learning networks and their abilities to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006). This study focused on two of the five high-leverage responsibilities: "Non-negotiable goals for achievement and instruction," and "Monitoring goals for achievement and instruction" (Waters & Marzano, 2006, p. 6). Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). All superintendents of public schools in New York State were surveyed to assess their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership and their participation in digital professional learning networks.

Research Questions

1. Do superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent?
2. Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:
 - a. Creating non-negotiable goals for achievement and instruction
 - b. Monitoring goals for achievement and instruction

3. Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

To answer the research questions, all superintendents of public schools in New York State were surveyed to assess their participation in digital professional learning networks and their perceptions of their ability to fulfill the two specific responsibilities of instructional leadership as defined by Waters & Marzano (2006).

Summary of Findings

Research question one investigated if superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent? Research question two examined superintendents in New York State, and their self-reported ability to fulfill the responsibilities of an instructional leader as described by Waters and Marzano (2006). Research question three explored whether a relationship exists between those superintendents that participate in digital professional learning networks and their self-reported ability to fulfill their responsibilities as an instructional leader.

Research Question #1: Do superintendents in New York State participate in digital professional learning networks as defined by Flanigan (2011) and Trust (2012), and if so, to what extent?

As a part of the survey, a definition of digital professional learning networks was provided to superintendents. It was defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) in an effort to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012).

Finding #1. Respondents access Facebook for professional purposes. More than half of the respondents (60%) access Facebook as a digital professional learning network, many of them (43%) access Facebook multiple times per day.

These findings support the work of Hardy (2014) in which the researcher purports that social media has opened up many new possibilities for educators to communicate. Not only does it allow educators to follow and explore areas of interest for professional development, it also serves as a mode of advocacy. Hardy reports that, “It appears that most teaching trade unions, the Department for Education and education publishing houses are all aware of the hunger [...] to collaborate, share develop and meet (2014, p. 274). The author proposes that perhaps this could be because social media provides a more engaging, on-your-time venue that does not require travel, a hotel stay or a registration fee (Hardy, 2014). “There are no financial costs, and the technology is, by and large, easy. Nor are there gatekeepers who might prevent teachers taking to cyberspace” (Hardy, 2014, p. 268).

Finding #2. A majority of respondents (64%) access Twitter as a digital professional learning network, of which many (41%) access it multiple times per day.

This finding aligns with the study conducted by Fucoloro (2012), in which the researcher investigated the use of online professional development networks, by educators, as a means for collaborating with other professionals to advance their own learning and that of their students. Fucoloro found, “Educators used Twitter significantly more than most other social media for informal, online professional development and overwhelmingly indicated that Twitter was their favorite social media application for informal professional development” (2012, p. 172). Fucoloro (2012) also reported that the use of social media by educators provided them a means to participate in professional development and create connections that would have otherwise

been impossible. Fucoloro (2012) discovered that educators that participated in online professional development using social media, felt that it was more effective than professional development provided to them by their employer. Fucoloro (2012) uncovered that the reasons why educators overwhelmingly preferred Twitter was related to the following themes: “community, convenience, sharing, informal learning, professional improvement and isolation reduction” (p. 175).

Finding #3. Other digital professional learning networks, such as LinkedIn, Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community are not as popular amongst respondents, with far fewer (17%) accessing them as a learning network.

This finding aligns with the research of Fucoloro (2012) as outlined above and is reiterated by Ross, Maninger, LaPrairie and Sullivan (2015). The researchers conducted a mixed method study to examine how educators are using Twitter to expand their professional development opportunities beyond traditional venues. The data from their study found that educators are already using, or want to use, Twitter for professional development (Ross et al., 2015). “Survey responses from 160 educators, all accessed through education related hashtags used specifically to facilitate education related discussion, showed that 94% are actively using Twitter to engage with their PLNs in professional learning” (Ross et al., 2015, p. 73). However, the researchers also suggest that further studies should be conducted on the use of social media for professional development, and in particular, blended methods of professional development, that use social networking (Ross et al., 2015).

Finding #4. Of the respondents that do access digital professional learning networks, the majority (63%) tend to access Twitter for professional purposes in comparison to Facebook

(40%). In addition, on average, slightly over one-third (35%) of those superintendents access both Facebook and Twitter for both social and professional purposes.

This finding supports the notion of digital professional learning networks being able to satisfy the needs of adults as social learning. As argued by Vygotsky (1978) social interaction is an integral part of the learning process and the way in which knowledge is acquired. Vygotsky also devised the “zone of proximal development” to describe that area which goes beyond what a child can do independently versus doing interdependently or with others. Albert Bandura (1977) posited that learning, while a cognitive process, occurs in a social context by observing others. It is through this process of observation and interaction in which learning occurs (Bandura, 1977).

Vygotsky’s and Bandura’s research has served as constructs and theoretical lenses for educators, and has direct implications to teaching and learning (MacLeod & Golby, 2003). Tinsley and Lebak (2009) conducted a study that built on Vygotsky’s (1978) “zone of proximal development.” The researchers coined the term “zone of reflective capacity” (Tinsley & Lebak, 2009). In particular, this is the ability for adults to expand their capacity for reflection and learning when they are collaborating with others that share the same goals (Tinsley & Lebak, 2009). Digital professional learning networks allow adults the ability to learn and reflect in a social context, and perhaps more importantly, at time in which is convenient and surrounding a topic that is relevant to their needs.

Research Question #2: Do superintendents in New York State work to fulfill the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006) with regard to:

- a. Creating non-negotiable goals for achievement and instruction**
- b. Monitoring goals for achievement and instruction**

The second question sought to determine the degree to which superintendents self-reported their ability to fulfill two of the responsibilities of an instructional leader as evidenced by Waters and Marzano (2006). In order to address this research question, two questions, each with multiple subparts, were asked on the survey. Superintendents ranked their ability fulfill each particular practice on a scale of: almost never (1), seldom (2), occasionally (3), frequently (4), almost always (5) or not applicable (0).

Finding #5. Based upon these ratings, a majority of the superintendent respondents, with a mean average of four, frequently believe they are creating non-negotiable goals for achievement and instruction.

This finding supports the work of Leithwood, Patten and Jantzi (2010), in which they discuss the powerful effects school leaders have on student learning and improvement. In particular, establishing, creating, and clarifying shared goals relative to student academic achievement is an essential contribution to the path of school improvement (Leithwood et al., 2010). Hough (2014) identified that superintendents of high-achieving districts develop collaborative goals to evaluate the effectiveness of instruction. “Even after a common understanding of goals and values are developed, superintendents must take action to show the importance of accountability” (Hough, 2014, p. 51).

Bjork, Browne-Ferrigno and Kowalski (2014) argue that the educational reform in the United States, especially over the last two decades, has dramatically changed the role of the superintendent. “As a consequence, superintendents are being viewed as pivotal actors in the complex algorithm for managing districts and leading policy implementation efforts” (Bjork et al., 2014, p. 444). Bjork, et al. (2014) highlights that the role of superintendent, as teacher-scholar, can be traced back to scholarly reports as early as 1890. By the 1920s, school boards

became more business dominated. During this time, the role of superintendent as manager and CEO became more prevalent (Bjork, et al., 2014). Functions such as democratic-political leader, applied social scientist, and communicator also emerged as important facets to the role of superintendent. Each of these roles, including that of instructional leader, has been affirmed as being a part of a set of interdependent roles and functions of a superintendent. Bjork et al., (2014) highlighted the role of superintendent as instructional leader, in particular—especially as expectations for public schools have increased. Perhaps other more managerial roles, while still necessary, have become more latent with an increased need for the superintendent to lead instructionally—by specifying goals to assess their success (Bjork et al., 2014).

Finding #6. A majority of the superintendent respondents, with a mean average of four and three-quarters, more than frequently (4) and almost always (5) monitor goals for achievement and instruction.

This finding aligns with the work of Peterson (1999) in which the research purported that effective superintendents also monitor the success of instructional goals by giving the autonomy and authority to principals by allowing them to, with key check points, continually promote district instructional goals. Often these goals might have been co-established with the superintendent and the principal as a part of the goals and objectives constructed as a part of the school site plan (Peterson, 1999). Peterson (1999) concluded that the superintendent, as a part of creating a vision and organizational structure, must also adapt the structure to constantly assess and evaluate the districts' progress toward meeting goals and objectives.

Sullivan and Shulman (2007) argue that the constant monitoring of initiatives is what allows leaders to not only experiment, but also modify goals when they are not meeting expectations. This also includes the close monitoring and empowerment of other leaders that

assist in fulfilling the instructional goals through close monitoring of quality leadership and instruction (Sullivan & Shulman, 2007).

In a more recent study conducted by Waldrom and McLeskey (2010), the authors highlighted the need to create a collaborative culture. This happens when goals are created for school improvement, they are continually monitored and data is presented, but that they are adjusted along the way if they are not working (Waldron & McLeskey, 2010). This is supported by DuFour and Marzano (2011) in their book *Leaders of Learning: How District, School, and Classroom Leaders Improve Learning*. In this book, an entire chapter was devoted to the ongoing monitoring of student learning (DuFour & Marzano, 2011). As found in the above studies regarding the superintendent as instructional leader, DuFour and Marzano (2011) also stress the importance of collaborative leadership and partnership with other stakeholders in order to ensure student learning. Lastly, in support of the importance of monitoring goals for student achievement, Hough (2014) found, “The agreement of superintendents and central office administrators concerning accountability may indicate commonly understood goals and a common understanding of how those goals are monitored with in a school district” (p. 48). Hough (2014) concluded that organizations are more likely to be able to accomplish goals when they are monitoring key indicators and on-going progress.

Research Question #3: Is there a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader?

The third research question was designed to determine if there was a relationship between the independent variable (participation in digital professional learning networks) and the

dependent variable (superintendents' ability to fulfill the two specific responsibilities as an instructional leader). In order to answer this research question, a nonparametric correlation coefficient was determined between those who participate in digital professional learning networks and their self-reported ability to fulfill the responsibilities of an instructional leader as defined by Waters and Marzano (2006).

Finding #7. While there was a statistically significant relationship for four out of 14 of the practices associated with these responsibilities, it is not strong enough to overwhelmingly demonstrate that there is a relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader. This does not allow the null hypothesis to be rejected, which is, participation in digital professional learning networks has no impact on the ability of a superintendent to fulfill their responsibilities as an instructional leader.

This study was not able to determine a direct relationship between those superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader, as outlined by the findings of Waters and Marzano (2006). In the recommendations that follow, this researcher hypothesizes that if there was intentionality in topic and frequency in use of digital professional learning networks, there exists a latent ability in the virtual relationships created that would assist superintendents in fulfilling their responsibilities as instructional leaders. This would include examining specifically what those conditions and environment looked like for there to be a positive correlation and impact.

Conclusions

Several studies focus on varying roles of superintendent leadership. Amongst the various descriptions of leaders, the superintendent can be considered a transformational leader (Fenn &

Mixon, 2011), ethical leader (Fowler & Johnson, 2014), supervisor (Fullan, Park & Williams, 1987), and/or a collaborative leader (King, 2002). This study focused specifically on the role and responsibilities of the superintendent as an instructional leader. Based upon their self-reported ability to fulfill their responsibilities as an instructional leader as outlined by Waters & Marzano (2006), superintendents in New York State are instructional leaders that create and monitor goals for student achievement.

Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). Flanigan (2011) stated:

As budget cuts continue to limit district-level training opportunities PLNs take an organic, grassroots approach to professional development. Administrators and teachers say such networks reduce isolation, promote autonomy, and provide inspiration by offering access to support and information not only within the walls of a school but also around the globe. (p. 1)

Trust (2012) indicated that the way individuals learn has changed. PLNs provide adaptive, flexible, online spaces to learn new information and connect with other professionals worldwide (Trust, 2012). Superintendents in New York State do participate in digital professional learning networks such as Facebook and Twitter, but Twitter is more often used for professional purposes.

There is a gap in the research that explores the relationship between superintendents that participate in digital professional learning networks and their ability to fulfill their responsibilities as an instructional leader. The findings of this study indicate that superintendents

in New York State are participating in digital professional learning networks and that they are also fulfilling the responsibilities of an instructional leader as defined by Waters and Marzano (2006). While this study did not show that participation in digital professional learning networks has an impact on the ability of a superintendent to fulfill their responsibilities as an instructional leader, additional research could explore the potentially latent power of these networks, especially considering social and adult learning theories.

As mentioned in Chapter One, this research was also inspired by the work of Simon Sinek (2009) in his book *Start With Why: How Great Leaders Inspire Everyone to Take Action* and Dennis Cheesebrow (2012) in his book *Partnership: Redefined Leadership Through the Power of &*. While this research was not able to prove a direct relationship between the use of digital professional learning networks and the ability for a superintendent to fulfill their responsibilities of an instructional leader, it did indicate that social media has the attention of superintendents in New York State and they are using it for professional purposes. Hashtags in social media allow users to hone in on topics and discussions that are relevant and timely. It reinforces the writing of Sinek (2009), and it starts with why. Moreover, it allows leaders to create partnerships and to connect to others so that together we can improve. Cheesebrow (2012) stresses the importance of leadership with an emphasis on partnership; digital professional learning networks are virtual partnerships intended to connect individuals so that together participants can share, learn and improve.

Recommendations for Policy and Practice

As a result of conducting this study, this researcher offers recommendations for policy, practice and future research. These recommendations are offered with the assumption that

further research surrounding participation in digital professional learning networks may yield the result of having a positive impact on leadership practices.

Recommendations for policy. In New York State, Part 100.2(dd) requires that each school district develop, certify and submit a plan for professional development to improve the quality of teaching and learning. While this regulation is targeted at the professional development of teachers, it is recommended that the regulation be updated to advocate for the alignment of professional development for school leaders, including the superintendent to the same topics and areas of focus as offered for teachers. This would ensure that school leaders can support teachers instructional practice and their quality of teaching and learning.

With recent updates to Continuing Teacher and Leader Education (CTLE) requirements in New York State, allowing for the required hours to be counted from online professional learning networks or blended environments may allow for increased engagement of educators. In addition, as acknowledged by the previous research, digital professional learning networks reinforce the theories behind adult and social learning theories. This could also be a change to state policies for acceptable means of meeting the required hours of maintaining certifications.

These updates to policy are supported by the work of Flanigan (2011), who states, “Administrators and teachers say such networks reduce isolation, promote autonomy and provide inspiration by offering access to support and information not only within the walls of a school, but also around the globe” (p. 1). Trust (2012) also indicated that the way individuals learn has changed. Professional learning networks provide adaptive, flexible, online spaces to learn new information and connect with other professionals worldwide (Trust, 2012).

Recommendations for practice. Digital professional learning networks allow educators to obtain timely and relevant information without the constraints of time, budget or location.

Furthermore, it allows for smaller doses of professional development to happen more regularly. This “micro-PD,” because it can be accessed frequently and with ease, may in the long run prove to be a more beneficial way of getting information disseminated.

The social aspect of learning in these digital networks also reinforces the ability for participants to contextualize and make meaning of topics based upon their interactions with others. It furthermore provides a venue for educators to explore options, discover best practices, as well as learn from the mistakes of others.

Providers of professional development should consider alternative delivery methods that incorporate digital professional learning networks, “micro-PD” and blended models into their format. This would allow for flexibility in their offerings, but also the ability for participants to pick and choose those items that are most pertinent and relevant at the time.

In order to be most successful, protocols surrounding digital professional learning networks should be developed. Similar to protocols used for professional learning communities (PLCs), digital networks would more impactful in they followed protocols for best practice.

Lastly, blended models are already being used in higher education. Creating digital professional learning networks could reinforce in class learning for students in educational preparation programs throughout their college career and beyond. It is an area for institutions of higher education to tap into that may engage students in a culture of learning that extends beyond the classroom and beyond obtaining their degree.

Blended models allow for knowledge to expand beyond just face-to-face interactions, and incorporate traditional venues with online communities. The Fishman et al. (2013) study found that online professional development can be just as impactful on practices and student learning as face-to-face modalities. Li and Greenhow (2015) explored how the use of Twitter at

conferences, as well as other backchannels, have a positive impact on conference participation and reinforce the dissemination of information. Li and Greenhow (2015) define a backchannel as an online space that provides parallel, unofficial means of communication that are still central to the themes of the conference, but might allow for opportunities for expanded learning. The researchers suggest that backchannels allow for conference feedback, encourage participation of those that might not otherwise speak in a formal setting, they extend the conversation beyond that of just a single speaker, as well as encourage engagement of both new and veteran members to the conference community or association (Li & Greenhow, 2015). This could easily be implemented by associations, boards of cooperative education services or school districts, within guidelines established by the state departments of education that allow participants to also receive continuing education credit for their involvement and participation.

Recommendations for future research. First, additional research would be beneficial in determining the impact of “micro-PD” on practice. This research should explore if these smaller bursts of professional development have more of an influence on teaching and learning. With time constraints on superintendents, and the way in which some adults consume information, the efficacy of shorter bursts of professional development should be explored.

A second recommendation for future studies includes researching the function and potential strength of virtual partnerships and their ability to influence practice and leadership. This research should extend beyond just instructional leadership, but also look at other responsibilities and practices of school leaders. With ongoing discussions in the virtual world, similar to the study conducted by Zellmer (2014) that followed a particular Twitter hashtag, there are also groups of educators that participate in weekly or even daily discussions surrounding

educational leadership. Future research should explore if those that participate, and the frequency in which they participate has a positive impact on their practice.

Since this study was limited just to superintendents, further research should explore the impact of digital professional learning networks on teachers, building leaders and other educational professionals. Since digital professional learning networks and virtual discussions surrounding education expand the globe, future research should expand beyond the confines of New York State and look to other states and countries. In addition, had this study included principals as the unit of study, this researcher hypothesizes that there might be an even more direct relationship between participation in digital professional learning networks and the principals ability to fulfill their responsibilities as an instructional leader.

Fourth, research regarding the future direction of professional development given advances in technology would be beneficial. Such research may also influence and change our practices as educators. As mentioned previously, given the nature of how adults consume information electronically, looking at delivering professional development in a similar format could yield changes in delivery.

Future research could also explore the impact of technology in asynchronous and synchronous learning models and the ability of each of those models on practice. Research that looks at each of the responsibilities as outlined by Waters and Marzano (2006) and the best learning model for providing those competencies to superintendents would be beneficial. Lastly, as a whole, more in-depth study of how superintendents and school leaders in particular acquire knowledge and information would be beneficial to the field. It would also allow for targeted professional development and targeted digital professional learning networks to best meet their needs.

References

- About BOCES. (n.d.). Retrieved July 9, 2017, from <http://www.boces.org/about-boces/>
- Alemu, D. S. (2016). *Dissertation completion guide: A chapter-by-chapter nontechnical guide for graduate research projects*. Latham, NY: Proficient Professionals Group.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bennett, W. J. (1988, April). *American education: Making it work. A report to the President and the American people* (Research Report No. ED 289 959). Washington, DC: Department of Education.
- Bjork, L. G. (1993). Effective schools-effective superintendents: The emerging instructional leadership role. *Journal of School Leadership*, 3, 246-256.
- Bjork, L. G., Browne-Ferrigno, T., & Kowalski, T. J. (2014). The superintendent and educational reform in the United States of America. *Leadership and Policy in Schools*, 13, 444-465.
- Bjork, L. G., & Kowalski, T. J. (2005). *The contemporary superintendent: Preparation, practice, and development*. Thousand Oaks, CA: Corwin Press.
- Brauer, J. D. (2014). *A hermeneutic phenomenological study of school administrators' participation in personal learning networks and privacy issues* (Doctoral dissertation, University of Missouri-Kansas City).
- Bredeson, P. V. (1995, April). *Superintendents' roles in curriculum development and instructional leadership: Instructional visionaries, collaborators, supporters, and delegators*. Paper presented at Annual Meeting of the American Educational Research Association, San Francisco, CA.

- Bredeson, P. V., & Kose, B. W. (2007). Responding to the education reform agenda: A study of school superintendents' instructional leadership. *Education Policy Analysis Archives*, 15(5), 1-26.
- Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: educator professional development via Twitter. *Professional Development in Education*, 41(4), 707-728.
- Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: Educator professional development via Twitter. *Professional Development in Education*, 41(4), 707-728. <http://dx.doi.org/10.1080/19415257.2014.939294>
- Cheesebrow, D. (2012). *Partnership: Redefined leadership through the power of &*. Centerville, MN: Bogman Publishing.
- Chingos, M. M., Whitehurst, G. J. R., & Lindquist, K. M. (2014). School Superintendents: Vital or Irrelevant?. *Brown Center on Education Policy at Brookings*.
- Cochrane, T., & Narayan, V. (2013). Redesigning professional development: reconceptualising teaching using social learning technologies. *Research in Learning Technology*, 21.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Boston, MA: Pearson.
- Cuban, L. (1988). *SUNY Series in Educational Leadership: The managerial imperative and the practice of leadership in schools*. Albany, NY: State University of New York Press.

- Cuban, L. (2001, September). *School Leadership for the 21st Century: Leadership for student learning: Urban school leadership--different in kind and degree*. Washington, DC: The Institute for Educational Leadership.
- Dimmock, C. (2016). Conceptualising the research-practice-professional development nexus: Mobilising schools as 'research-engaged' professional learning communities. *Professional Development in Education*, 42(1), 36-53.
- DOE Leadership. (n.d.). Retrieved June 3, 2017, from NYC department of education website: <http://schools.nyc.gov/AboutUs/default.htm>
- Dufour, R., & Marzano, R. J. (2011). *Leaders of learning: How district, school, and classroom leaders improve student achievement*. Bloomington, IN: Solution Tree Press.
- Elmore, R. F. (2000, Winter). *Building a new structure for school leadership*. Washington, DC: Albert Shanker Institute.
- Elmore, R. F. (2002). *Bridging the gap between standards and achievement: The imperative for professional development in education*. Washington, DC: Albert Shanker Institute.
- Fisher, D., & Frey, N. (2012). Making time for feedback. *Educational Leadership*, September, 42-47.
- Fishman, B., Konstantopoulos, S., Kubitskey, B. W., Vath, R., Park, G., Johnson, H., & Edelson, D. C. (2013). Comparing the impact of online and face-to-face professional development in the context of curriculum implementation. *Journal of Teacher Education*, 64(5), 426-438.
- Flanigan, R. L. (2011). Professional learning networks taking off. In *Education Week* (Vol. 31, pp. 10-12). Editorial Projects in Education, Inc. (Excerpted from *Education Digest*, 77(7), 42-45, 2012, March)

- Flanigan, R. L. (2011, October 26). Professional learning networks taking off. *Education Week*, sec. s, pp. 10-12. Retrieved from <http://www.edweek.org/ew/articles/2011/10/26/09edtech-network.h31.html?qs=2011%20October%2026%20inmeta:Authors=Robin%20L.%20Flanigan&print=1>
- Fucoloro, D. J. (2012). Educators' Perceptions and Reported Behaviors Associated with Participation in Informal, Online Professional Development Networks. *ProQuest LLC*.
- Fullan, M. G., Park, P. B., & Williams, T. R. (1987). *The supervisory officer in Ontario: Current practice and recommendations for the future*. Toronto: Ministry of Education.
- Glass, T. E., & Franceschini, L. A. (2007). *The state of the American school superintendency: A mid-decade study*. Lanham, Md.: Rowman & Littlefield Education.
- Hallinger, P., & Murphy, J. (1982). The superintendent's role in promoting instructional leadership. *Administrator's Notebook*, 30(6), 1-4.
- Hardy, E. A. (2014). Teachers are doing it for themselves: Using social media for professional development and advocacy. *FORUM*, 56(2), 265-276.
- Hough, K. L. (2014). Internal accountability and district achievement: How superintendents affect student learning. *Journal of School Leadership*, 24, 32-60.
- IBM. (2015). SPSS statistics premium gradpack for Windows (Version 23) [Computer software].
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Englewood Cliffs, N.J.: Cambridge Adult Education.
- Laerd Statistics*. (n.d.). Retrieved July 10, 2017, from <https://statistics.laerd.com/>
- Leithwood, K., Patten, S., & Jantzi, D. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly*, 46(5), 671-706.

- Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2004). *Learning from Leadership Project: How leadership influences student learning*. New York, NY: The Wallace Foundation.
- Lewis, T., Rice, M., & Rice, R., Jr. (2011). Superintendents' beliefs and behaviors regarding instructional leadership standards reform. *The International Journal of Educational Leadership Preparation, 1*, 1-13.
- Li, J., & Greenhow, C. (2015). Scholars and social media: Tweeting in the conference backchannel for professional learning. *Educational Media International, 52*(1), 1-14.
- Liou, Y.-H., & Daly, A. J. (2014). Closer to learning: Social networks, trust, and professional communities. *Journal of School Leadership, 24*, 753-795.
- Mackey, J., & Evans, T. (2011). Interconnecting networks of practice for professional learning. *International Review of Research in Open and Distance Learning, 12*(3), 1-18.
- MacLeod, F., & Golby, M. (2003). Theories of learning and pedagogy: Issues for teacher development. *Teacher Development, 7*(3), 345-362.
- Mizell, H. (2010). *Why professional development matters* [Pamphlet]. Oxford, OH: Learning Forward.
- Murphy, J., & Hallinger, P. (1986). The superintendent as instructional leader: Findings from effective school districts. *Journal of Educational Administration, 24*(2), 213-236.
<http://dx.doi.org/10.1108/eb009917>
- Nenty, H. J. (2009). Writing a quantitative research thesis. *International Journal of Educational Science, 1*(1), 19-32.
- New York State Council of School Superintendents. (2016). *Snapshot IX: the 9th triennial study of the superintendency in New York State* [Brochure]. Albany, NY: Author.

- New York State Education Department. (2016, April). *2015-16 public, charter, nonpublic school listings: Directory of public and non-public schools and administrators in New York State* (New York State Education Department, Comp.). Retrieved from <http://www.p12.nysed.gov/irs/schoolDirectory/>
- New York State Education Department. (2017, May 3). District enrollment - all students [Table]. Retrieved from <http://www.p12.nysed.gov/irs/statistics/enroll-n-staff/home.html>
- Pajak, E. F., & Glickman, C. D. (1989). Dimensions of school district improvement. *Educational Leadership, 46*(8), 61-64.
- Perez, L. (2012). Innovative professional development: Expanding your professional learning network. *Knowledge Quest, 40*(3), 20-22.
- Petersen, G. J. (1999). Demonstrated actions of instructional leaders: An examination of five California superintendents. *Education Policy Analysis Archives, 7*(18), 1-23.
- Privacy Policy. (2016, September 12). Retrieved from <https://www.surveymonkey.com>
- Reeves, P., & Berry, J. E. (2009). Preparing, developing, and credentialing k-12 school leaders: Continuous learning for professional roles. *National Council of Professors of Educational Administrations, 1-9*.
- Ross, C. R., Maninger, R. M., LaPrairie, K. N., & Sullivan, S. (2015). The user of Twitter in the creation of educational professional learning opportunities. *Administrative Issues Journal, 5*(1), 55-76. <https://doi.org/10.5929/2015.5.1.7>
- Sauers, N. J., & Richardson, J. W. (2015). Leading by following: An analysis of how k-12 school leaders use twitter. *NASSP Bulletin, 99*(2), 127-146.
- Sinek, S. (2013). *Start with why: How great leaders inspire everyone to take action* (16th ed.). London: Portfolio/Penguin.

- Spanneut, G., Tobin, J., & Ayers, S. (2011). Identifying the professional development needs of school superintendents. *National Council of Professors of Educational Administration*, 1-15. Retrieved from <http://www.ncpeapublications.org>
- Standards for professional learning. (2015). Retrieved December 10, 2016, from <https://learningforward.org/standards/learning-communities>
- Sullivan, S., & Shulman, V. (2005). Managing change: The superintendent as line director of instruction. *International Journal of Leadership in Education*, 8(2), 123-143. <http://dx.doi.org/10.1080/01446190500041784>
- Tinsley, R., & Lebak, K. (2009). Expanding the zone of reflective capacity: Taking separate journeys together. *Networks: An On-line Journal for Teacher Research*, 11(2), 1-11.
- Trust, T. (2012). Professional learning networks designed for teacher learning. *Journal of Digital Learning in Teacher Education*, 28(4), 133-138.
- Vogt, W. P., Gardner, D. C., & Haeffele, L. M. (2012). *When to use what research design*. New York, NY: Guilford Press.
- Waldron, N. L., & McLeskey, J. (2010). Establishing a collaborative school culture through comprehensive school reform. *Journal of Educational and Psychological Consultation*, 20, 58-74.
- Waldron, N. L., & McLeskey, J. (2010). Establishing a collaborative school culture through comprehensive school reform. *Journal of Educational and Psychological Consultation*, 20(1), 58-74. <https://doi.org/10.1080/10474410903535364>
- Waters, J. T., & Marzano, R. J. (2007). School district leadership that works: The effect of superintendent leadership on student achievement. *Spectrum: Journal of School Research and Information*, 25(2), 1-12.

Waters, J. T., & Marzano, R. J., Jr. (2006). *School district leadership that works: The effect of superintendent leadership on student achievement*. Denver, CO: McREL.

Whitehurst, G. J. R., Chingos, M. M., & Gallaher, M.R. (2013). *Do School Districts Matter?.* Brown Center on Education Policy at Brookings.

Zellmer, A. (2014). *School leaders' perceptions of using #iaedchat: A subnetwork of Twitter for professional development and lifelong learning* (Doctoral dissertation, University of South Dakota).

Appendix A: Survey Instrument

Instructional Leadership and Professional Networks

1. Informed Consent

Dear Superintendent,

You are being asked to participate in a research project entitled: Instructional Leadership Practices and Professional Networking of New York State Public School Superintendents.

This research is being conducted by: Deborah Shea, Ed. D, Doctoral Chair/Primary Principal Investigator and Aaron Bochniak, Doctoral Candidate in Educational Leadership at the Sage Colleges in Albany, New York.

1. Purpose of the research:

The purpose of this study is to more fully understand the level and extent at which New York State public school superintendents network professionally, as well as their practices toward creating and monitoring goals for student achievement and instruction. This research will look to find if there is a relationship between those superintendents that participate in professional networks and their ability to fulfill their responsibilities as instructional leaders.

2. Nature and duration of participation:

This survey is being conducted as a one-time, anonymous survey in the period from December 2016 to April 2017.

3. Procedures followed:

This anonymous survey has been emailed to the all superintendents of public school districts in New York State (excluding New York City). All data collected will be within the guidelines as set forth by the Institutional Review Board of the Sage Colleges. All survey data collected will be kept confidential, in locked files and password protected computer files, that are solely accessible to the researchers. This survey does not reveal the identities of respondents nor their districts. Data stored in Survey Monkey, as a part of their privacy policy, agrees to safeguard respondents' information. No IP addresses will be stored and the data collected as a part of this survey will be owned by this researcher ("Privacy Policy," 2016). Data published and/or presented as a part of this study will be in aggregate only – no individual responses will be shared.

Your participation in this survey will contribute to the professional development of school district leaders. The nature of this study poses no risk related to personal information not the confidentiality of respondents.

You may choose not to answer or skip any individual questions, but still continue on with the survey. Participation is voluntary, I understand that I may at any time during the course of this study revoke my consent and withdraw from the study without any penalty. If you have any questions, please contact me by phone at 518-577-2045 or by email at bochna@sage.edu. You may also contact my Doctoral Chair, Dr. Deborah Shea by phone at 518-292-8659 or by email at shead@sage.edu.

I have been given an opportunity to read and keep a copy of this Agreement (to keep a copy, select print from your browser window) and to ask questions concerning the study. Any such questions have been answered to my full and complete satisfaction.

Sincerely,

Aaron T. Bochniak
Doctoral Candidate in Educational Leadership
The Sage Colleges

This research has received the approval of The Sage Colleges Institutional Review Board, which functions to insure the protection of the rights of human participants. If you, as a participant, have any complaints about this study, please contact:

Dr. Donna Heald, PhD
Associate Provost
The Sage Colleges
65 1st Street
Troy, New York 12180
518-244-2326
healdd@sage.edu

* 1. By clicking "Yes," I indicate having full capacity to consent, do hereby volunteer to participate in this research study.

Instructional Leadership and Professional Networks

2. Demographic Information

2. What is your gender?

3. Do you have a doctoral degree?

- Yes
 No
 In progress

4. What NYSED Administrative certification(s) have you received (check all that apply)?

- School Administrator/Supervisor (SAS)
 School District Administrator (SDA)
 School Business Administrator (SBA)
 School District Leader (SDL)
 School Building Leader (SBL)
 School District Business Leader (SDBL)

Other (please specify)

5. What race do you identify with?

- White
- Black or African-American
- American Indian or Alaskan Native
- Asian
- Native Hawaiian or other Pacific Islander
- From multiple races
- Some other race (please specify)

6. What is your age?

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65-74 years
- 75 years or older

7. About how many years of professional work experience do you have in the field of education?

- Less than 1 year
- At least 1 year but less than 5 years
- At least 5 years but less than 10 years
- At least 10 years but less than 15 years
- At least 15 years but less than 20 years
- At least 20 years but less than 25 years
- At least 25 years but less than 30 years
- At least 30 years but less than 35 years
- 35 years or more

8. Of the years of professional work experience in the field of education, how many of those years have been within the state of New York?

- Less than 1 year
- At least 1 year but less than 5 years
- At least 5 years but less than 10 years
- At least 10 years but less than 15 years
- At least 15 years but less than 20 years
- At least 20 years but less than 25 years
- At least 25 years but less than 30 years
- At least 30 years but less than 35 years
- 35 years or more

9. Of the years of professional work experience in the field of education, how many of those years have been in states OTHER than New York?

- None or N/A
- Less than 1 year
- At least 1 year but less than 5 years
- At least 5 years but less than 10 years
- At least 10 years but less than 15 years
- At least 15 years but less than 20 years
- At least 20 years but less than 25 years
- At least 25 years but less than 30 years
- At least 30 years but less than 35 years
- 35 years or more

10. Approximately how many total employees work at your school district?

11. About how many students are enrolled at your school district?

- Less than 250
- 250-999
- 1,000-1,999
- 2,000-4,999
- 5,000-9,999
- 10,000 or more

12. How is your district categorized based upon the Need/Resource Capacity Index as per the NYS Education Department?

- High NRC: Large City District
- High NRC: Urban-Suburban District
- High NRC: Rural District
- Average NRC District
- Low NRC District

Instructional Leadership and Professional Networks

3. Professional Networks

Digital professional learning networks are defined as groups of individuals who participate in an online professional learning community (e.g. social media or other online discussion groups) in an effort to share and learn with other professionals using digital communities and tools (Flanigan, 2011; Trust, 2012). The following questions are related to your use of social media for both professional and social purposes.

13. Do you have a Facebook account?

- Yes
- No
- Other (please specify)

14. Whether or not you have an account, about how often do you view or access Facebook?

- Multiple times a day
- Once a day
- A few times a week
- A few times a month
- Less than once a month
- Not at all

15. When accessing Facebook, what percentage of the time is it for *professional* purposes?

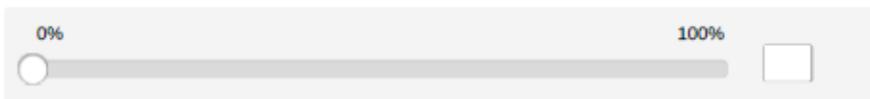
0% 100%

16. When accessing Facebook, what percentage of the time is it for *social* purposes?

0% 100%

17. When accessing Facebook, what percentage of the time is it for **combined professional AND social** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently empty.

18. Do you have a Twitter account?

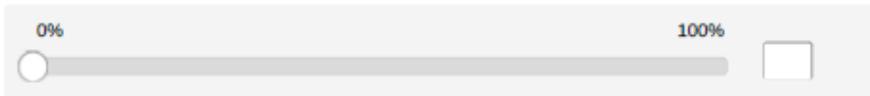
- Yes
 No
 Other (please specify)

19. Whether or not you have an account, about how often do you view or access Twitter?

- Multiple times a day
 Once a day
 A few times a week
 A few times a month
 Less than once a month
 Not at all

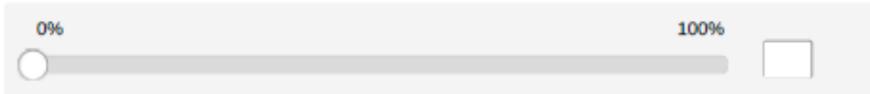
20. When accessing Twitter, what percentage of the time is it for **professional** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently empty.

21. When accessing Twitter, what percentage of the time is it for **social** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently empty.

22. When accessing Twitter, what percentage of the time is it for **combined professional AND social** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently empty.

23. Do you have an account on some other type of digital professional learning network such as Edmodo, Classroom 2.0, The Educators PLN, a wiki or some other type of online community?

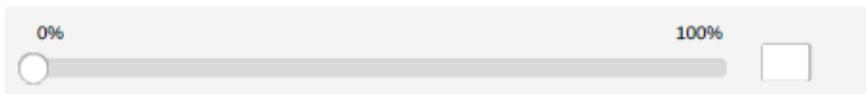
- Yes
- No
- Other (please specify)

24. Whether or not you have an account, about how often do you view or access Edmodo, Classroom 2.0, The Educator's PLN, a wiki or some other type of online community?

- Multiple times a day
- Once a day
- A few times a week
- A few times a month
- Less than once a month
- Not at all

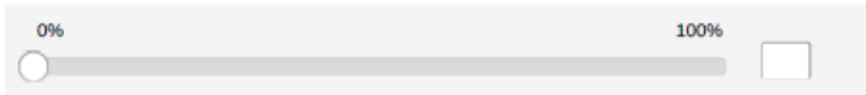
25. When accessing Edmodo, Classroom 2.0, The Educator's PLN, a wiki or some other type of online community, what percentage of the time is it for **professional** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently at 0%.

26. When accessing Edmodo, Classroom 2.0, The Educator's PLN, a wiki or some other type of online community, what percentage of the time is it for **social** purposes?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently at 0%.

27. When accessing Edmodo, Classroom 2.0, The Educator's PLN, a wiki or some other type of online community, what percentage of the time is it for **combined professional AND social purposes**?

0% 100%

A horizontal slider control with a circular knob at the 0% mark and a square checkbox at the 100% mark. The slider bar is currently at 0%.

28. Based on the following items, please rank (#1 most important to #10 least important) the ways you personally stay current and informed about trends and topics in education:

☰	<input type="text"/>	Boards of Cooperative Education Services (BOCES)	<input type="checkbox"/> N/A
☰	<input type="text"/>	Books on specific topics based on district needs	<input type="checkbox"/> N/A
☰	<input type="text"/>	College/University coursework	<input type="checkbox"/> N/A
☰	<input type="text"/>	Conferences	<input type="checkbox"/> N/A
☰	<input type="text"/>	In-person professional development	<input type="checkbox"/> N/A
☰	<input type="text"/>	Online Newsletters (NYSCOSS, NYSSBA, etc.)	<input type="checkbox"/> N/A
☰	<input type="text"/>	Professional organizations (local)	<input type="checkbox"/> N/A
☰	<input type="text"/>	Professional organizations (national)	<input type="checkbox"/> N/A
☰	<input type="text"/>	Social media or other online communities	<input type="checkbox"/> N/A
☰	<input type="text"/>	Webinars	<input type="checkbox"/> N/A
☰	<input type="text"/>	Other	<input type="checkbox"/> N/A

29. Based upon your rankings in the previous question, why did you rank #1 as most important to you?

- School improvement (including sharing systems/programs/approaches to increasing achievement, support for the use of data for accountability systems and instruction, as well as leadership approaches and support networks)?
- Broadening opportunities (including networking with non-school agencies such as social services or business)
- Resource sharing
- Ease of use
- Timeliness of topics
- Other (please specify)

30. When thinking about the relationships you have created in **online communities**, how would you rate the quality of those relationships in regard to your development as a professional relative to the following factors?

	Not effective	Minimally effective	Somewhat effective	Mostly effective	Completely effective	N/A
Ability to meet your professional development needs?	<input type="radio"/>					
Satisfaction with the quality of the relationships created?	<input type="radio"/>					
Likelihood of interacting with your digital cadre in person rather than digitally?	<input type="radio"/>					
Ability to influence your decisions as an educational leader?	<input type="radio"/>					
Ability to have an impact on your school programs?	<input type="radio"/>					

31. When accessing **online communities**, to what extent is it for any of the following reasons?

	Never	Rarely	Sometimes	Frequently	Constantly	N/A
Information, resource, and media sharing?	<input type="radio"/>					
Expanding learning opportunities beyond the confines of the school district?	<input type="radio"/>					
Requesting assistance and offering suggestions?	<input type="radio"/>					
Digital identity/presence and impression management?	<input type="radio"/>					
Connecting and networking?	<input type="radio"/>					

Instructional Leadership and Professional Networks

4. Instructional Leadership

According to a meta-analysis conducted by Waters and Marzano (2006), district level leaders have a significant impact on student achievement. The following questions are related to your practices as a direct or indirect leader of instruction in your school district.

33. How often do you engage in direct or indirect leadership in regard to:

	Almost Never	Seldom	Occasionally	Frequently	Almost Always	N/A
Using an instructional evaluation program that accurately monitors implementation of the district's instructional program	<input type="radio"/>					
Monitoring student achievement through feedback from the instructional evaluation program	<input type="radio"/>					
Use a system in place to manage instructional change (action plan, project plan, etc.)	<input type="radio"/>					
Annually evaluating principals on their ability to accomplish their established goals	<input type="radio"/>					
Reporting student achievement data to the board on a regular basis	<input type="radio"/>					
Ensuring that the curricular needs of all student populations are met	<input type="radio"/>					
Observing classrooms during school visits	<input type="radio"/>					
Coordinating efforts of individuals and groups within the organization to increase reliability of the system, with adjustments by individuals to quickly respond to system failures	<input type="radio"/>					

Instructional Leadership and Professional Networks

5. Professional Experiences and the Work Environment of the Superintendent

34. As a result of my participation in a Professional Learning Network (PLN), I am inspired to meet my goals at work.

- Strongly Disagree
- Disagree
- Neutral/Neither agree nor disagree
- Agree
- Strongly Agree
- Not applicable

35. How improved is your performance as a result of getting feedback from your PLN?

- Not at all improved
- Not so improved
- Somewhat improved
- Very improved
- Extremely improved
- Not applicable

36. I am always challenging myself to grow and to improve my practice.

- Strongly disagree
- Disagree
- Neither disagree nor agree
- Agree
- Strongly agree

37. Communication is valued and practiced consistently in my school district.

- Strongly Disagree
- Disagree
- Neutral/Neither agree nor disagree
- Agree
- Strongly Agree

38. My board of education values my growth as a professional and encourages my ongoing development.

- Strongly Disagree
- Disagree
- Neutral/Neither agree nor disagree
- Agree
- Strongly Agree

39. How often does your board of education give you feedback that is actionable, constructive and apropos to the vision, mission and goals of your school district?

- Not at all often
- Not so often
- Somewhat often
- Very often
- Extremely often

40. How often does your board of education give you feedback that is actionable, constructive and apropos to your growth as a professional?

- Not at all often
- Not so often
- Somewhat often
- Very often
- Extremely often

41. I chose to participate in a Professional Learning Network (PLN) with people that share the same beliefs, interests and views.

- Strongly disagree
- Disagree
- Neither disagree nor agree
- Agree
- Strongly agree
- Not applicable

42. I chose to participate in a Professional Learning Network (PLN) with people that challenge my beliefs, interests and views.

- Strongly disagree
- Disagree
- Neither disagree nor agree
- Agree
- Strongly agree
- Not applicable

43. What type of device did you use to take this survey?

- iPhone / iPad
- Android Phone / Android Tablet
- Other type of Phone / Tablet
- Windows Desktop / Laptop
- Mac Desktop / Laptop
- Chromebook
- Other (please specify)

44. What type of device do you use most for work/professional purposes?

- iPhone / iPad
- Android Phone / Android Tablet
- Other type of Phone / Tablet
- Windows Desktop / Laptop
- Mac Desktop / Laptop
- Chromebook
- Other (please specify)

This concludes the survey. Thank you for your participation. This survey will contribute to the professional development of school district leaders and is greatly appreciated. Please click "Done" at the bottom of the page to conclude the survey and submit your responses.

Appendix B: IRB Approval Letter

School of Health Sciences

Deans Office
65 1st Street
Troy, New York 12180
518.244.2264
Fax: 518.244.4571
sage.edu/academics/health-sciences

December 16, 2016

Aaron Bochniak
16 Arbor Gate Court
Cohoes, NY 12047

IRB PROPOSAL #532-2016-2017
Reviewer: Francesca Durand, Chair

Dear Aaron:

The Institutional Review Board has reviewed your application and has approved your project entitled "Instructional Leadership Practices and Professional Networking of NYS Public Schools." Good luck with your research.

Please refer to your IRB Proposal number whenever corresponding with us whether by mail or in person.

When you have completed collecting your data you will need to submit to the IRB Committee a final report indicating any problems you may have encountered regarding the treatment of human subjects, if the project goes on for more than one year.

Please let me know if you have any questions.

Sincerely,

Francesca Durand, PhD
Chair, IRB

FD/nan

Cc. Dr. Deborah Shea

THE SAGE COLLEGES

RUSSELL SAGE COLLEGE

SAGE COLLEGE OF ALBANY

ESTEVEZ SCHOOL OF
EDUCATION

SCHOOL OF HEALTH SCIENCES

SCHOOL OF MANAGEMENT

SCHOOL OF PROFESSIONAL
& CONTINUING EDUCATION

RUSSELL SAGE ONLINE