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THE ROLE OF ONLINE PROFESSIONAL DEVELOPMENT OPPORTUNITIES FOR TEACHERS IN WESTERN PENNSYLVANIA PUBLIC SCHOOL DISTRICTS

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ABSTRACT

The purpose of this study was to focus on how school districts are using online opportunities, activities, and programs for teacher professional development. The goal of this study was to identify the key indicators of success from principals and central office staff that implement online professional development opportunities in their public school districts.

The research questions investigated how public school district located in Western Pennsylvania are using online professional development opportunities for teacher professional growth. After an initial survey of the 109 public school superintendents in Intermediate Units 1,3,4, and 27, final participants were selected based on varying student and faculty populations, and that have indicated they have been using online professional development opportunities for teachers K-12 for at least one (1) year. Methods of final data collection were face-to-face semi-structured interviews. The interviews were recorded and transcribed to allow for content analysis using identify consensus, supported, and individual themes.

Key findings of the study indicate that the most important factor of a quality online professional development program was a strong leader in the role of building principal. This study discovered the variety of successful ways in which public school districts located in Western Pennsylvania are using online learning opportunities to meet the professional learning needs of their faculty and creates the opportunity for teachers to share ideas and collaborate with colleagues anywhere and anytime.

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1.0 INTRODUCTION

School districts across America are being held to unprecedented levels of accountability for student achievement. Schools are faced with increasing demands from the state and federal departments of education to ensure that students are meeting standards. Hence, the desire for renewing education continues to be at the forefront in the minds of policymakers, administrators, teachers, parents, and citizens throughout the country (Glickman, Gordon, and Ross-Gordon, 2004).

The standards-based vision established under President Clinton was carried forward under President George W. Bush with the No Child Left Behind Act (NCLB) of 2001, the most recent reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA). Ensuring that every child is taught by a highly qualified teacher is a central feature of the Act as NCLB requires states to set standards for designating all public school teachers as highly qualified and requires districts to notify parents of students if their child's teacher does not meet these standards. The requirements apply to all teachers of core academic subjects, English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and to teachers who provide instruction to students with limited English proficiency (LEP) and students with disabilities. No Child Left Behind supports ongoing professional development for all teachers regardless of their highly qualified status (United States Department of Education, 2009).

Professional development is defined in the No Child Left Behind Law (2001) as activities that are not 1-day or short-term workshops or conferences but are ongoing to

have a lasting and positive impact on teaching and learning. Professional development must include activities that improve and increase teacher knowledge of the academic subjects they teach and enable teachers to become highly qualified and advance teacher understanding of effective instructional strategies and activities that are an integral part of broad school-wide and district-wide educational improvement, a significant component to this improvement movement is the development of professional learning communities (PLC).

With this in mind, it is important to recognize the value in professional development. Teacher professional development is a serious enterprise, not an option, not an add-on, not dependent on a season of the year. For this to be the case, educators must experience learning as integral to their normal work-week (Mizzel, 2008).

Recent education reform efforts have emphasized teacher professional development and continuing education, which span a teacher's entire career, as quality opportunities to improve student achievement. (McIntyre & Byrd, 1998). In recent years, there has been a growing appreciation for the potential impact of professional development on the overall school achievement and not simply on individual classrooms (Abdal-Haqq, 1996). Corcoran (1995), notes that systemic reforms place many demands on teachers improving content knowledge and pedagogical skills and a teacher's professional responsibility has evolved to greater understanding of cultural and psychological factors that affect student learning, as well as, assuming greater, and in some cases new, responsibilities for curriculum, assessment, and instruction.

As accountability for student achievement intensified, educational reform movements over the past several decades have focused on teacher quality. With doubts

about the quality of American education emerging, so to is the emergence of reports that have helped to shape current educational policy and public perception (Darling-Hammond, 1990).

1.1 INITIATORS OF REFORM

1.1.1 No Child Left Behind Act of 2002's impact on Teacher Professional Development

The Elementary and Secondary Education Act (ESEA) was first enacted in 1965. Although amended several times since, the most recent reauthorization was signed into law by President George W. Bush on January 8, 2002. Since its inception, as part of President Lyndon B. Johnson's "Great Society" programs, it has been reauthorized or amended approximately every five years. Each of these reauthorizations have given the Administration and Congress the opportunity to add, delete, or modify provisions in the law in response to current demands and expectations. As the latest amendment of ESEA, the No Child Left Behind Act (NCLB) changes in many ways programs in the Elementary and Secondary Education Act. Although the main component of this bill is Title I, the government's flagship aid program for disadvantaged students, section II of NCLB focuses on teacher education quality (Trahan, 2002).

According to the State and Local Implementation of the *No Child Left Behind Act* Volume VIII—Teacher Quality Under *NCLB*: Final Report (2009), NCLB makes professional development a key strategy for improving teachers' knowledge and skills. The quality of the professional development that teachers receive is critically important if professional development is to have the intended effects of improving instruction and

student learning. Professional development, as defined under *NCLB,* includes activities that:

> "Are high quality, sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and the teacher's performance in the classroom; and are not 1-day or short-term workshops or conferences …" (*Title IX,* Section 9101(34)).

According to the law, professional development also includes activities that improve and increase teachers' knowledge of the academic subjects they teach and enable teachers to become highly qualified. It further includes activities that advance teachers' understanding of effective instructional strategies and activities that are an integral part of broad school wide and district wide educational improvement plans.

Prior to No Child Left Behind's reauthorization of the ESEA, in 1983, the National Commission on Excellence in Education published *A Nation At Risk.* This document called for substantial changes to assist schools in improving the quality of education and warned of the "rising tide of mediocrity" invading our schools (Blasé & Blasé, 2001). This report got the attention of lawmakers and prompted action by raising standards for students and teachers, raising course requirement for graduation, increasing student assessments, and tightening teacher certification requirements (Fuhrman, 2003).

1.1.2 Need for Effective Professional Development

Traditional teacher professional development has been criticized for being irrelevant, ineffective, and fractured; not giving teachers what they actually need to teach students (Corcoran, 1995). While little is known about the impact professional development has on student achievement, the amount of money spent annually on professional development is estimated at $9 billion. (Killeen, Monk, & Plecki, 2002).

States have used stimulus funds to increase resources for teacher professional development. However, most teachers do not believe the professional development they complete is useful or relevant to their classroom practice. Teachers often find professional development does not meet their individual needs; nor does it include critical follow-up and leadership support necessary to implement strategies covered in professional development sessions (Darling-Hammond, 2009).

Professional development generally lacks the fundamental elements necessary to ensure student learning is impacted. A recently released study from the National Staff Development Council examined teacher professional development options, and indicated that the duration and intensity of the professional development offered to the nation's teachers is insufficient to affect instruction and student learning (Grossman, 2009). Grossman (2009) stresses the deficits that exist with regard to the content and delivery of teacher professional development, and continuing large investments in ineffective professional development efforts can no longer be justified. Improvements in the use of teacher evaluation and student performance data to drive professional development decisions are imperative to program success. Effective professional development should be intensive, ongoing, and connected to practice, focused on student learning, and tied to school improvement goals (Darling-Hammond, 2009).

Faced with stringent content standards and high-stakes testing, teachers are turning to new and different sources for quality professional development. With the increased access to technology that provides for the opportunity to communicate and collaborate efficiently and effectively, teachers and administrators are exploring the use of online sources for professional development. (Garet, et al., 2001).

1.1.3 21st Century Teaching and Learning

Today's classroom is a very different place than it was fifteen years ago. As a result, teachers are faced with larger, more diverse classrooms during a time when teacher accountability is mandated as a result of *No Child Left Behind* legislation (Kariuki 2009). 21st Century Skills have been defined in many different ways. Key components of 21st century skills are technology literacy and content that emphasizes global awareness and scientific literacy, learning and higher order thinking skills, and leadership skills with ability to plan, manage and collaborate (Greenwood Henke, 2007). While the foundation of these skills is technology, they serve more as guidelines for success. 21st century learners must possess both self-direction and an ability to collaborate with individuals, groups, and machines. Today's students will be required to think critically and create high quality products in order to compete in the global marketplace (Cavanagh, 2008)

According to Cavanagh (2008), for students to acquire 21st century skills, they must be encouraged to create new ideas, evaluate and analyze the material presented, and apply that knowledge to their previous academic experiences. This is achieved by changing the methods of instruction. If teachers consider their students' skills and facilitate learning, students will reach their greatest potential. Instead of delivering content, teachers should engage students in the content, which may also mean delivering instruction at a more rigorous pace. A one-size fits all approach must be replaced with giving students options. It is important to supplement face to face interaction with online activities. This idea is a great example of how technology acts as a foundation and not what drives 21st century teaching and learning.

As policy makers consider reauthorization of No Child Left Behind legislation in the coming year, schools, districts, and states taking the first steps toward integrating 21st century skills represent the pioneers in the next wave of education reform. Issues such as how to define and measure the new essential skills, whether to standardize them nationally, and how to determine their impact on workplace success remain very much works in progress. It's crucial to teach kids the critical thinking skills they need to adapt and compete in the future as borders and boundaries are a thing of the past (Greenwood Henke, 2007).

In summary, today's educational issues require specialized expertise as schools move beyond traditional classrooms to more virtual educational environments for students. The 21st century teacher needs the skills and abilities to manage students in this ever-changing educational environment. To this end, professional development is a vital tool to the success of educating today's learner (Jackson & Davis 2000).

1.2 ONLINE TEACHER PROFESSIONAL DEVELOPMENT

According to Guskey (2000), professional development is an extremely important endeavor and is central to education's advancement as a profession. High-quality professional development is at the center of every modern proposal to enhance education. Educational researchers are constantly discovering new knowledge about teaching and learning. As professional knowledge expands, new expertise is required of educators of all experience levels.

The Ultimate goal of teacher professional development is improving student-learning outcomes (Guskey, 2000). Professional development for teachers is the range of

formal and informal processes and activities that teachers engage in both inside and outside of the school to improve their teaching knowledge and skills (Jackson & Davis, 2000).

Serim (1996) argues that online professional development is emerging as an international revolution, motivated by the vision of free flowing knowledge, with teachers taking responsibility for their own learning, and embracing networks that foster the exchange of new ideas in a spirit of community. Online professional development programs provide educators with a managed supportive learning system and the opportunity for learning in real time so teachers may immediately apply new information and skills, thus improving the quality of instruction (Brown & Green, 2003). While online professional development programs seem to offer positive benefits for the educational community, what role does online professional development activities have on the improvement of public school educators?

1.3 PURPOSE OF THE STUDY

In an era of school reform, many consider the education and professional development of teachers the keystone to school improvement (Hawley & Valli, 1999). Sparked by a need to meet student achievement goals mandated by the No Child Left Behind legislation, a plethora of professional development programs have arisen, and administrators have added workdays devoted to professional development to teachers' already busy schedules. But this improvement comes at a price in resources and time. While we need to build teachers' capacity for improvement, we also need to be sure that time, effort, and scarce resources are expended only on quality programs utilize and focus on best

practices (Killeen, Monk, & Plecki, 2002).

The purpose of this study was to focus on how school districts are using online opportunities, activities, and programs for teacher professional development. The goal of this study was to identify the impact online professional development has on principals and central office personnel and to discover key indicators of success for online professional development programs for teachers from the superintendent's perspective.

1.4 STATEMENT OF THE PROBLEM

Gabriel (2004) defines the problems of traditional professional development programs as top-down decision making with the idea that teachers need to be "fixed." These professional development programs lack teacher ownership in the professional development process and the nature of professional development content. Traditional professional development appears to ignore the application of classroom practices in terms of subject and students' age, or level of cognitive development. Furthermore, traditional professional development provides little or no support in transferring professional development ideas to the classroom. Traditional professional development opportunities appear to disregard the varied needs and experiences of teachers, and contain little or no acknowledgement of the learning characteristics of teachers among professional development planners. As teacher professional learning needs and apparent dissatisfactions to traditional professional development opportunities arise, there develops a need to explore the potential of online professional development.

Because today's educational issues require specialized expertise as schools move beyond traditional classrooms to more virtual educational environments for students,

there appears to be an emerging problem as the 21st century teacher needs to develop or enhance skills and the ability to educate students in this ever-changing educational environment. If professional development is a vital tool to the success of educating today's students, then how does online professional development opportunities for teachers address the need for high quality, sustained, intensive, and classroom-focused professional development needed in order to have a positive and lasting impact on classroom instruction and the teacher's performance? In what way are public school districts in Western Pennsylvania utilizing online professional development opportunities for teacher professional growth in an attempt to meet the 21st century educational challenges?

1.5 RESEARCH QUESTIONS

In an attempt to address teacher professional learning needs and apparent dissatisfactions to traditional professional development opportunities, and to explore the potential of online professional development, the research developed the following research questions:

1. In what ways are public school districts using online professional development opportunities for teachers?

2. From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?

3. From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?

4. From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?

1.6 DEFINITION OF TERMS

In an attempt to provide clarification of terminology and a consistent interpretation of terms commonly used in this study, but may not be commonly known, the researcher has provided a consistent and similar interpretation for all readers in this definition of terms.

Western Pennsylvania Public Schools –

For the purpose of this study shall be defined as public school districts located in Intermediate Units 1, 3, 4, and 27 for the 2011-12 school year. These selected intermediate units comprise public school districts located in Allegheny, Beaver, Butler, Fayette, Greene, Lawrence, Mercer, and Washington Counties.

Pennsylvania's Intermediate Unit #1 –

For the purpose of this study shall be defined as public school districts located in Intermediate Unit 1, Washington County, PA for the 2011-12 school year.

Pennsylvania's Intermediate Unit #3 –

For the purpose of this study shall be defined as public school districts located in Intermediate Unit 3, Allegheny County, PA for the 2011-12 school year.

Pennsylvania's Intermediate Unit #4 –

For the purpose of this study shall be defined as public school districts located in Intermediate Unit 4, Butler County, PA for the 2011-12 school year.

Pennsylvania Intermediate Unit #27 –

For the purpose of this study shall be defined as public school districts located in Intermediate Unit 27, Beaver County, PA for the 2011-12 school year.

Synchronous Learning –

For the purpose of this study shall be defined as online learning opportunities that occur during a specified time period and is available to a person or a group of people allowing collaboration between the participants and instructor commonly supported by video conferencing and synchronous chat technologies.

Asynchronous Learning –

For the purpose of this study shall be defined as online learning opportunities that are student-centered using online resources and technologies such as discussion boards, blog, wiki, email, and posting of documents to facilitate information sharing and collaboration outside the constraints of time and place among a network of people.

Online Professional Development Activity –

For the purpose of this study shall be defined as the opportunity for teachers and administrators to engage in professional learning through the use of synchronous or asynchronous methods to focus on developing methods that incorporate best practices for teacher development while allowing for customization and individualization of teacher learning.

WIKI –

For the purpose of this study shall be defined as a collaborative website that comprises

the perpetual collective work of many authors and allows for editing, deleting or

modifying of content that has been placed on the site by any user with access.

BLOG –

For the purpose of this study shall be defined as a web page that serves as a publicly

accessible personal journal for an individual and does not allow for the editing, deleting

or modifying of content that has been placed on the site by any other user with access.

Blog is a short term for Web log.

Web 2.0 Tools –

For the purpose of this study shall be defined as web tools that focus on the ability for

people to collaborate and share information online which includes open communication

with an emphasis on Web-based communities of users, and more open sharing of

information.

Blackboard Learning System –

For the purpose of this study shall be defined as the virtual learning environment

developed by Blackboard Inc. and is a course management system that allows for course

management, customizable open architecture, and scalable design that allows for

integration with student information systems and authentication protocols. It may be

installed on local servers or hosted by Blackboard ASP Solutions. Its main purposes are

to add online elements to courses traditionally delivered face-to-face and to develop completely online courses with few or no face-to-face meetings.

Sanctuary Institute –

For the purpose of this study, shall be defined as a purchased service that offers a five-day intensive training experience in which teams of five to eight people, from various levels of the organization, come together to create a shared vision of creating or changing an organization's culture.

Atomic Learning –

For the purpose of this study, is a purchased product in which online training resources are used for professional development to instruct teachers through a library of thousands of short, easy-to-understand tutorial movies and content that can be used as an integral part of a professional development program and a valuable curriculum supplement.

2.0 LITERATURE REVIEW

"Effective professional development affects many teachers as opposed to some, and many students as opposed to a few" (Hirsch, 2009, pg. 10).

2.1 INTRODUCTION

This chapter outlines the literature relevant to the research questions of this study. For the purposes of organization, this chapter outlines the need for teacher professional development followed by a brief history of teacher professional development in the United States. Additionally, this review of literature focuses on the challenges associated with teacher professional development in the 21st century with highlights on the roles of the building level administrators, principals, and central staff members in providing teacher professional development. Finally, this review focuses on the literature associated with effective online opportunities for teacher professional development.

2.2 THE NEED FOR TEACHER PROFESSIONAL DEVELOPMENT

Professional development refers to ongoing learning opportunities that are available to teachers through their school or school district. The primary purpose of professional development is to prepare and support teachers by giving them the knowledge and skills they need to help all students achieve high standards of learning and development. (U.S. Department of Education, 1996). Never before in the history of education has there been greater recognition of the importance of professional development. Every modern proposal to reform, restructure, or transform schools emphasizes professional

development as a primary vehicle in efforts to bring about needed change. With this increased recognition, has come increased scrutiny. Questions are being raised about the effectiveness of professional development in education. These questions have also brought increased demands for demonstrable results. Legislators, policy makers, funding agencies, and the general public all want to know if professional development programs make a difference in teacher performance and student achievement. If they do, what evidence is there to show they are effective (Guskey, 1994)?

The American educational system has had extensive experience with reform initiatives (Fullan, 2001). Some scholars suggested that these reform efforts began with John Dewey's philosophy of education and have continued through successive movements that included the nation's response to Sputnik, the war on poverty, the Civil Rights Movement, and *A Nation at Risk* to name a few. Due to rapid globalization, rapid advancement of technology, and increased pressure to deliver standards-based results, schools must shift to a philosophy of long term, sustainable continuous improvement (Elmore, 2000). Many consider the education and professional development of teachers as the keystone to educational improvement during school reform initiatives (Hawley &Valli, 1999).

Teacher professional development is an essential component of comprehensive school reform. Teachers are at the center of educational reform because they must make every effort to ensure that their students meet the high standards that districts and states have adopted (Garet, Porter, Desimone, Birman, & Yoon, 2001). Student performance is influenced by teachers' high quality professional development and that the effects of

increased teacher knowledge are observed across academic settings (Darling-Hammond, 1999). However, to sustain any effective, meaningful school reform or transformation, there must be a systematic, intensive, and long-term professional development design. It is design and not intent that characterizes successful programs. Educators need to design a framework that identifies and builds upon the strengths of the students, staff, and community. This framework must provide a collaborative process with creative tension between dreams and vision on the one hand and current reality on the other. Teachers and administrators need to work with parents, community members, and students to set goals and establish high expectations. In addition, educators must develop a stronger understanding of the social, cultural, and economic differences students bring to the classroom (Fuhrman 2003).

According to the U.S. Department of Education (1996), the primary purpose of professional development is to prepare and support teachers by giving them the knowledge and skills they need to help all students achieve high standards of learning and development. Challenging student performance standards and rigorous accountability policies require teachers to master their professional practice and enhance their ability to make pedagogical changes that will result in increased student achievement (French, 1997).

The American Federation of Teachers (2002) indicates the nation can adopt rigorous standards, set forth a visionary scenario, compile the best research about how students learn, change textbooks and assessments, promote teaching strategies that have been successful with a wide range of students, and change all other elements involved in systemic reform, but without professional development, school reform and improved

achievement for all students will not happen. High quality professional development is an essential component of school reform as teachers are the focal point of educational reform initiatives due to their direct contact with students and their considerable control over learning climates (Garet et al, 2001). Because in-service teachers are not inexperienced learners, teacher professional development builds on existing knowledge and understandings that can either facilitate or impede the acquisition of new ideas and approaches. This is particularly so at a time of educational reform, when teachers and schools are challenged fundamentally to change direction and practice (McCaslin, 2006).

Successful professional development programs are emergent and rooted in the three Rs. Professional development programs must be relevant to the practicing professionals and multiple communities served. As such, they must be temporally coherent, philosophically consistent, and culturally responsive. Professional development programs must have rigor to draw upon theory, research, and best practice. They must be rooted in the needs of students, teachers, and community and based upon the most advanced knowledge and skill available. Finally, to have any impact on curriculum, instruction, and academic achievement, professional development programs must be situated in a climate of strong, trusting, and positive relationships. Improving any of those attributes cannot be forced from the top down, nor can it simply emerge from the bottom up. Transformation must emerge from the context of the classroom and community and must be informed by the system goals and applicable research (Wagner 2002).

The American Federation of Teachers (2002) believes for American school districts to reach the nation's goal of high standards of learning for every child, quality professional development becomes a key investment in an effort to ensure teachers

continue to learn. Investments in teacher knowledge and skills results in greater increases in student achievement that any other usage of educational funds (National Commission on Teaching and America's Future, 1996).

However, traditional professional development for educators has been criticized for being irrelevant, ineffective, and fractured, and for not giving teachers what they actually need to teach students (Corcoran, 1995; Wilson & Berne, 1999). In the past, professional development consisted of teachers attending one or two workshops on the latest instructional practices. Professional development participants listened passively to outside experts and were then encouraged to apply the strategies learned in their own classrooms. New professional development experiences were frequently introduced with no connections to past trainings (DuFour, 1997). Teachers were provided few opportunities for follow-up activities and rarely applied newly acquired knowledge upon returning to their classrooms (Black, 1998).

According to the National Research Council (2004), the need for quality teacher professional development is evident as teachers lack the training to interpret data about their students and often do not know how to adapt instruction for struggling students and at times, may not know enough about the discipline they are teaching and about methods for teaching in that discipline to be able to teach in ways that are both engaging and conceptually deep. Effective professional development programs can be neither brief nor superficial. Effective programs, those that change teaching practices and improve student outcomes, focus on both content knowledge and particular aspects of content mastery related to student learning; they were coherently linked to curricular expectations, involved the sustained participation of teachers over long periods of time, and allowed

teachers the opportunity to try new methods in the context of their own practice (Putnam & Borko, 2000).

Teachers come to the classroom with varied experiences and knowledge bases (Lortie, 1975). How teachers develop as professionals is a fundamental question that has motivated educational researchers and teacher educators for years (Hammerness, Darling-Hammond, Bransford, et al., 2005). According to Cochran-Smith & Lytle (1999), knowledge from experience combines with knowledge generated from teaching episodes that lead to the implicit and explicit know-how of teaching. Such know-how ultimately guides teachers' pedagogical choices. Teacher professional development, then, requires an acknowledgement that experienced educators have developed both the knowledge-in and knowledge-of teaching practice. Since most of the knowledge of experienced educators is situated, meaningful professional development should be designed to aid practitioners in assimilating "new techniques into an existing system of ideas about pedagogy and subject-matter knowledge" (Nelson and Hammerman, 1996, p. 4).

Cochran-Smith and Lytle (1996) argue that professional development programs need voices of teachers themselves, the questions teachers ask, the ways teachers use writing and intentional talk in their work lives, and the interpretive frames teachers use to understand and improve their own classroom practices. In order to address this need, Cochran-Smith and Lytle (1993) point to a growing effort among schools to provide professional development that involves "organizational structures that enable groups of teachers to come together to talk about their work, learn from one another, and address curricular and instructional issues" (p. 89).

Glickman, et al (2004) narrate an analogy of "the Car "as given by one of the presenters at a Michigan school board to illustrate the importance of professional development of teachers. In the analogy, the authors argue that when a customer buys a new car, preventive maintenance, fine tuning, and additional investment into the car is necessary to prolong its life and performance. Similarly when a school board employs a professional teacher and invests an initial amount of money in the form of a salary, it needs to invest further resources, time, and professional development for fine-tuning and reinvigorating the teacher, and to maintain and improve upon their performance.

2.3 HISTORY OF EDUCATION REFORM AND TEACHER PROFESSIONAL DEVELOPMENT IN AMERICA

To understand current trends in professional development, it is necessary to detail the professional development trends from the history of American Education and Education Reform. Teacher professional development is not a new idea. It began around 1850 with in-service trainings designed to help teachers improve their instructional practices. During the 1850s, many teachers were untrained and had little knowledge of subject matter. In-service training programs were designed to help inexperienced teachers attain knowledge and skills. In the 19th and early 20th centuries, teachers were considered to be poorly educated and "deficient" in teaching skills, and in-service education focused on large group instruction at teacher institutes with the purpose of correcting teacher deficiencies (Corey, 1957).

Cook (1977) reported that prior to World War I, a spirit of reform flourished and affected almost every aspect of American life. Teddy Roosevelt's creation of the Panama Canal inspired Administrative Progressives to develop a blueprint for educational

progress (Tyack and Cuban, 1995). From 1900 to 1950, Administrative Progressives "shaped the agenda and implementation of school reform more powerfully than any other group had done before. The Progressive Education Movement was in full force during the first two decades of the century and consisted of two branches: John Dewey's "child centered wing" and the "mass education wing (sometimes called administrative)" often associated with Edward Thorndike (Levin, 1991).

A shift toward the use of workshops for teacher professional development occurred in the late 1930s. New ideas about motivation and learning led to a transition in beliefs about the main purpose of in-service programs for teachers. While the prior purpose of professional development focused on correcting individual teacher deficiencies, in-service programs evolved towards generating cooperative, problem solving approaches to instruction (Corey, 1957). Hass (1957) described in-service education as the activities that educational professionals participate in for continuous, on-the-job improvements. In-service education was expected to provide assistance to new educators as they learn the profession, to help educators eliminate deficiencies, to assist educators with understanding a rapidly expanding knowledge base, and to promote the development of common values among educators.

As part of a 1932 Work Relief in Education program, unemployed teachers were hired to teach other unemployed adults (Cook, 1977). Through the Carnegie Corporation Study in 1931, William S. Gray concluded that adults would not necessarily benefit from the instructional techniques used for children. In 1930, twenty men decided to form the Society for Curriculum Study, which eventually merged with the Directors and Supervisors of Instruction group of the National Education Association to form the

Association for Supervision and Curriculum Development (ASCD) that remains a powerful force in the professional development of teachers (Tyler, 1987).

Perhaps the most significant reform stemming from 1930s was the Progressive Education Association's Eight-Year Study conducted between 1933 and 1941, which focused on reform to secondary education that benefited both teachers and students. For the first time, teachers had the opportunity to work together, instead of in their usual isolation. In addition, the study initiated professional development opportunities for teachers called an "in-service workshop" (Tyack & Cuban, 1995).

In the Post-World War II and Cold War era, new ways of looking at learning also evolved. The Eight-Year Study from 1933-1941 became impractical as post-war America looked for ways to insert more authoritarianism into its schools. Although in-service workshops continued in the decades following the 1930s, much of the power was lost as side-to-side activities and teacher collaboration, highlighted in the study, was replaced by a top-down approach to professional development. Surrounded by World War II's threats to American power, schools paid less attention to teacher sharing and creative curricula and more attention to strengthening the sense of authority within the schools (Tyack & Cuban, 1995).

The 1950s can be called the era of re-examination in education. School criticism that would spread into the rest of the century began here (Cohen & Barnes, 1999). This school criticism had several causes: fear, memories of hard times, devaluation of the dollar, military spending, and social unrest. The launching of the Soviet satellite Sputnik sent Americans into a panic. World War II shook Americans' steady faith in peace, and fear often leads to aggression (Cremin, 1968). The professional

development needs of educators in the 1950s were linked to gaining subject knowledge and increasing expertise in teaching methods (Hass, 1957). Educators were expected to adapt their teaching to match the needs of individual students and to increase their own personal skills and abilities for working co-operatively with colleagues. Therefore, teacher professional development was expected to assist educators in developing skills and knowledge to address the individual needs of learners, to modify the behavior and attitudes of educators, and to address the growing social concerns of American education (Corey, 1957).

During this decade, many Americans could remember the devastation of the Great Depression and turned careful attention to whether or not the schools were solid. An overall uncertainty about the security of the nation prompted citizens to worry about the shrinking value of the dollar and the fact that the government was spending so many of those dollars in an effort to protect the public. Social unrest about the decline of morality inspired some to look to the schools as a source of the problem (Scott & Hill, 1954).

Tyack and Cuban (1995) noted that educational reformers attacked 'mediocrity' of academic performance, poor discipline and lax teachers. Some argued that students who were permitted to waste time in class were becoming lazy. Some of the frustration of the times explained the accusations of schools ignoring the basics, becoming too easy, becoming too permissive, offering insignificant courses, leading the young toward socialism, failing to get students ready for college, and poorly preparing students for the job market (Scott & Hill, 1954). The launching of Sputnik sent the nation on a quest for more rigorous academic programs (Tyack & Cuban, 1995). In 1956, America learned of something called the Taxonomy of Educational Objectives that made educators aware of

the range of cognitive processes used by learners (Walberg & Haertel, 1992).

Educational reform of the 1960s originated from the government and the individuals schools themselves. Government reform was derived from Lyndon B. Johnson's Great Society War on Poverty that indicated that the answer to all our national problems comes down to education. With his Elementary and Secondary Education Act of 1965, Johnson hoped that schools would prevent poverty.   In 1965, Lyndon B. Johnson urged the field of education to pay attention to research on teaching and learning (Tyack & Cuban, 1995). There were increased concerns about science and mathematics instruction and demands for curriculum revision. The use of films, tape recorders, and television added a new layer of complexity to teaching and learning. Teachers were faced with rapid change and how to utilize this innovation in their profession. (Fenstermacher & Berliner, 1985). Dillon (1976) reported that school districts began to push professional development to try to alleviate some of the public dissatisfaction with education and to address emergence of technology as a teaching tool.

The 1970s was a period of turmoil for teachers and students. As the public trusted the government less and less because of the Watergate Scandal, that lack of trust began to filter into other areas such as education.   Confidence in public schools certainly reflected the times and schools were called mediocre while teachers were blamed for letting students down. Some of the educational reforms from the 1970s were continuations of the 1960s, some reflected criticisms specific to the 1970s, and some reached back even further to a return of scientific management (Tyack & Cuban, 1995). Staff development began to reflect public criticisms and expectations of schools. Since schools were to become a solution for social problems, teachers needed training and professional

development to be a successful cure. Professional development was becoming more localized and school leaders would decide for themselves what they needed to cover, and staff development would become more side to side, rather than top down. Teachers and school administrators would conduct their own sessions, rather than depending on college personnel to provide professional development (Dillon, 1976). This was the decade of mass marketing of educational materials intended as ready-made solutions (Tyack & Cuban, 1995).

The nature of education was changing and competing with Japan became an issue. After the appearance of *A Nation at* Risk in the mid 1980s, teachers felt a decreased reliance on their professional judgment in instructional matters, increased time demands, more staff reassignments, greater pressure, more paperwork, and heightened concern about liability, but not improved results for students as a result of all the stress (Tyack & Cuban, 1995). The *Nation at Risk* report listed seven recommendations for improving teacher quality, including higher standards for teacher-preparation programs, teacher salaries that were professionally competitive and based on performance, 11-month contracts for teachers allowing more time for curriculum and professional development, career ladders that differentiated teachers based on experience and skill, more resources devoted to teacher-shortage areas, incentives for drawing highly qualified applicants into the profession, and mentoring programs for novice teachers that were designed by experienced teachers. Within a year of the *Nation at Risk* report, reform initiatives were under way in every state, and more than 275 state-level task forces were working on educational issues. (United States Department of Education 1984). Not since the National Defense Education Act of 1958, passed in response to the Soviet launching of Sputnik,

had the nation exhibited such determination to reform public education. But the resulting standards revolution, characterized by "test-driven accountability" and deregulation measures such as charter schools, vouchers, privatization, and takeovers, differed from the curricular reforms that followed Sputnik (Fuhrman 2003).

The *Nation at Risk* report had a strong impact on American education and led to comprehensive school reform efforts, was the impetus for the academic-standards movement, drew attention to the importance of education policy, and led to a focus on school accountability. In 1989, pressure of educators compounded when President George Bush initiated national standards. Teachers had a feeling of being caught in the middle. Teaching to the test became popular (Tyack & Cuban, 1995).

A standards-based vision was enacted in federal law under the Clinton administration with the 1994 reauthorization of the Elementary and Secondary Education Act (ESEA). Basic elements of the standards vision were established in the 1994 ESEA. The law required that states set challenging and rigorous content standards for all students and develop assessments, aligned with the standards, to measure student progress. By holding schools accountable for meeting the standards, it was expected that teachers and actors at other levels of the educational system would redirect their efforts and find ways to improve student achievement. In contrast to the hoped-for idea of coherent capacity building envisioned for Goals 2000: Educate America Act of 1994, passed earlier that same year, ESEA set forth primarily an *incentives* theory of change. It assumed that with sufficient motivation teachers and other relevant school personnel would find the means to improve instruction. Unfortunately, early implementation research showed that many schools lacked an understanding of the changes that were

needed, and also lacked the capacity to make them happen (Elmore & Rothman, 1999).

The Goals 2000: Educate America Act of 1994 defines content standards as "broad descriptions of the knowledge and skills students should acquire in a particular subject area." For many states, these content standards represented the first effort at trying to develop some kind of curriculum framework. But without previous experience and access to coherent curricula representing particular curricular perspectives, the political solution of adding in everyone's favorite content area topic created overly-full, encyclopedic standards in some states, or vague, general statements in others (Harris & Goertz, 2008).

It was recognized at the beginning of the standards movement, set forth by The Goals 2000: Educate America Act of 1994, that teaching a much more challenging curriculum to all students was difficult. To overcome this difficulty would mean providing all students with rich and engaging instructional activities that previously had been offered only to more academically advanced students. Because this vision would require fundamental changes in instructional practices, capacity building and teacher professional development were seen as key ingredients to achieve success under the Goals 2000 reform. Unfortunately, these expectations resulted in few states investing in training to develop teachers' capacity to teach rigorous subject matter in engaging ways. In most cases, policy makers relied on the state tests to convey changes that were needed, and accountability tests do not help teachers learn how to teach for conceptual understanding (Massell, 2008).

The standards-based vision established under President Clinton was carried forward under President George W. Bush with the No Child Left Behind Act (NCLB) of 2001, the most recent reauthorization of the Elementary and Secondary Education Act of 1965

(ESEA)**.** Ensuring that every child is taught by a highly qualified teacher is a central feature of the Act as NCLB requires states to set standards for designating all public school teachers as highly qualified and requires districts to notify parents of students if their child's teacher does not meet these standards. The requirements apply to all teachers of core academic subjects, English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and to teachers who provide instruction to students with limited English proficiency (LEP) and students with disabilities. No Child Left Behind supports ongoing professional development for all teachers regardless of their highly qualified status (United States Department of Education, 2009).

One of the key mechanisms of *NCLB* is to identify schools in need of improvement and encourage those schools to implement activities designed to improve instruction, and thereby increase student achievement. No Child Left Behind established an accountability of schools for ensuring that all students reach proficiency on state assessments by 2014, making it vital for teachers to have the knowledge and skills needed for effective instruction. No Child Left Behind acknowledged and supports professional development as a key strategy for improving knowledge and skills for all teachers, regardless of their highly qualified status. The quality of the professional development that teachers receive is critically important if professional development is to have the intended effects of improving instruction and student learning (United States Department of Education, 2009).

Professional development is defined in the No Child Left Behind Law (2001) as activities that "are high quality, sustained, intensive, and classroom-focused in order to

have a positive and lasting impact on classroom instruction and the teacher's performance in the classroom; and are not 1-day or short-term workshops or conferences …" (*Title IX,* Section 9101(34)). Professional development must include activities that improve and increase teacher knowledge of the academic subjects they teach and enable teachers to become highly qualified and advance teacher understanding of effective instructional strategies and activities that are an integral part of broad school-wide and district-wide educational improvement, a significant component to this improvement movement is the development of professional learning communities (PLC).

The term professional learning community first emerged among researchers as early as the 1960s when the concept was offered as an alternative to teacher isolation that was common in the teaching profession in the United States. Rick DuFour, and Michael Fullan, have provided meaningful guidance to educators on the concept of developing professional learning communities and with the emergence of NCLB comes the focus on learning rather than teaching, teachers who work collaboratively, and are personally responsible for student academic results (DuFour, 2004).

DuFour (2004) details the excitement about the possibility of change as it gives way to the confusion about the purpose and meaning of the professional learning communities.   To meet the requirements of NCLB, learning communities are developed based on three "big ideas" that assist faculties with the implementation of learning communities. Big Idea # 1: Ensure that students learn, Big Idea # 2: Create a culture of collaboration, and Big Idea # 3: Focus on results.

According to Fullan (2000), a learning community should result in teachers and leaders working collaboratively to improve student achievement. Effective schools

research discovered that variances in instruction among classrooms were greatly decreased when teachers participated in professional learning communities, resulting in teacher practice moving more to best practices. During an interview with the National Staff Development Council (Sparks, 2003), Fullan explained that school culture plays an integral part in the development of a professional learning community and recommended that school investment in leadership was the best approach to attaining the culture that would support professional learning communities. Fullan's ideals of professional learning communities along with the principles detailed by DuFour are the cornerstones in the development of online learning communities.

From the beginning of professional development when the purpose focused on correcting the deficiencies of teachers (Richey, 1957) to current views and models, many of the issues and concerns about professional development have remained the same (Schlager & Fusco, 2003). The complaints leveled against the teacher institutes could pass for criticisms of current professional development practices. Professional development is still criticized for being used to correct the deficiencies of teachers and for being fragmented, disconnected, and misaligned (Schlager & Fusco, 2003). In the 21st century, education is becoming a more competitive business enterprise. Like all other investments, people spend money, effort, and time in education and expect quality returns; making education an institution to be rated on the basis of its cost effectiveness. The outcomes calculated in terms of economic, social and political gains is what motivates people to invest heavily in education (O'Donnell, Reeve& Smith., 2009). According to Darling-Hamond (1998) each dollar spent on improving teacher's qualification nets greater gains in student learning than any other use of educational

funds. However, these gains are dependant on the quality of the teachers and

unfortunately it takes time for one to become an effective teacher. At whatever cost, it is

notable that good instruction accrues from the professional development of teachers

(O'Donnell, et al., 2009).

2.4 CHALLENGES ASSOCIATED WITH TEACHER PROFESSIONAL DEVELOPMENT IN THE 21st CENTURY

America has long been regarded as a center of innovation and creativity. American has

pioneered space exploration, developed life-saving medicines, and launched the World

Wide Web. Harnessing this power of innovation is imperative for the success of

America's educational system. America's continued productivity and prosperity depend

on our educational system's ability to meet the challenges of the 21st Century. Education,

including teacher professional development, is no longer a one-size fits all endeavor and

advances in technology provide the opportunity to personalize education, use time more

efficiently, and tailor instruction in innovative ways. If it is an expectation for students to

become the world's innovators, then educators must embrace new and innovative ways to

deliver instruction and engage in professional development (U.S. Department of

Education, 2007).

As the wave of computer and information technological advancements have

increased our ability to create, manage, and transmit information; thus leading to a digital

age of increased productivity and job effectiveness, these forces at work are ultimately

transforming the educational landscape for students and staff (Olsen & Sommers, 2006).

To help students learn the more complex and analytical skills they need for the 21st

Century, teachers must learn to teach in ways that develop higher-order thinking and performance. To develop these more sophisticated teaching skills, to improve instruction, and increase student achievement, requires more effective professional development than has traditionally been offered (Darling-Hammond & Richardson, 2009).

Unfortunately, research suggests that many forms of professional development can be insufficient to foster restructuring of teacher knowledge (Desforges, 1995). According to Borko (2004), much of what passes for teacher professional development is not of high quality, and is often splintered into perfunctory seminars using strategies that do not enable significant changes in teacher practice. Many teacher development programs have been criticized for being unable to provide the guidance necessary to implement new curricula and teaching strategies (Barnett, 2002). Professional support is often made difficult for teachers attempting new strategies in settings made unfriendly and contentious by colleagues and administrators who see the new interventions as an affront to a school's particular culture. In addition, conventional one-day workshops or afternoon training sessions associated with many teacher professional development programs fail to provide sustained mentoring opportunities for teachers at various stages throughout their career (Wei, R., Darling-Hammond, L., Andree A., Richardson, N., & Orphanos, S., 2009).

Dede (2006) suggests that the lack of professional support for many teachers is a major factor underlying teacher attrition rates, with nearly 50 percent of new teachers exiting the field within their first five years of beginning their classroom career. Many teachers have become confounded and disappointed by professional development as it is

often regarded as ineffective and requiring sacrifices unequal to the perceived improvement it affords.

Fundamental and rapid changes in society related to the explosion in information and communication technologies are permitting researchers and teacher educators the opportunity to re-examine notions of how professional development can be adapted and designed for online settings. Recently, educational and technology researchers have begun investigating ways in which social software enhance professional development organizational structures for practicing teachers (Dede, 2004). Social software are applications that run on a computer designed to support a wide range of communication and interaction among groups of people utilizing an online computer-mediated environment serving as a medium or structural organization for people to communicate, socially network, find information, and expand individual and collective knowledge bases (Shirky, 2003).

Information and communications applications like weblogs, wikis, and interactive social networking sites offer a variety of ways to support knowledge building networks and provide space for recording and documenting individual and collective research. Social software applications are designed around principles of fostering cooperation, collaboration, sharing and dialogue between members of multiple learning communities and networks. Mejias (2005) suggests that social software affords the potential to connect virtual practice to physical practice, and to support everyday practice beyond that which exists online. Educators who are researching, reflecting, and discussing issues and practice online can enact what they are researching and discussing online directly in their

daily practice. In this sense social software serves as a conduit between virtual and physical realities.

2.5 THE ROLE OF PRINCIPALS AND CENTRAL OFFICE ADMINISTRATORS IN PROVIDING PROFESSIONAL DEVELOPMENT

Principals don't just set the tone and climate of the building, they also influence the overall culture in which everything else in the school operates. Principals need to hold the time allocated to professional development sacred, protecting it from interference or distractions (Chappuis, Chappuis, & Stiggins, 2009). The effectiveness of professional development programs is enhanced when administrators design programs with individual school district, teacher and student needs in mind. Administrators have the responsibility to foster an environment that supports ongoing professional development and provide strong support for the programs. Research indicates that successful professional development occurs when principals encourage their teachers to learn and work toward continuous professional growth (French, 1997).

As the demand for better instructional practices evolved under the accountability of public schools and *No Child Left Behind* legislation, so did the efforts of administrators to develop their teachers and their school's effectiveness (Darling-Hammond & Berry, 2006). Educators are being called upon to continually increase their knowledge base and learn new instructional techniques, strategies, and methodologies (Corcoran, 1995). By teachers continually improving upon their knowledge and performance, the students directly benefit and experience stronger academic growth (Darling-Hammond & Berry, 2006).

According to Sparks (1997), teacher professional development is most successful when it focuses on goals for student learning that is unique to the strengths and challenges of individual school districts. Individual school or district administrators must determine the specific types of training that will most benefit their staff, then design a professional development program according to the specific needs of their faculty (Black, 1998).

Guskey (1999) believes professional development programs should focus on the unique characteristics of schools and that activities should be planned and delivered through the collaborative efforts of teachers, school level administrators, and district level administrators. Although school based administrators often have knowledge and expertise to contribute to the design of effective professional development programs, the extremely demanding work conditions of administrators, often times, makes it difficult to become proficient in the latest concepts and strategies. By combining expertise and resources of teachers, building level administrators, and district level administrations, professional development programs are consistently more effective and efficient than those planned by administrators alone.

Prevailing school culture greatly affects the delivery of professional development and school reform efforts (Abdal-Haqq, 1996). Principals help to foster a school culture that allows teachers to continually learn, as well as provide time for teachers to participate in professional development (Doud & Keller, 1998). Providing time for professional development, encouraging collaboration among teachers, and allowing teachers to make their own decisions about professional development are elements of school culture that affect the impact of professional development. Leaders at the school

level, primarily building level administrators, influence the school culture and the delivery of professional development (Sullivan, 1999). Decision making for teacher professional development is decentralized to the school site, effectively providing principals with increased authority to tailor professional development programs to meet the unique culture of the school and staff (Brand, 1997).

However, professional development programs will be ineffective if school and district administrators fail to develop a culture of mutual respect between the faculty and the administration, as well as among teachers. Teachers will have a difficult time sharing and openly expressing themselves in professional development activities if they fear their colleagues; thus deflecting the focus of the activities from building student achievement and teacher knowledge development (Hord & Hirsh, 2009).

Guskey (1994) suggests that professional development include organizational development as well as individual development. School and district leaders must see that professional development be job embedded as well as programmatic, and must not be only for teachers, but for everyone who affects student learning. In addition, administrators are strengthening teacher professional development programs by focusing on the issues of program evaluation, especially the importance of gathering data on the impact of all forms of professional development. Since the goal of most modern professional development efforts is improved performance by the organization, staff, and ultimately students, the information on crucial measures of student learning needs to be examined and evaluated by building and district leaders (Guskey & Sparks, 1991).

Professional development is more effective when school leaders approach it as a coherent part of a school reform effort. To avoid disparities between what teachers learn

in professional development activities and what they implement in their classrooms, school and district administrators should seamlessly link curriculum, assessment, standards, and professional development opportunities. When administration provides intensive, content-rich, and collegial learning opportunities for teachers, they create the conditions for improvement in teaching and student learning. Administrative support for teachers with well-designed professional development, allows teachers to create the same types of rigorous and engaging opportunities for students, thus developing a foundation for student success in school and beyond (Darling-Hammond & Richardson, 2009).

2.6 EFFECTIVE ONLINE PROFESSIONAL DEVELOPMENT

Guskey (2004) cautions professional development researchers of the powerful and dynamic influence of context, it is impossible to make precise statements about the elements of effective professional development. The effectiveness of professional development is often measured by self-reports of teacher participants instead of by examining improvements in student learning (Garet et al., 2001). Sparks and Hirsch describe the self-reporting evaluation method as the "happiness quotient" and believe that professional development must move beyond fragmented approaches towards a strategically planned, widespread, and sustained approach to professional development that promotes change in the skills and attitudes of individuals while impacting organizational cultures and structures.

Even programs that share a common vision and seek to attain comparable goals may need to follow very different pathways to succeed. However, the first goal of professional development is to design training that enables staff to learn and transfer knowledge and skills to their classroom practice. There is no one specific type of

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professional development found to be most effective (American Federation of Teachers, 2002). Successful professional development programs are said to have clear, specific goals and objectives, engage teachers intellectually, actively involve participants, consists of multiple sessions over an extended period of time, all teachers to learn with and from their colleagues, and provide opportunities for teachers to practice and adopt new strategies (French, 1997).

Effective professional development is to foster lasting change in the classroom. When it does not, valuable time and resources are wasted, and teacher trust in that time engaged in professional development being well spent is lost. This can be avoided by offering proven professional development delivered in a model that aligns with characteristics of effective adult learning in school (Chappius, et al, 2009). Increasing numbers of educators are seeking online sources to meet their professional development needs. Of course, the online design also offered flexibility that traditional professional development workshops do not. The response to online professional development opportunities provides positive professional growth and overwhelming teacher enthusiasm as a solution for meeting professional development needs (Marrero, et al, 2010).

In an effort to meet the demands for high quality teacher professional development that is meaningful, situated within teacher practice, and convenient to teachers' busy schedules, a number of online teacher development programs have evolved. These online teacher professional development programs are generally available to teachers at their convenience and provide "just-in-time" support. In many cases, these programs provide participants access to experts in the field who would otherwise be

unavailable locally as well as access to archived educational or administrative resources that would be costly to reproduce in another fashion. A range of educational improvement objectives frame many of these online professional development programs including the introduction of new curricula and teaching strategies, addressing teachers' beliefs, enhancing instructional and assessment practices, altering school culture and school organizational structures, as well as building on school and community relationships (Dede, 2006).

While there are a growing number of online teacher professional development endeavors serving hundreds of teachers, evidence for what entails best practices for the design, implementation, and sustainability for these models of teacher professional development has been insufficient. Consequently, online programs may be convenient for participants given individual time constraints, but they offer little to minimize teachers' suspicions of professional development programs already regarded as deficient, regardless of their modality (Dede, 2006).

The ability to implement and sustain learning through online professional development can be found through the development of online professional learning communities. On-line professional learning communities can provide greater access to high-quality professional development for teachers, paraprofessionals, and principals, as required specifically by the No Child Left Behind Act of 2001 (Garrison & Anderson, 2003). Berge (1995) suggests that the interaction with content and interpersonal interaction of the professional learning community are critical to meaningful learning.

Berge (2005) further suggests that interaction among individuals doesn't have to happen in real-time. Asynchronous communication is as effective as synchronous

communication. Vrasida and Zembylas (2004) define three dimensions that illustrate the role of interaction within the framework: Dimension 1 - personal and social constructivism (knowledge constructed in the head of the learner), Dimension 2 - situated and distributed knowledge (the situation in which knowledge is constructed), and Dimension 3 - local and non-local communities of practices (groups of individuals bound by activities). When interaction in the three dimensions is achieved, online professional learning communities are formed. Professional learning communities share a commitment for a certain teaching and learning practices that initiate communication and sharing, which results in the development and integration of new knowledge.

Teachers can improve their practice of teaching using the tools of online learning and through participation in online professional learning communities. Collaboration plays a vital role in learning, provides viewpoints for varying perspectives, and teaches others to value new ideas (Murphy and Laferriere 2003). Learning is most effective when it takes place in a collaborative environment rather than in isolation. This is true whether the learning experience is online or face-to-face, and that the learning is relevant to the learner. An online learning environment provides a unique setting for learners as participants have more time to reflect on learning and dialogue with peers. Participants have the opportunity to read and re-read postings and conversations, gather thoughts, and organize points to be made before providing a response. These activities increase the relevance of the learning experience (Bonk, Wisher, and Nigrelli, 2004).

Online learning experiences bring together individuals with varied backgrounds, interests, and experiences. These differences enrich the learning experience and promote increased learning. Participation in conversations, whether face-to-face or online,

promotes the feeling of being a part of a community of learners. When learners are part of a professional learning community, feelings of isolation decrease, motivation increases, and learners are challenged to expand their learning through the examination of peer ideas (Xiaojing, Magjuka, Bonk, & Lee, 2007).

In conclusion, the literature review indicates that professional development and school reform has brought about significant changes in the educational landscape since the Progressive Education Movement of the early 20th century. Research indicates that the primary purpose of professional development is to prepare and support teachers by giving them the knowledge and skills they need to help all students achieve high standards of learning and development. Online professional development opportunities have the potential to illicit positive professional growth and increase teacher enthusiasm as a solution for meeting professional development needs. However, the use of online professional development activities is a relatively new concept and the role of principals and central office administrators in not clearly defined. Due to its novelty as a professional development concept, the study of online learning for teacher professional leads to a valuable opportunity for an in-depth study of how school districts are using online opportunities, activities, and programs for teacher professional development and to evaluate how an online professional development model impacts teaching and learning.

3.0 CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

No Child Left Behind, accountability for student achievement, and the emergence of 21st century skills have reshaped expectations for students, teachers, and administrators, and has a profound impact on professional development opportunities for educators in order to meet these expectations.

School districts across America are being held to unprecedented levels of accountability for student achievement. Schools are faced with increasing demands from the state and federal departments of education to ensure that students are meeting standards, while educational funding is on a decline. Yet, today's classrooms are a very different place than they were fifteen years ago. The emergence of technology as a teaching and learning tool has reshaped the importance of technology literacy and the focus on content that emphasizes global awareness and scientific literacy, learning and higher order thinking skills, and leadership skills with ability to plan, manage and collaborate.

According to Guskey (2000), Professional development is an extremely important endeavor and is central to education's advancement as a profession. High-quality professional development is at the center of every modern proposal to enhance education. Educational researchers are constantly discovering new knowledge about teaching and learning. As professional knowledge expands, new expertise is required of educators from all experience levels. Online professional development is emerging as an international revolution, motivated by the vision of free flowing knowledge, with teachers taking responsibility for their own learning, and embracing networks that foster

the exchange of new ideas in a spirit of community. Online professional development programs provide educators with a managed supportive learning system and the opportunity for learning in real time so teachers may immediately apply new information and skills, thus improving the quality of instruction (Brown & Green, 2003). While online professional development programs seem to offer positive benefits for the educational community, what role does online professional development activities have on the improvement of public school educators?

3.2 STATEMENT OF THE PROBLEM

Because today's educational issues require specialized expertise as schools move beyond traditional classrooms to more virtual educational environments for students. An emerging problem of the 21st century teacher's need to develop or enhance their skills and ability to educate students in this ever-changing educational environment. If professional development is a vital tool to the success of educating today's students, then how does online professional development opportunities for teachers address the need for high quality, sustained, intensive, and classroom-focused professional development needed in order to have a positive and lasting impact on classroom instruction and the teacher's performance? In what way are public school districts in Western Pennsylvania utilizing online professional development opportunities for teacher professional growth in an attempt to meet the 21st century educational challenges?

3.3 RESEARCH QUESTIONS

1. In what ways are public school districts using online professional development opportunities for teachers?

2. From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?

3. From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?

4. From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?

3.4 METHODOLOGY AND PROCEDURES

This descriptive, qualitative study explored the ways in which public school districts located in Western Pennsylvania are using online opportunities for teacher professional development and detailed the impact online professional development programs have on the role of building principal and central office staff from the perspective of superintendents. Patton (2002) defines program evaluation as the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and lead to informed decisions about future programming. Qualitative methods are often used in evaluations because they tell the program's story by capturing and communicating the participants' stories in the process. Qualitative research allows for "depth" and "detail" due to its focus on detailed descriptions of conditions, events, people, and interactions from the pragmatic world (Patton, 1980). Denzin & Lincoln (1994) explain that qualitative research provides "rich insight into human behavior" (p. 106). While Strauss and Corbin (1990) claim that qualitative methods can be used to better understand any phenomenon about which little is yet known. Qualitative methods can also be used to gain new perspectives about which

much is already known, or to gain more in-depth information that may be difficult to convey quantitatively.

Thus, qualitative methods are appropriate in situations where one needs to first identify the variables that might later be tested quantitatively, or where the researcher has determined that quantitative measures cannot adequately describe or interpret a situation. Qualitative research problems tend to be framed as open-ended questions that will support discovery of new information (Strauss and Corbin, 1990).

3.4.1 Population for study

The researcher selected public school districts located in Intermediate Unit 1, Intermediate Unit 3, Intermediate Unit 4, and Intermediate Unit 27 to explore the ways in which public school districts located in Western Pennsylvania are utilizing online opportunities for teacher professional development and the impact online professional development has on the role of building principal and central office staff. These selected intermediate units comprise public school districts located in Allegheny, Beaver, Butler, Fayette, Greene, Lawrence, Mercer, and Washington Counties. These intermediate units and the districts they represent are dedicated to providing quality leadership and services to the schools to assure their success as they prepare all learners to meet the challenges of an information society.

3.4.2 Initial Data Collection and Analysis Phase - Survey

The researcher initially surveyed the superintendents of the 109 school districts located in Intermediate Units 1, 3, 4, and 27 to determine the specific public schools districts in Western Pennsylvania that utilize online professional development opportunities for teacher professional development, how long each district has been involved in the use of

online professional development, the extent to which online professional development opportunities are utilized, and the type of online professional development opportunities available in each district. Additionally, the researcher gathered data from school districts that are not currently using online professional development opportunities for teachers and explore their current interest level of implementing such an initiative in their public school district.

Public school superintendents were selected for this initial survey so the researcher could develop and compile a list of school districts using online professional development opportunities for teachers, whether these districts develop their own online professional development content or purchase online professional development programs, and how many years each district has been engaged in online professional development for teachers. The researcher developed the following initial survey questions:

1. Does your school district offer online professional development opportunities for teacher professional growth that are developed by your district? (Yes or No)

2. Does your school district offer online professional development opportunities for teacher professional growth that are not developed by your district? (Yes or No)

3. If you answered yes to question 1 or 2 above, how long has your school district been offering online professional development opportunities to teachers? (Years)

4. If you answered no to question 1 or 2, how would your describe your district interest in exploring online professional development opportunities for teacher professional growth? (no interest and not exploring, interested but no planned timeframe to explore, interested and currently exploring)

5. What academic levels (k-2, 3-5, 6-8, 9-12) do you offer online professional development opportunities for teachers?

6. Is the primary responsibility for designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development with the building administration or central administration?

The researcher transcribed the initial survey questions, for distribution, into a Surveymonkey account and, through its distribution feature, emailed the initial survey to the 109 superintendents of the public school district located in Intermediate Units 1, 3, 4, and 27. The researcher chose Surveymonkey because it is a web-based survey service that allows users to create and distribute surveys, and to get reports on the responses and data collected. Additionally, for the protection of subjects who may not want to participate in the study, it allows respondents the option to opt out of the survey. Surveymonkey provided security to subjects who respond, and the specific data collected, as it may only be accessed through a password that is unique to the researcher.

According to Bogdan & Biklen (1998), "Analysis involves working with the data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what to tell others" (p. 157).

Data from this initial data collection was analyzed to determine the public schools districts in Western Pennsylvania using online professional development opportunities for teacher professional development, the extent in which it is utilized, and the type of online professional development opportunities available in each district.

Through the analysis of the initial survey data, the researcher developed a sample group of eight (8) initial survey respondents with varying student populations, who have indicated they have been using online professional development opportunities for teachers K-12 for at least one (1) year. This organization and analysis of data from the initial survey allowed the researcher to progress to the final data collection phase of the study where the sample group was used to further delve into the utilization of online

professional development for teachers.   Figure 1 details the process for evaluating a

school district's eligibility of progressing from the initial data collection phase to the

semi-structured interview phase.
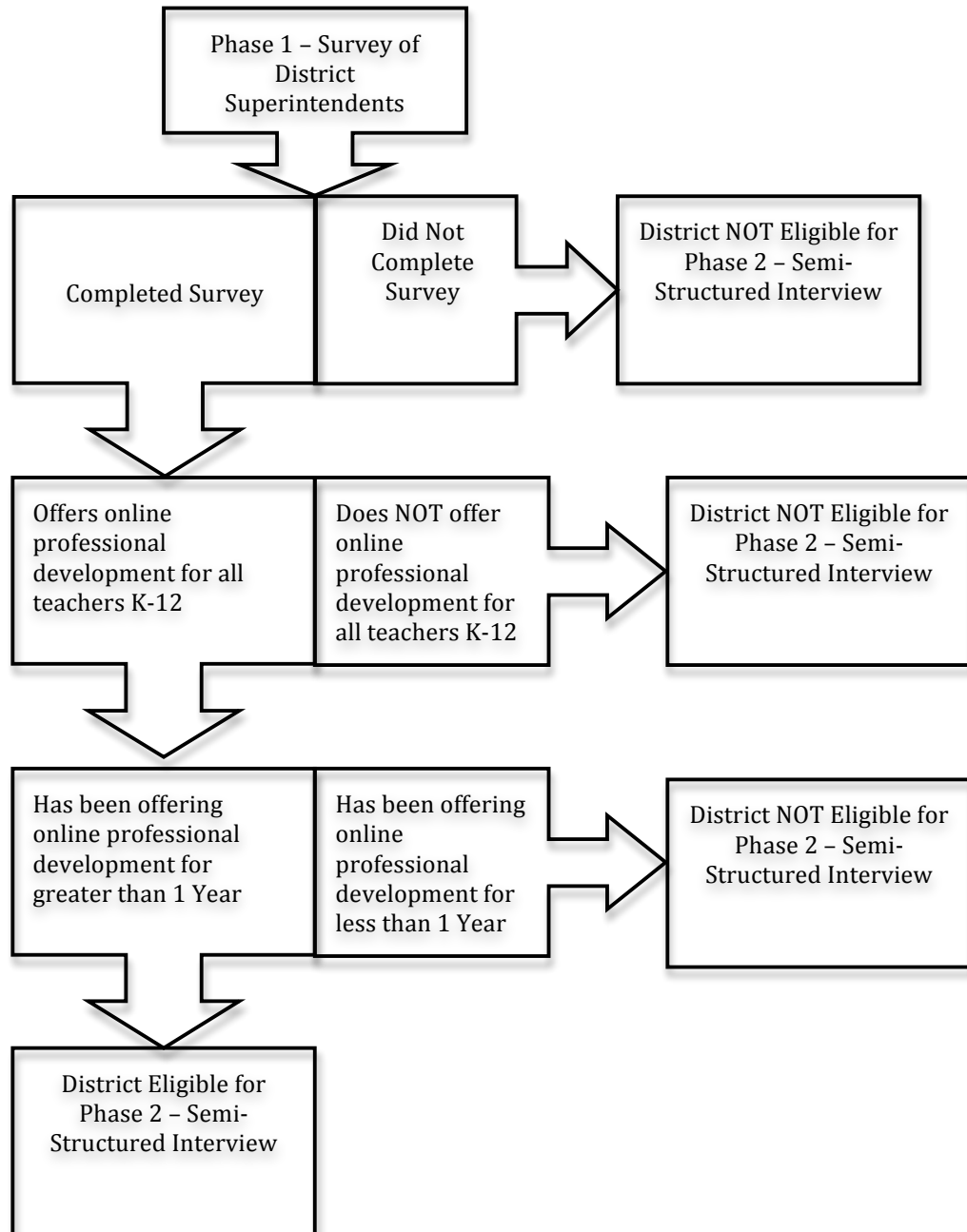
Figure 1: Initial Data Collection Phase Schematic

3.4.3 Final Data Collection and Analysis Phase – Semi-Structured Interview

According to Bogden & Biklen (1998), descriptive data gathered from the respondent's own words assists the researcher in developing insights on "how the subjects interpret some piece of the world" (p. 94). The researcher will use a semi-structured interview to explore the role of online activities for professional development in Western Pennsylvania public school districts, how school districts are structuring online professional development opportunities for teachers, the strengths and weaknesses of online professional development programs in the area, and to discover the role of building principals, and central office administrators in the development and facilitation of online professional development opportunities for teachers. Qualitative research allows the researcher to explore and analyze individual and collective beliefs, values, and perceptions (McMillan & Schumacher, 2006).

To provide a semi-structured interview, the researcher developed the following open-ended questions:

1. Describe your online teacher professional development model in terms of how and when your district is using online professional development opportunities for teachers?

2. In what ways has professional development changed in your district since you implemented online opportunities?

3. Describe the steps and procedures used to implement online professional development opportunities for your staff.

4. Does your district use a pre-developed or purchased program (s) for online teacher professional development, if so, who do you purchase from and what is the cost of the program?

5. Does your district develop its own online professional development opportunities for your teachers, if so, who is responsible for content development?

6. How did your district determine the content for either purchased or district

developed online professional development activities?

7. What specific professional development content has your district implemented?

8. What kind of feedback have you received from your teachers regarding the online professional development activities?

9. What's the role of the Principal in designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development?

10. What's the role of the Central Office Administration in designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development?

The researcher gathered responses through the use of interviews that will be audio recorded. Patton (1980) explains, "The purpose of gathering responses to open-ended questions is to enable the researcher to understand and capture the points of view of other people without predetermining those points of view through prior selection of questionnaire categories" (p. 28). Open-ended questions will be used to assist the researcher in gathering descriptive data from the respondent's perspective.

Furthermore, Patton (2002) asserts that qualitative interviewing is used to depict the respondent's perceptions and experiences about a phenomenon and to understand how the participants view the program. From the interviews and descriptive data collected, responses will be coded and organized into themes based on the perceptions, roles, and experiences of the central office personnel, principals, and teachers who engage in online professional development opportunities, and to discover ways in which public school districts are using online professional development opportunities for teachers.

Data analysis begins with the identification of themes emerging from the raw data, a process sometimes referred to as "open coding" by Strauss and Corbin (1990). During

coding, the researcher will identify and name the major themes to create descriptive categories that form a framework for analysis. Words, phrases or events that appear to be similar will be grouped into the same category. According to Creswell (2002), coding is the process of labeling text and segmenting it to form broad themes. The themes are then "aggregated codes" and are used "to form a major idea in the database" (p. 267). Finally, the researcher will categorize each theme as defined by Lincoln and Guba (1985) as: (1) consensus themes – when the majority of the respondents state the same theme, (2) supported themes – when approximately half of the respondents state a theme, and (3) individual themes – when only one or two respondents state a theme. Then themes will be categorized according to the frequency and not the importance of the theme.

McMillan & Schumacher (2006) suggest, "Qualitative analysis is a relatively systematic process of coding, categorizing, and interpreting data to provide explanations of a single phenomenon of interest" (p. 364). The final thematic analysis of data will develop into the researcher's interpretation of the collected data. According to Boyatzis (1998), thematic analysis is a process of encoding qualitative information that serves as a label for the collected data. For this study, data will be coded and organized into themes according to the individual responses of the district administrator interviewed. These identified themes and established narratives will be analyzed to represent the role of online activities for professional development in public school districts located in Western Pennsylvania, and the ways these public school districts are using online professional development opportunities for teachers.

In summary, this descriptive, qualitative study explored the ways public school districts located in Western Pennsylvania are utilizing online professional development

opportunities for teachers, and the impact online activities for professional development have on administrators, teachers, and students. The researcher surveyed the superintendents of 109 school districts located in Intermediate Units 1, 3, 4, and 27 to determine the public schools districts in Western Pennsylvania that utilize online professional development opportunities for teacher professional development and the extent in which it is utilized, and the type of online professional development opportunities are available in each district. For greater understanding of the initial survey data's function to answer the study research questions, the researcher developed a matrix (Table 1) located on page 48 of this study. Data from the initial survey was utilized to determine which specific school districts the researcher would visit to conduct interviews of the district administrator responsible for professional development. For greater understanding of the semi-structured interview data's function to answer the study research questions, the researcher developed a matrix for interview questions 1-5 (Table 2) located on page 49 of this study and for interview questions 6-10 (Table 3) located on page 50 of this study. The interviews were audio recorded, and data coded by theme to provide for a thematic data analysis. Finally, Chapter 4 details the researcher's descriptive summary of each research question and a detailed explanation of how each school district in the study uses using online professional development for teacher growth and its impact on their public school district located in Western Pennsylvania.

Table 1 - Matrix of initial survey question's function to answer study research question

Matrix of initial survey question's function to answer study research question	Initial Survey Questions			
	Does your school district offer online professional development opportunities for teacher professional growth that are developed by your district?	Does your school district offer online professional development opportunities for teacher professional growth that are not developed by your district?	What academic levels (k-2, 3-6, 7-9, 10-12) do you offer online professional development opportunities for teachers?	Is the primary responsibility for designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development with the building administration or central administration?
Research Question 1: In what ways are public school districts using online professional development opportunities for teachers?	X	X	X	
Research Question 2: From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?				X
Research Question 3: From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?				X
Research Question 4: From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?				X
Matrix Legend – X = Initial survey question addresses study research question. "blank" = Initial survey question does not address study research question.				

Table 2 - Matrix of the semi structured interview questions 1-5 and their function to answer the study's research questions.

Matrix of semi-structured interview question's function to answer study research questions 1-5.	Research Questions			
	Research Question 1: In what ways are public school districts using online professional development opportunities for teachers?	Research Question 2: From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?	Research Question 3: From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?	Research Question 4: From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?
Describe your online teacher professional development model in terms of how and when your district is using online professional development opportunities for teachers?	X			
In what ways has professional development changed in your district since you implemented online opportunities?	X			X
Describe the steps and procedures used to implement online professional development opportunities for your staff.	X	X	X	
Does your district use a pre-developed or purchased program (s) for online teacher professional development, if so, who do you purchase from and what is the cost of the program?	X			
Does your district develop its own online professional development opportunities for your teachers, if so, who is responsible for content development?	X	X	X	
Matrix Legend – X = Initial survey question addresses study research question. "blank" = Initial survey question does not address study research question.				

Table 3 - Matrix of the semi structured interview questions 6-10 and their function to answer the study's research questions.

	Research Questions			
Matrix of semi-structured interview question's function to answer study research questions 6-10	Research Question 1: In what ways are public school districts using online professional development opportunities for teachers?	Research Question 2: From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?	Research Question 3: From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?	Research Question 4: From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?
How did your district determine the content for either purchased or district developed online professional development activities?	X	X	X	
What specific professional development content has your district implemented?	X			
What kind of feedback have you received from your teachers regarding the online professional development activities?				X
What is the role of the Principal in designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development?		X		
What is the role of the Central Office Administration in designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development?			X	
Matrix Legend – X = Initial survey question addresses study research question. "blank" = Initial survey question does not address study research question.				

4.0 CHAPTER FOUR: FINDINGS

4.1 INTRODUCTION

The purpose of this study was to focus on how school districts are using online opportunities, activities, and programs for teacher professional development. The goal of this study was to identify the impact online professional development has on principals and central office personnel and to discover key indicators of success for online professional development programs for teachers from the superintendent's perspective. The researcher surveyed the superintendents of the 109 school districts located in Intermediate Units 1, 3, 4, and 27 to determine specific public school districts in Western Pennsylvania that utilize online professional development opportunities for teachers.

Data from the initial survey was used to develop a representative sample of school districts that are using online professional development opportunities for teachers. Using the representative sample, the researcher conducted semi-structured interviews of the district superintendent over a one-month period. The interviews occurred at a location selected by the participant. Each interview was audio recorded and transcribed for accuracy. The following sections of this chapter include data results from the initial survey, a profile of each school district led by the superintendent interviewed from the representative sample, a discussion of each research question, and results of the data analysis. Finally, this chapter includes a summary of the consensus, supported, and individual themes discovered through the qualitative interview process used to illustrate the respondent's perceptions and experiences with online professional development, and to understand how the participants view the online professional development program

experiences in their school district.

4.2 INITIAL SURVEY DATA

Using a Surveymonkey account and, through its distribution feature, the researcher emailed the initial survey to the 109 superintendents of the public school districts located in Intermediate Unit 1, Intermediate Unit 3, Intermediate Unit 4, and Intermediate Unit 27 to explore the ways in which public school districts located in Western Pennsylvania are utilizing online opportunities for teacher professional development. These selected intermediate units comprise public school districts located in Allegheny, Beaver, Butler, Fayette, Greene, Lawrence, Mercer, and Washington Counties. The initial survey produced thirty-five (35) respondents or 32.9% of the 109 superintendents in the surveyed intermediate units responded.

The initial survey revealed ten (10) respondents who are not currently offering online professional development for teacher improvement in their district. Of the respondents two (2) indicated their school district is currently not interested and not exploring online professional development, four (4) indicated their district is interested in exploring online professional development, but has no planned time-frame to explore online professional development, and four (4) indicated they are interested in online professional development for teachers and are currently exploring online professional development options. This provides for valuable information as it indicates a potential growth model for online professional development in Western Pennsylvania Public School Districts and provides potential for future research into online professional development for teachers.

In a search for school districts in Western Pennsylvania that utilize online professional development opportunities for teachers, the survey revealed eight (8) school districts that offer online professional development opportunities for teacher professional growth that are developed by their district. Additionally, survey data revealed twenty-five (25) school districts that offer online professional development opportunities for teacher professional growth that are not developed by their school district. A review of respondent data indicated that five (5) school districts are classified in both categories above as they provide online professional development opportunities for teacher professional growth that are both developed by their school district, as well as opportunities that are not developed by their school district.

The 25 respondents that indicated they are offering online professional development for teachers were asked how many years their school district has been offering online professional development opportunities to teachers. Data revealed a range from less than one year to eight years with four (4) school districts that have been engaged in online professional development for teachers for less than one year and one (1) school district that has been engaging teachers in online professional development for eight school years. Additionally, one (1) respondent has been engaging their teachers in online professional development for one school year, and 19 respondents have been engaging teachers in online professional development for a period of two to five school years.

All 25 respondents who are engaging their teachers in online professional development offer online professional development to high school teachers (grades 9-12). Of the 25 respondents who indicated they are offering online professional development

for teachers, 18 respondents provide online professional development to middle school teachers (grades 6-8), and 15 respondents offer online professional development to elementary school teachers (grades k-5). This data provides the potential for future research into the reasons why districts chose selected grade levels to include or exclude from online professional development opportunities in their districts.

The organization and analysis of the data from the initial survey allowed the researcher to progress to the final data collection phase of the study by identifying a sample group of eight (8) school districts, who met the established research criteria; school districts located in Western Pennsylvania that use online professional development for teachers in grades k-12 and have been engaging their teachers in online professional development for at least one (1) school year.   Final data was collected through the use of a semi-structured interview of the sample district's superintendent.

4.3 DEMOGRAPHIC DATA FOR SCHOOLS REPRESENTED IN THE STUDY

Eight (8) school district superintendents, representing eight (8) Western Pennsylvania school districts, were eligible for inclusion in the semi-structured interview phase of the study and agreed to participate in the semi-structured interview with the researcher.

Each of the eight (8) participants initially responded as a school district that currently offers online professional development to their entire K-12 teaching staff and has been engaging in online professional development for teachers for more than one school year. Three (3) of the eight participants utilize online professional development opportunities for teachers that are solely developed by school district staff.   Five (5) of the eight participants utilize online professional development opportunities for teachers

that are both developed by school district personnel and have implemented online

professional development opportunities that are developed by a third party that are either

purchased or provided through grant opportunities. Student populations for the

participant school districts ranged from approximately 1,300 students to approximately

7,400 students, with teacher populations ranging from 110 faculty members to 640

faculty members.

Of the school districts represented in this study, one school had recently

implemented online professional development for teachers within the last school year,

while the district with the most experience has been offering online professional

development for teachers for a period of eight years.

Disaggregated demographic data of the schools represented in this phase of the

study are shown in Table 4. In an attempt to protect the identity of respondents in this

phase, the researcher rounded to the nearest hundred for student enrollment, to the nearest

ten for faculty member populations, and to the nearest million for school district revenue

dollars. Table 4 reveals an array of unique characteristics in defining the subjects in this

study. Subjects are comprised of a variety of school districts from small schools to large

schools and from low socioeconomic to rather solid socioeconomic schools based on

student free and reduced lunch data as well as district operating budgets for the 2011-12 fiscal

year. Additionally, subjects in this study have a variety of experience levels in terms

of offering online professional development opportunities for teachers.

Table 4: Demographic Data of the Schools Represented.

	Approximate Student Enrollment	Approximate number of faculty members	% of Free and Reduced Lunch Students*	Approximate District Revenues for 2011-12 Budget (in millions)	Offers online professional development developed by district staff	Offers online professional development not developed by district staff	Years offering online professional development
A	4200	330	19.7	$67	Yes	No	5 Years
B	2400	200	29.3	$35	Yes	No	3 Years
C	3500	270	23.5	$50	Yes	No	2 Years
D	4200	350	28.4	$60	Yes	Yes	3 Years
E	4800	360	26.3	$69	Yes	Yes	5 Years
F	2700	200	49.3	$41	Yes	Yes	1 Year
G	7400	640	11.4	$94	Yes	Yes	2 Years
H	1300	110	36.5	$17	Yes	Yes	8 Years

Note: 2011-12 Data
* - Pennsylvania Department of Education – Division of Food and Nutrition October 2010 Report Data

4.4 ADDRESSING THE RESEARCH QUESTIONS

The following section addresses each research question identified in this study and specifies the interview questions that were asked of each participant. This section is organized in a sequential manner by each participant's response to the questions. Direct quotations and excerpts from the participants are used throughout this section to capture the essence of the responses. With eight (8) school district superintendents participating in the semi-structured interviews, the researcher used a theme analysis of the collected data and categorized themes according to the frequency and not the importance of the theme by (1) consensus themes – when the majority (5 or more responses) of the respondents state the same theme, (2) supported themes – when approximately half (3 or 4 responses) of the respondents state a theme, and (3) individual themes – when only one or two respondents state a theme.

4.4.1 Research Question 1: In what ways are public school districts using online professional development opportunities for teachers?

The researcher developed and asked the following questions to acquire the data to answer research question one (1):

- Describe your online teacher professional development model in terms of how and when your district is using online professional development opportunities for teachers.

- In what ways has professional development changed in your district since you implemented online opportunities?

- Describe the steps and procedures used to implement online professional development opportunities for your staff.

- Does your district use a pre-developed or purchased program (s) for online teacher professional development, if so, who do you purchase from and what is the cost of the program?

- Does your district develop its own online professional development opportunities for your teachers, if so, who is responsible for content development?

- How did your district determine the content for either purchased or district developed online professional development activities?

- What specific professional development content has your district implemented?

Upon analysis of the collected data regarding the description of online teacher professional development models in terms of how and when districts using such models, several consensus themes arose. There was a consensus of superintendents using the Blackboard Learning System in their school districts for the interface of online professional development opportunities for teachers that occur throughout the school year

in a workshop, webinar, or mini-course format. Based on the responses of the superintendent's interviewed, they believed that the quality of professional development has improved as their districts are using online professional to address ongoing professional development needs, as opposed to full day professional development days or in-service days scheduled with their faculty.

Through the use of online collaboration technologies like wiki, blogs, online discussion boards, or skype, districts that engage in online professional development have created the opportunity for teachers to engage in professional learning and professional discourse in an environment that is not bound by time and space. As indicated by the superintendents interviewed, the greatest asset to the online professional development model was that it creates convenience and flexibility to meet the time constraints of the adult learner, with the opportunity to choose the programs that individual teachers need to grow professionally.

Data analysis revealed several supported themes, as more than one superintendent indicated that their school district utilizes the Moodle Platform. Three superintendents indicated their districts use online professional development as a component on their district's new teacher induction program; all of which have online activities for the entire three year program established to meet the needs of new district employees. Two superintendents indicated that their district uses online professional development for teacher enrichment as a component of a summer academy or summer workshops for teachers. In both incidents, teachers volunteer to engage in professional learning during the summer to earn Act 48 hours. Additionally, two superintendents indicated they have online components for the professional growth of coaches in their athletic department,

although not all coaches in the district are teachers, this statement is an indication of how Western Pennsylvania public school districts are using online professional development opportunities.

Individual themes emerged around the content management programs that are pre-developed, or purchased, as opposed to developed by school district personnel. Individual themes of Intermediate Unit online programs, Wilkes University, Atomic Learning, and the Sanctuary Institute are all in use at Western Pennsylvania public school districts for online learning.

The next section delineates each superintendent's description of their district's online teacher professional development model in terms of how and when their district is using online professional development opportunities for teachers, and is intended to provide an in-depth report of the participant's perspectives on how their school districts is using online professional development opportunities for teacher professional growth. The consensus, supported, and individual themes are shown in Figure 1.

Superintendent A

Superintendent A's district has been offering online professional development using the Blackboard platform through Blendedschools.net for the past five (5) school years. This initiative began when the district engaged in an online professional development as a component of their induction program for second and third year inductees. This program has since evolved with online modules developed to engage new district employees throughout their three (3) year induction program. When describing the professional development model in their district Superintendent A stated,

The past five years our district professional development opportunities have been

online and this model allows the teaching staff to engage in a professional learning community. Our model allows for teachers to collaborate through discussion boards and blog postings, build upon professional knowledge through the completion of wiki activities, share best practices, and discuss teaching and learning activities in a professional environment.

Shortly after the implementation of an online induction program, Superintendent A indicated that their district implemented online professional development programs at their junior and senior high schools to meet the one-hour weekly professional development opportunities contractually offered to their professional staff. Currently, this district's one-hour weekly, online professional development model has expanded to all teachers k-12. Superintendent A stated,

> Prior to the implementation of our online professional development program, our district's ongoing professional development program was designed around after-school activities or workshops for teachers. Our current teacher's collective bargaining agreement provides for 50 hours of ongoing professional development annually. Of those 50 hours, one (1) hour per week is prescribed professional development at the discretion of the district administration. The online model has allowed our district the opportunity to offer a forum for teachers to discuss teaching and learning and to collaborate without time constraints found in a traditional work-day.

Superintendent A described their model as teachers engage in a learning activity, review a professional publication, learn about instructional strategies, examine data, or share best practices in teaching and learning. The learning activity is normally followed by a reflection activity in which teachers can discuss their professional growth, explain how they could implement newly learned strategies, or share experiences from an implemented strategy. Superintendent A stated

> It (online professional development) provides a forum to model and share the positive outcomes and caution colleagues on the pitfalls of a newly implemented activity. It (online professional development) instituted a community of risk taking with professional support in an environment where teachers can, on a consistent basis, share experiences from their classroom. There's cooperation and collaboration that allows us to have the opportunity for teachers to talk about

teaching learning and the online environment provides us that opportunity, without the boundaries of time and space, for teachers to engage in professional learning.

Since implementing the online professional development program, Superintendent A believes their district is offering greater quality professional development and is engaging a greater percentage of teachers with the online program as compared to the traditional professional development model that requires "physical attendance" to engage in the program. Superintendent A explained,

> In the past, it was difficult for administrators to develop a professional development program in a face-to-face environment that had 100% engagement and teacher participation. Online professional development allows our district to breakthrough the elements of time and space and creates a forum for teachers to talk about teaching and learning, where they can share ideas and share best practices; a forum to share what is occurring in their classrooms. But teachers don't have a face-to-face discussion scheduled by the administration; they do so online based on their own time schedule. We saw professional development grow from 100 teachers listening to a program for 1 hour a week to 100 teachers engaged in professional learning at various intervals over a weekly timeframe. It was amazing to see the time periods that teachers entered the professional development site to engage and learn. It truly created an environment for continuous learning. People would enter and engage in the site more than the required hour because it (online professional discussions) developed a curiosity. Teachers would enter their postings and would look forward to seeing their colleague's comments. They would do their required work, and then continue to enter the site to see what their colleagues were posting on the same topic. The environment of online discussions became very powerful for teachers. It not only provided a reflection and comment environment, but it gave teachers a validation and support from their colleagues. It also gave the administration a glimpse into the classrooms without physically going.

To determine specific content to offer for online professional development, Superintendent A explained their administration determines the professional development content as an administrative team of principals and central office staff with little input from the faculty. The team establishes the online professional development content based on data that focuses on identified areas in need of improvement. The online professional development program's mission is to improve upon identified weaknesses,

and to establish an opportunity to share individual strengths within the teaching staff, to improve the instructional practices of the faculty members.

Although it is not directly related to teacher professional development, it was interesting to discover that Superintendent A indicated their district's athletic department offers online professional development for coaches. This program is developed by the athletic director to meet the Western Pennsylvania Interscholastic Athletic League (WPIAL) mandates for pre-season coach's informational meetings and provides a forum for online collaboration amongst coaches, as well as with the athletic director.

Superintendent B

Using the Blackboard Learning System, Superintendent B's district has been engaged in online professional development for the past three (3) school years. This program evolved out of a district initiative to focus on a strict instructional model that clearly defines the steps of an effective lesson from "do now" activities through the "lesson closure activities." As teachers progressed through the trainings and the professional development for this instructional model, the district administration began to realize the need to create a forum for teachers to collaborate how this instructional model is working in classroom practice.

Additionally, the district implemented the Olweus Bullying Program and realized the program would have a major impact on the professional development time available for district administration use. Superintendent B explained,

> With the implementation of the Olweus Bullying Program and the realization that this program will take up the majority of the time for professional development, we (administration) recognized that the teachers needed the opportunity to, on a regular basis, engage in professional learning and professional discussions regarding the instructional model. As there was no time for the necessary learning and discussions that the instructional model warrants, central administration developed a model that created a professional learning community online using a Blackboard interface for the experience.

As the administration in Superintendent B's school district implemented online professional development for teachers, they also provided an opportunity for teachers to have input into the professional development topics offered. Superintendent B describes changes in teacher attitude about professional development since the district implemented the online model and believes the online professional development model changed the faculty culture of professional learning and collaboration as online professional development raised the expectation for professional conduct. Superintendent B describes their faculty members as "excited about the opportunity to get more professional development on specific topics that they feel are needed for their own professional growth while having the flexibility to complete the professional development program as opposed to it being scheduled."

Superintendent C

School C has negotiated through their teacher's contract that each professional employee is required to complete four (4) mini-courses each school year to complete their required professional development. At its inception, many of the mini-courses did not meet the needs of the individual teachers. It was here that the district began to offer online professional development, two years ago, as a substitution for the district developed mini-courses. Over the past two school years this program has taken hold as teachers are now developing and facilitating online mini-courses for their colleagues through the use of the Blackboard Learning System. Superintendent C explained that the true beginning of the online professional development movement in their district was lead by their professional school nurses who had difficulty finding mini-courses to meet their personal professional development needs, but were able to locate online courses that

would serve a greater benefit to their professional growth. Superintendent C indicated,

> In our (teacher's) contract we have mini-courses that the teachers have to take for their professional development. These courses take place before school or after school and the (teacher's) contract requires the teachers to complete four (4) mini-courses each school year. When we started out, a lot of those mini-courses didn't really fit the needs of individual teachers, so the teachers were permitted to apply an online course in substitution of the district offered mini-courses. The nurses took the greatest advantage of online learning at the onset of the program, as the mini courses did not meet their needs.

As stated by Superintendent C, the online program continued to grow and the district teachers and administrators are now developing and offering online courses of their own. The greatest change that occurred from the implementation of the online professional development model was the movement from district administration determining the professional development needs of teachers to the individual teachers choosing professional learning opportunities based upon their own interests or needs. Superintendent C stated,

> As our mini-course offerings expand, teachers are provided with the opportunity to choose professional development topics that address individual interests, or topics of interest that they believe are needed to make them a better teacher, rather than the administration establishing professional development offerings that they (the administration) think the teachers need. Online learning allowed our district to move from collecting survey data in an attempt to discover the professional development needs of the faculty, to providing an opportunity for teachers to evaluate their own professional needs and choose the appropriate offering that best fits that need, want, or professional interest.

Superintendent C configures a leadership team of teachers and administrators from each building, and facilitates a leadership retreat that focuses on the different professional learning initiatives that each building would be interested in exploring.   Professional development content is evaluated based upon teacher input, effectiveness, and need. Through discussion and collaboration, the district establishes the professional development content and type of mini-course offerings that will be available to faculty

members for the upcoming school year. Superintendent C stated, "At the retreat, each school team evaluates what worked and what did not work, what should continue to be offered and what maybe should not be offered. The teachers and the principals have a lot of input into what they need to make themselves better."

Additionally, Superintendent C's athletic department and coaches engage in online professional learning and stated "our coaches are exposed to online professional development through the athletic department's use of online courses offered through the state association."

Superintendent D

Superintendent D introduced the district to online professional development three year ago as a component of their new teacher induction program. This program provided teachers new to the school district with the opportunity to work collaboratively on projects and assigned tasks throughout the year using the Blackboard Learning System. This school year, the district will pilot an online professional development program through Atomic Learning.   Atomic Learning is a purchased product in which online training resources are used for professional development to instruct teachers through a library of thousands of short, easy-to-understand tutorial movies and content that can be used as an integral part of a professional development program and a valuable curriculum supplement. When asked to explain the professional development model used by the district, Superintendent D revealed,

> We use Blendedschools' Blackboard platform to implement our online professional development. Starting three years ago, we created a comprehensive online professional development module for our new teachers as part of their induction program. New teachers meet regularly throughout the year and work through assigned tasks and projects using the Blackboard platform.

New this year, we will initiate a pilot program through Atomic Learning, a company that offers online professional development solutions to K-12 educators, in a further effort to differentiate technology professional development.

Superintendent D feels that from a culture of learning standpoint, the generation of teachers employed by the district has an acceptance of the concept of online learning as "a part of the educational landscape." The online program has provided a "break from the old fashioned ways of conducting professional development." Using online professional development has allowed for the accurate assessment of teacher needs, which allows the administration to provide programs that offer faculty members more choices, and the opportunity to work independently to achieve their goals. "No longer are teachers bound by the confines of a seven o'clock (7:00 am) to three o'clock (3:00 pm) school day. They have access to professional development 24 hours a day seven (7) days a week."

Superintendent E

Superintendent E explained their district's implementation of online professional development and their use of online webinars as an opportunity to be more fiscally responsible and stated "our district's full year professional development for teachers will be comprised of online webinars through the use of Blackboard. This allowed us to become much more cost effective because it allowed us to have access to speakers that we could not have afforded to have physically onsite to present to our faculty."

Superintendent E developed an Act 48 committee of teachers, parents, and administrators to answer the question of what should the district offer for online professional development content. The committee chose an online webinar based model.

In this model, teachers attend webinars in an online format, followed by an opportunity to

engage colleagues in online discussions regarding the webinar. Additionally, the district

creates opportunities for continued discourse and collaboration on the webinar topics

through the use of Act 80 in-service time.   Superintendent E detailed this plan,

> Teachers attend the webinar sessions that may last anywhere from one hour to one
> and a half hours, and then engage in an online discussion board with guiding
> questions developed by the administration. As a component of the online model,
> teachers are required to reflect upon the webinar topic, and its personal impact to
> their personal professional growth. For collaboration, teachers are divided into
> groups to engage in the online discussion portion of the program. After the webinar
> and reflection professional development session, our district has early dismissal
> days, for students, two (2) weeks after a professional development day to allow for
> additional collaborative work based on the specific professional development day
> focus. This collaborative work also has an online discussion and reflection
> component.

In addition to the full year professional development model with online

components, Superintendent E explained their district's voluntary online book study

groups in which teachers have the opportunity to earn 15 Act 48 credits through the

summer months. Superintendent E detailed this program,

> Over the summer the district offers voluntary online book study opportunities for
> teachers to engage in professional learning groups and to earn 15 act 48 hours.
> Each online study group, or each book club, has a limited capacity of 40 teachers.
> Each member receives a copy of the book selected by the facilitator, which is
> normally a teacher or an administrator. Professionals read the book on their own
> time, but all of the discussion and collaboration regarding the books are completed
> online through the use of Blackboard. Each book club had a moderator or
> facilitator to pose the questions to the group and to spark discussions. In the past,
> our district was able to use a skype session with the author and to have a
> collaborative discussion between the teachers and the author and to answer some of
> the questions that the book study leader could not answer. This was a very unique
> opportunity because of the nature of the online environment and the ability to
> communicate through the application of technology.

Superintendent E truly values the flexibility the online program brought to the

district, the ability to meet the individual learning needs of the faculty, and the

collaboration the program has provided for the teaching staff,

> When you review the discussions taking place online, you begin to see the value of the online program. Our teachers are engaged in great discussions that get to the root of some major issues. I saw a great benefit to our teacher professional growth just reading the discussion and reflections that were generated. Professional development has become an activity with flexibility as to when these programs can be completed. Moving to an online professional development program has allowed our district to offer quality professional development opportunities over the summer. We all know that during the school year, engaging in professional learning communities, like a book club, would be difficult just based on the busy schedules of our teachers; but by having the opportunity to offer these programs online, with a flexible timeframe created the ability to mold the program to meet the time needs of each individual participant.

Superintendent F

Superintendent F explained their district began using online opportunities for professional development over the past school year because there was not enough time in their daily schedules to provide quality professional development to meet the needs of their faculty under financially difficult times for public school districts. Through the use of the Intermediate Unit's professional development offerings, and the Sanctuary Institute, the district has successfully developed a quality professional development program for teachers. The Sanctuary Institute is a purchased service that offers a five-day intensive training experience in which teams of five to eight people, from various levels of the organization, come together to create a shared vision of creating or changing an organization's culture.

By implementing online professional development opportunities, the district was able to move into a situation where teachers are developing opportunities for other teachers using the Blackboard Learning System. When asked to describe the online professional development program in the district, Superintendent F reported,

Our district uses online professional development for after school programs, for activities in our three professional development days or in-service days, and for our monthly professional development opportunities. We have tried to make online professional development opportunities available because we do not have enough time to cover all the needs of our teachers. Online professional development allows teachers to engage in professional development on their own time, after school and on the weekends. With the budget cuts and elimination of conferences, more teachers are exploring the online professional development opportunities endorsed by the district.

Superintendent F has witnessed a positive change in the district professional learning climate and culture since moving to the online model. Online professional development has allowed the district to provide more individualized professional development in a system with limited time. "Online professional development has really grown in our district because teachers see this (online professional development) as the wave of the future and if we can't get needed professional development into the timeframes we have scheduled, online professional development gives us the opportunity to address the needs of our teachers and to meet our district goals."

Superintendent G

In Superintendent G's school district, online professional learning began when district administration began accepting and reimbursing for credits earned online through colleges and universities. As this movement began in this school district, those involved in online learning were teachers who were studying to complete advanced degrees or for teachers looking to move horizontally on the district's pay scale into Masters +15 credits, Masters +30 credits, or Masters +60 credits. As this movement and the desire for online learning grew in the district, district administration began to construct online professional development opportunities for teachers.

Superintendent G stated, "Teachers are doing a lot of online professional

development in our district. We use Moodle for our district developed online professional development and act 48 opportunities for teachers. We offer quite a bit of online professional development through our technology department. Additionally, many teachers are exploring online professional development opportunities offered through the Pennsylvania Department of Education (PDE)."

Furthermore, Superintendent G described their "Summer Academy" in which the district offers online professional development modules, courses, seminars, and book clubs for teachers. These sessions are facilitated online by teachers and administrators and provide for voluntary professional development during the summer break.

In Superintendent G's school district there are two induction program tracts; one for teachers new to the district, but are not new to the teaching profession, and one for teachers new to the district and new to the profession. Both induction program tracts have online professional learning, reflection, and collaboration as a requirement of the program.

Superintendent G attributes the positive reactions by teachers, regarding online professional development, to the flexibility that the online professional development program offers in respect to time and topic. Superintendent G explains,

> For the adult learner, it (online professional development) allows the professional the opportunity to tailor their program into a timeframe that best fits their busy schedule. Our teachers are more willing to enroll in online professional development opportunities, or take the courses if they get the flexibility to choose the topic and time needed to complete the activities. Offering more choice has had an impact on the number of teachers who engage in professional learning. I believe more teachers are excited about online professional development because of the flexibility as to when they complete the activities and where they complete the activities.

To establish online professional development content offered to teachers,

Superintendent G surveys the faculty and gathers input on topics of interest to the employees. Administration collaborates to establish what professional development topics should to be addressed in traditional face-to-face workshops, what online topics are currently available in the district, and what new topics would be best structured for courses under the online professional development program using Moodle. This process also allows for the establishment of a differentiated professional development model for the district's induction program. Superintendent G stated,

> Prior to engaging new employees, we send them a survey and ask for their input on the topics they would like to learn more about or need more professional development in. We basically send them a list of topics we have of pre-developed programs to check off. We complete this survey at the end of the 1st year and the end of the 2nd year, which allows us to provide an online induction program that meets the individual needs of our new hires.

Superintendent H

Eight (8) years ago, Superintendent H's school district was awarded a Reading First Grant, and as a condition of the grant, was required to retrain kindergarten through 3rd grade teachers in the best practices of reading instruction. Furthermore, building and district administrators were required to engage in professional learning in regards to the reading program as well. According to Superintendent H, "The online training programs were developed by Wilkes University and focused on research based strategies and best practices in how to best teach reading."

Superintendent H attributes the Reading First Grant and the Classrooms For the Future Grant (CFF) to creating a comfort level for online learning in the district. Superintendent H believes that the teacher comfort level with online professional development has since expanded with more teachers engaging in online course work

developed through Wilkes University, including opportunities intimated through the

Reading First and the Classrooms For the Future Grant (CFF). This opportunity and the

expertise of the district's technology department and technology coach has allowed for

the district to develop and facilitate online learning opportunities for teachers using the

Moodle platform. To describe the online professional development model used in the

district, Superintendent H's explained,

> Classrooms For the Future has allowed us to expand our online professional development through the use of Moodle. Our technology director and CFF coaches have developed online learning opportunities that focus on using technology in the classroom. We have focused on some very simple tasks like learning how to set-up and use a blog in the classroom, how to develop a web page for your classroom to increase communication with the parents and students. We have created online classes that allow our teachers to engage in professional development after school, on weekends, and at times as a portion of the district's full professional development days. Since the completing the requirements of the CFF grant many of our teaches have continued with online learning through Wilkes University.

Figure 2 below organizes the identified themes into consensus, supported, or

individual themes from Research Question 1. Theme data in Figure 2 reveals school

districts in the study provide online professional development opportunities to teachers

throughout the school year and during the summer vacation in a workshop, webinar, or

mini-course format. Additionally, districts are using online professional development as

a component, in whole or in part, for their new teacher induction programs, and for the

professional learning of their athletic program coaches. With the emergence of interactive

technologies and through the use of online collaboration tools like wikis, blogs, online

discussion boards, or skype, districts in this study have created the opportunity for

teachers to engage in professional learning and professional discourse in an online

environment that creates the flexibility to meet the time constraints of the adult learner,

with the opportunity to choose the programs that individual teachers need to grow

professionally.

Identified Themes for Research Question 1

Consensus Themes (Frequency of 5 or more)	Supported Themes (Frequency of 3 or 4)	Individual Themes (Frequency of 1 or 2)
• Blackboard Learning System for content management • Workshop, Webinar, Mini-Course, Professional Learning Module format • Quality of professional development improved • Use of online collaborative technologies (wiki, blog, Online discussion Boards, Skype) • Offers flexibility • Offers differentiation and teacher choice	• Moodle Learning System for content management • Used for New Teacher Induction Program • Used for Summer Academy • Used for athletic coaches professional learning	• Wilkes University for online content management • Atomic Learning for online content • Intermediate Unit program for online content • Sanctuary Institute • Grant initiated

Figure 2: Research Question 1: In what ways are public school districts using online professional development opportunities for teachers?

In an attempt to discover the specific online professional development content offered in the interviewed districts, the analysis of the data revealed a wide variety of content topics offered by the eight (8) respondents. Figure 3 lists the variety and specific content offered by the superintendents in this study and reveals the potential opportunity for school districts to collaborate and cooperate in the development and offering of online professional development content. This list provides a valuable beginning library of

professional development content that can be organized and shared as superintendents

seek to provide professional development programs to meet identified areas of needed

staff improvement in their school districts.

Online Professional Development Content Offered

Professional Development Topic	Type of Theme
21st Century Teaching and Learning	Supported
Anticipatory Set	Individual
Co-teaching	Individual
CPR and First Aid in the Classroom	Individual
Curriculum Mapping	Individual
Differentiated Instruction	Supported
Effective Closure Strategies	Individual
Effective Lesson Delivery	Supported
Inclusion Practices	Individual
Instructional Design	Individual
Integrating Technology into Instruction	Supported
Positive Behavior Support	Individual
Promethean Board/SMART Board Training	Supported
Questioning Strategies	Individual
Reading Instructional Strategies	Supported
Response to Intervention	Supported
Scaffolding Practices	Individual
Teaching the Gifted Learner	Supported
Using Online Instructional Resources	Individual
Writing Instructional Strategies	Supported

Figure 3: What specific professional development content has your district implemented?

4.4.2 Research Question 2: What is the role of the principal in designing,

implementing, facilitating, and monitoring online professional development

opportunities for teachers?

The researcher developed asked the following questions to acquire the data to answer this

research question:

- What is the role of the Principal in designing, developing, implementing, facilitating, and monitoring of online opportunities for teacher professional development?

- Does your district develop its own online professional development opportunities for your teachers, if so, who is responsible for content development?

- Describe the steps and procedures used to implement online professional development opportunities for your staff.

- How did your district determine the content for either purchased or district developed online professional development activities?

Upon analysis of the collected data, several consensus themes arose that detail the role of the principal in designing, facilitating, and monitoring online professional development opportunities for teachers in school districts using online professional development for teacher professional growth. The most prominent theme that emerged is that the principal plays the "key role" in the district's online professional development for teachers. As instructional leaders, principals are charged with leading the district's teaching force and instructional practices; therefore, it is only natural that any effective professional development program for teachers would have the building leadership as the prominent role. Additionally, the principal's leadership role is evident in the consensus theme of building principals working on leadership teams with fellow administrators and teacher leaders to determine online professional development content offered in Western Pennsylvania public school districts. Once topics have been established, there is a consensus that principals serve in the role of content developer, designer, facilitator and monitor of the online professional development activities for teachers.

A consensus of superintendent responses indicated that it was imperative to the success of the district's online professional development program that the principals were

trained in online content development, online pedagogy, and online instructional practices prior to engaging in an online professional development model for teachers. As stated by Superintendent D, "They (principals) keep the use of instructional technology and online learning at the forefront. Conversely, a principal who does not know or value online learning will not let it get through the door or support such an initiative."

Through the teacher supervision and observation process, the supported theme of principals monitoring the impact of professional development programs emerged. Principals are asked to look for, and to discuss during the post observation clinical conference, the impact professional development initiatives have on the instructional practices of the faculty. Additionally, through the post observation clinical conference process, principals gather qualitative data about the online professional development program, current offerings, and teacher input into potential future offerings that reflect teacher needs and interests. A final supported theme emerged as principals identify and work closely with teacher leaders on district-established teams to determine professional development topics and to develop professional learning content.

Through the analysis of data, individual themes emerged as well. Principals are asked to conduct research and develop detailed outlines prior to any potential professional development topic receiving central office approval. In a district that is purchasing or reimbursing teachers for participating in online professional development activities, building principals must approve the teacher participation and the topic as it relates to the district mission, vision, and goals.

The next section delineates each superintendent's responses to the interview

questions listed above and is intended to provide an in-depth report of the superintendent's perspectives on the impact that online professional development has on the role of building principals. The consensus, supported, and individual themes are shown in Figure 3.

Superintendent A

In Superintendent A's school district, the building principals have the "key role" in the program. Using the Blackboard Learning System, it is the building principal's responsibility to essentially design and develop the online professional development content, and facilitate and monitor teacher participation in the online professional development program offered in Superintendent A's school district. Superintendent A described the principal's role as "they (principals) are the teacher or facilitator of the entire program, and the teachers are the students in our principals' online classrooms."

As a result of Superintendent A's district developing their own professional development content, the building principals play an integral role in the determination and development of the professional development program. This integral role required the district to dedicate time and resources to have their district administrators trained to be online instructors and online course developers. Superintendent A explained,

> We had administrative workshops on the procedures of course development, how to construct an online course, and what good online pedagogy looks like. There is no one person responsible for content development in our district, but it mostly lies at the building principal's and assistant principal's level. It is a team effort to determine what we're going to offer and what topics we believe are important to add into the online program, but the actual developing of the course and managing the content lies in the hands of the principals

Superintendent B

Superintendent B explained that their program relies on the principals to develop the modules for the online professional development program under the guidance and supervision of the central office administrators. To prepare the building principals for online content development, Superintendent B had their building principals trained in content development. When asked to detail the role their principals have in the district's online professional development program, Superintendent B stated,

> Everything. Our principals are responsible for designing content, building the course, rolling it out to staff, and providing support for teachers throughout the process. Principals are responsible for the follow up discussions with the teachers engaged in the program. Additionally, principals are engaged in the facilitation of the discussions by asking questions, prompting responses, and conducting online dialogue with teachers. Pretty much from development to completion, and every step in between, the principals are responsible for the program.

Superintendent C

Principals in Superintendent C's schools are an integral part of the collaborative leadership teams that are established. Principals attend a professional development retreat designed to evaluate the professional development needs of the faculty and to establish "mini-course" offerings for the district's online professional development model. Superintendent C stated, "The retreat really establishes an accountability for professional learning and growth amongst our staff." Most importantly, building principals are key to the district's collaborative leadership teams as they "seek out those teacher leaders for the collaborative leadership teams and engage them in the decision making process of what professional development needs our schools have and encourages teachers to become leaders by developing and offering mini-courses to share with their colleagues."

Once the collaborative leadership teams determine the content to be developed and offered as part of the online professional development program, building principals serve as the role of "instructional leaders" for the courses that are being developed and offered by faculty members. Occasionally, principals serve as course developers as explained by Superintendent C,

> At times, our principals design and develop mini-courses, but their main role is to encourage teachers to design, develop, and facilitate the offerings to their peers and truly become experts and teacher leaders. As instructional leaders, they (principals) monitor teacher interaction within the mini-courses and monitor the impact of particular mini-courses have on the staff and the students through classroom observations.

Because Superintendent C's district utilizes teachers and administrators in the design of online course content, prior to the program implementation, the district administration had to ensure that the teachers and administrators were properly trained in online course development in order to develop quality online mini-courses.

Superintendent D

Superintendent D believes the principal plays the "key role" in the process of integrating online learning into professional development. "They (principals) are Identifying and supporting key personnel within the teaching staff to act as teacher-leaders within the building; both by providing the delivery of instruction to other teachers and in support of the overall efforts related to technology integration from a cultural standpoint."

Superintendent D's district uses a variety of online needs assessment tools to determine teachers' needs and to gather teacher feedback regarding district professional development offerings. Using the data collected, "administrators evaluate key areas of

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need within the overall vision and mission of the school and district." Superintendent D

relies on the building principals to conduct research into identified topics in the key areas

of need and outline the format for the online professional development program. Once

the content is outlined, building principals, in collaboration with central administration

and members of the faculty, develop the online content using the Blackboard Learning

System.   Superintendent D stated,

> In terms of professional development opportunities developed by principals and teachers, we encourage a collaborate model that takes the general ideas and expertise of our staff, combine it with data from the needs assessment, and seek to take advantage of the skill set of our employees. It is imperative for the principals to drive the collaborative development process, as it allows for the principal to lead teachers about effective instructional practices related to online learning.

Additionally, to address building principal concerns arising from the need to

differentiate technology professional development, Superintendent D initiated the

purchase of a pre-developed online professional development program from a corporation

called Atomic Learning. According to Superintendent D, Atomic learning's main focus

is to assist teachers and technology professionals to develop strategies and tactics for

furthering technology usage in the classroom.

Superintendent D praised their district's principals and stated, "We are fortunate

to have principals that value the concept of online professional development and

understand the importance that technology has on instructional practice. They

(principals) keep the use of instructional technology and online learning at the forefront.

Conversely, a principal who does not know or value online learning will not let it get

through the door or support such an initiative."

Superintendent E

Superintendent E indicated that a high degree of administrator turnover in the district has led central staff to build a professional development model which created opportunities for teachers to engage in professional learning that could be linked back to classroom practice in a more job embedded environment. With this model, the principal's primary role is the monitoring and facilitating of the online webinars. The principals work closely with the department leaders and curriculum chairs and "they (principals) oversee the teacher leaders and the facilitators of the discussion portions of the online program and the actual collaboration that takes place, but the guiding questions and facilitation really takes place through our teacher leaders. This really empowers the teachers to have a vital role in their professional development."

Superintendent F

In Superintendent F's school district, principals are just beginning the development of online professional development programs for teachers, but the district is "moving to developing more online professional development programs as it ties into our district cyber program that is growing by leaps and bounds." At this point, the main professional development initiatives are purchased through the Intermediate Unit and through the Sanctuary Institute; a program for change which is helping the district build a culture and climate of caring. The principals must approve any online line professional development initiative that a teacher wants to engage in as it relates to the district's 5 goals. "Once teachers are engaged in online learning programs, principals oversee and monitor teacher involvement in the (online professional development) program."

Superintendent G

Superintendent G's school district uses Moodle to deliver online content and some of their principals serve as instructors that are responsible for the development, design, implementation, facilitation, and monitoring of the online course. Others are assigned as monitors of teachers enrolled in the online courses. Regardless of their specific role, all principals are required to engage in, and collaborate with, teachers in online discussions regarding the specific professional development topics. Additionally, through the role of the instructional leader, principals are instructed to "engage in conversations and reflections with teachers during post observation conferences and discuss how the professional development has impacted their teaching and student learning." Additionally, these post observation conference discussions provide administrators with feedback on future topics that teachers would be interested in for professional development; therefore providing the district with the potential to continue the expansion of the online model and to meet the needs of their teachers.

Superintendent H

Superintendent H has established two expectations for building principals regarding online professional development; Principals must be active participants in the online professional development program, and they must monitor the implementation of professional learning activities in classroom practice. Superintendent H stated,

> We learned years ago that our teachers took professional development very seriously when there was follow through from our principals in the professional development. Our principals must have either completed the online professional development program prior to the teachers enrolling or must be engaged in the program concurrently with the teachers as facilitators or presenters. Teachers have

greater "buy in" to professional development initiatives if there is an established expectation on the part of the administration to use the professional learning in the classroom and that this expectation will be monitored by the building administration. It is very important that principals hold teachers accountable for their professional learning, cooperative learning, and expansion of learning and expect to see new ideas in action in the classroom.

Figure 4 below organizes the identified themes into consensus, supported, or individual themes from Research Question 2. Theme data in Figure 4 reveals Principals are the instructional leaders and are responsible for leading the district's faculty making it natural that any effective professional development program for teachers would have the building leadership as the prominent role. Principals have the difficult task of working on leadership teams with fellow administrators and teacher leaders to determine online professional development content offered, serve in the role of content developer, designer, facilitator, and monitor of the online professional development activities for teachers.

Identified Themes Research Question 2

Consensus Themes (Frequency of 5 or more)	Supported Themes (Frequency of 3 or 4)	Individual Themes (Frequency of 1 or 2)
• Principals play the "key role" • Serve an the "Instructional Leader of the online program • As a member of a team, determine professional development content • Design online content • Facilitate online teacher professional development activities • Monitor teacher participation in online professional development activities	• Monitor impact of professional development programs through classroom observations • Engage in specific discussions regarding professional development in post observation conferences • Identify and work closely with teacher leaders in online content development and implementation	• Conduct research into potential professional development topics • Develop outlines of professional development activities • Approve teacher participation in online initiatives not developed by the district

Figure 4: Research Question 2 - What is the role of the principal in designing, implementing, facilitating, and monitoring online professional development opportunities for teachers?

4.4.3 Research Question 3: From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?

The researcher developed asked the following questions to acquire the data to answer this research question:

- What is the role of the Central Office Administration in designing, developing, implementing, facilitating, and monitoring of online

opportunities for teacher professional development?

- Does your district develop its own online professional development opportunities for your teachers, if so, who is responsible for content development?

- Describe the steps and procedures used to implement online professional development opportunities for your staff.

- How did your district determine the content for either purchased or district developed online professional development activities?

Upon analysis of the collected data, several consensus themes arose that support role of central office staff members in districts utilizing online professional development opportunities for teacher professional growth. As compared to the principals, the superintendents in this study believe that central office personnel plays a minor role or a secondary role in the online professional development programs in their school districts. Central office personnel provide support for the building principals who play a more prominent role. The primary responsibility of central office administrators in the online professional development model is to provide mission, vision, expectations, or goals. Additionally, consensus themes emerged regarding central office administration working to secure funding, and to ensure that the staff members, teachers and principals, have been properly trained to initiate and engage in online professional development.

Data revealed the supported themes of providing time and resources for the program success, including the necessary technology support to ensure the success of the online professional development program. A supported theme of central office administrators working with union leadership to resolve issues related to online professional development also emerged.

There were several individual themes revealed through the data analysis. Central

office administrators indicated role responsibilities in the securing of school board support. Although securing funding was a consensus theme, one superintendent discussed in detail the catalyst behind their district's online professional development program was the securing of grant funding that resulted in online professional development as a requirement of the grant. Additionally, it was noted that central office administrators ensure the professional development model focuses on the district's strategic plan, provide technical support to the building level administrators and teachers, and at times, are active participants in the online professional development program.

The next section delineates each superintendent's responses to the interview questions listed above and is intended to provide an in-depth report of the participant's perspectives on the impact that online professional development has on the role of central office staff. The consensus, supported, and individual themes are shown in Figure 4.

Superintendent A

Superintendent A explains that, as compared to the role of the principal, central office administration's role is "very minor". Although central office is an integral part of working collaboratively with principals in the selection of topics for teacher professional development, central office merely assists in the design and development of online content, and is uninvolved in the implementation and facilitation of the program as "the online professional development program is primarily all building based activities." The primary role of central office administration is to provide support to the building administrators that are the "key" administrators in the online professional development program.

In Superintendent A's district, the major impact of central administration was in the

relationship development with the teacher's union in regards to the online professional development program. Superintendent A stated,

> Once the district administration established that online professional development was an initiative we were going to pursue, and once we were fully prepared to implement the program, we had to ensure that the teacher's union would support the initiative as well. Central administration worked closely with union leadership to discuss the program and review the expectations as we moved professional development online. The issue was not the content or the topics, but that it was something that was new to our district, and it was not easily defined the (teacher's) contract. Because the online environment has no time boundaries it became difficult for either side (union or administration) to define it in terms of days, hours, and minutes. We really had to work closely with the teachers union for an agreement on the modules; the activities developed for the online model, and on the program expectations.

Superintendent B

Superintendent B's central office staff provides the necessary resources needed to operate the online professional development program, provides access to the necessary trainings, supervises the principal's implementation of the online program and approves the activities that the principals have developed as the components of the district's online professional development program. Because the district invested a great deal of professional development time and resources in past school years, focusing on "a strict instructional model with a 'do now' lesson all the way through 'lesson closure', central administration really plays the support role for the building principals as they work closely with the teaching staff in the district's teachers professional growth plans."

Superintendent B, with the support of central office and building administration, chose to implement online professional develop in their district because of programs like the Olweus Bullying Program will "take up the majority of the time for professional

development, but the teachers need the opportunity to engage in professional learning and professional discussions regarding the instructional model." Superintendent B stated,

> There was no time for the necessary learning and discussions that the instructional model warrants. So, central administration developed a model of moving professional development online to a Blackboard interface for the professional development experience. In our program, principals developed the modules under the guidance and supervision of the central office administrators.

Superintendent B and central office administration worked with the teacher's union to agree upon the number of hours the online professional development model would take to complete. In Superintendent B's district, the teachers were concerned that online professional development "would take valuable time from them." District administration and union leadership had to agree that the "teachers would be given the freedom to complete the activities on their own time, and that they would not be scheduled to a rigid timeframe but more of a flexible timeframe to complete the activities."

Superintendent C

According to Superintendent C, the primary role of central administration in the district's online professional development model is to "keep everyone focused on the strategic plan." Superintendent C leads a collaborative effort with teacher leaders and building administrators to establish professional development mini-course offerings and evaluate the needs of the district's teaching staff. This collaborative effort establishes accountability for professional learning and growth amongst district staff. Superintendent C explained that "it is the responsibility of central administration to ensure the online professional development program receives the appropriate funding, the teachers and administrators receive the appropriate training to implement and interact

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within the online environment, and to provide the necessary technology, hardware and software, to make the program successful."

Superintendent D

Superintendent D explained that the main role of the central office administration in the online professional development model is to provide "time and money to support the building level efforts." In terms of purchased online professional development resources, most notably Atomic Learning, central administration "responded to building level concerns arising from the need to differentiate technology professional development."

Once the building administrators in Superintendent D's district gather teacher feedback regarding district professional development offerings and potential professional development topics, central office and building level administrators collaborate to evaluate teacher professional development needs and evaluate how those identified needs attain the district's vision and mission. Superintendent D provides support to the building principals as they conduct research into identified topics for professional development and outline the format for the online professional development program. Once the content is outlined, building principals, in collaboration with central administration and members of the faculty, develop the online content using the Blackboard Learning system.

Superintendent E

Because of the high degree of administrator turnover in Superintendent E's district, central office staff has played a significant role in the district's professional

development model.   Central office staff created the online opportunities for teachers to engage in professional learning.   When asked about the role of central office, Superintendent E stated,

> Masterminds. Central office completely planned the 5 full days of professional development. Central Staff researched the topics and the webinar opportunities and developed a Blackboard page that houses the webinars. The central office staff members structured and hosted the training sessions for the facilitators. Because of high administrative turnover, central office is heavily involved in the process.

Superintendent F

According to Superintendent F, at this point, the main professional development initiatives for their district are purchased through the Intermediate Unit and through the Sanctuary Institute. The Sanctuary Institute is a purchased service that offers a five-day intensive training experience in which teams of five to eight people, from various levels of the organization, come together to create a shared vision of creating or changing an organization's culture.

The role of central administration is to provide the necessary funding to allow for the utilization of these purchased programs and to ensure that the program offerings meet the five (5) district goals. Additionally, members of central office staff meet monthly with the building administrators to evaluate the online professional development options that the teachers are engaged in and discuss future offerings.

The major contribution of central office administration in the online professional initiative is the conversations with the teacher's union leadership to bring administration and union leadership to an agreement on the professional development model.

Superintendent F stated,

> We have a very strong union and a union leadership that is very resistant to change. We had to work closely with the teachers union as we began to move into online professional development because there was no clear language in the (teacher's) contract. Because our district has a very strong union, we worked tirelessly to build a strong collaborative relationship about online learning, and to see this as the wave of the future for our district's professional development and that online professional development gives us the opportunity to address the needs of our teachers, and to meet our district goals in a era of reduced funding for public education.

Superintendent G

Central office administration in Superintendent G's school district plays a much smaller role as compared to the building administration. The technology department provides needed technical support for the course developers and program facilitators, but overall central office administration provides input into the program but is not "on the front lines." However, central office administration has established an expectation for the building principals' to "engage in conversations and reflections with teachers during post observation conferences and discuss how the professional development has impacted their teaching and student learning."

Superintendent H

Superintendent H establishes the expectations for building principals regarding online professional development, and expects principals to be active participants in the online professional development program, and expects principals to monitor the implementation of professional learning activities in classroom practice.

In addition to the establishment of expectations, central administration was the catalyst for the implementation of online professional development in Superintendent H's

district as the online professional development initiative was established as a condition of the Reading First Grant that central administration worked to secure. Through this grant opportunity, teachers, principals, and district level administrators were required to engage in online professional learning through Wilkes University. In this model, central office administration was an active participant in the online professional development model. Since the inception of the Reading First Grant, Superintendent H's district received grant funding through the Classrooms For the Future Grant (CFF) that carried similar expectations for central office administrators.

When asked specifically what the role of central office is in the district's online professional development model, Superintendent H responded "to make sure the funding is available for online learning, time in the calendar has been established for the activities, the vision and expectations of the program, and most importantly to gain approval from the school board."

Figure 5 below organizes the identified themes into consensus, supported, or individual themes from Research Question 5. Theme data in Figure 5 reveals Central office personnel's primary responsibility in the online professional development model is to provide mission, vision, expectations, and overall goals. It is important for, the success of the program, that central office administration garners the support of the board of education, properly funds the initiative, and ensures that the staff members are properly trained and supported in the online professional development format utilized by the district. Data revealed that successful programs resulted when central office administrators worked with union leadership to resolve issues related to online professional development.

Identified Themes Research Question 3

Consensus Themes (Frequency of 5 or more)	Supported Themes (Frequency of 3 or 4)	Individual Themes (Frequency of 1 or 2)
• Provide Vision, Mission, Expectations or Goals • Plays a minor or secondary role • Provide support for building principals • Secure funding for the program • Ensure staff is properly trained	• Provide time for the program • Purchase the necessary technology to support the program • Resolve issues with the teachers union	• Obtain School Board Support and approval • Focus on strategic plan • Provide technical support • Be an active participant in the program • Secure grant funding

Figure 5: Research Question 3 - From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?

4.4.4 Research Question 4: From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?

The researcher developed and asked the following questions to acquire the data to answer this research question:

- What kind of feedback have you received from your teachers regarding the online professional development activities?

- In what ways has professional development changed in your district since you implemented online opportunities?

Upon analysis of the collected data, several consensus themes arose that are indicators of

success for Western Pennsylvania public school districts using online professional development. Based on the perceptions of the Superintendents, there is an increased collaboration and teacher sharing of ideas since the districts began engaging its teachers in online professional development. Additionally, successful online professional development programs provide teachers with flexible use of time, in an environment that can be completed virtually anywhere. Finally, online professional development indicators of success lie in the teacher's opportunity to have input into the professional development programs being offered in their respective district. Along with the opportunity to choose topics for professional learning, online professional development provides the structure for teacher customization of a program that meets their individual professional needs and interests.

Data analysis produced a number of supported themes as indicators of success for online professional development programs offered in Western Pennsylvania public school districts. Superintendents supported the belief that the online professional development movement has changed the culture and climate of professional learning in their districts, as the online model treats teachers more professionally as learners. The movement to online professional development has permitted school districts to establish quality summer professional development institutes. Superintendents expressed their belief that teachers prefer the online professional development model as opposed to the face-to-face model, and indicate a greater teacher participation rate in online professional development as compared to the traditionally scheduled professional development sessions.

Analysis of data revealed several individual themes that represent district

recognition of success indicators in their online professional development models. Due to the flexibility of time in the online professional development model, professional growth initiatives are no longer hindered as a result of teacher absences or inability to "attend" the professional development session, as the traditional model requires. Use of online professional development has raised the expectation for teacher professional conduct, and has created an opportunity for teachers to work independently to achieve their professional goals.

The next section delineates each superintendent's responses to the interview questions listed above and is intended to provide an in-depth report of the participant's perspectives on the indicators of success for districts using online opportunities for teacher professional development. The consensus, supported, and individual themes are shown in Figure 5.

Superintendent A

Superintendent A believes that since the district implemented the online professional development model, more professional development is occurring due to the fact that it is online as opposed to face-to-face. Professional development is no longer disrupted by teacher absences. In a traditional program, if an employee is absent, they miss the workshop that is fixed by time and space. Because the program is online, teachers can engage in the program without being physically present in the school building. In the online environment teachers must be engaged and are required to answer or get involved in discussion activities in order to qualify as "completing the prescribed professional development." Online professional development ensures that teachers will be engaged in the professional development process. Superintendent A stated,

In the past, it was difficult for administrators to create a professional development program in a face-to-face environment that had 100% engagement and teacher participation. Online professional development allows our district to breakthrough the elements of time and space and creates a forum for teachers to talk about teaching and learning, where they can share ideas and share best practices; a forum to share what is occurring in their classrooms. But teachers don't have a face-to-face discussion schedule by the administration; they do so online based on their own time schedule. We saw professional development grow from 100 teachers listening to a program for 1 hour a week to 100 teachers engaged in professional learning at various intervals over a weekly timeframe. They (teachers) begin to understand what others were doing in their classroom in an environment that traditionally occurs in isolation. Online professional development allowed our staff to "break down" those barriers of isolated classrooms. Online professional development created a community of collaboration and sharing of ideas and to talk about teaching learning without sitting in face-to-face workshops.

Superintendent A believes the time in which teacher engage in online professional develop is an indicator success. Superintendent A believes their online professional development program developed a community of continuous learning and provided a forum for teacher sharing and reflection that created a support network for their teachers. Superintendent A detailed their program's successes stating,

It was amazing to see the time periods that teachers entered the professional development site to engage and learn. It truly created an environment for continuous learning. People would enter and engage in the site more than the required hour because they developed a curiosity. Teachers would enter their postings and would look forward to seeing their colleague's comments. They would do their required work, and then continue to enter the site to see what their colleagues were posting on the same topic. The environment of online discussion became very powerful for teachers. It not only provided a reflection and comment environment, but it gave teachers a validation and support from their colleagues. It also gave the administration a glimpse into the classrooms without physically going.

Superintendent A explained that the online professional development model truly "opened the doors of collaboration and sharing" amongst staff members and stated "teachers began sharing and collaborating what they were doing in the classroom. It

(online professional development) developed a sharing of ideas and best practices; a sharing of what works one classroom in the hopes that they (teachers) can have a positive impact on the success of their colleagues."

Initially, teachers were apprehensive of the online professional development model, but since have reacted favorably and the feedback has been very positive. Superintendent A stated,

> It's (teacher feedback) been very positive because teachers quickly were able to see that online professional development was productive and treated them as professionals with adult lives and responsibilities, yet the fact that professional growth was not rushed and was important to the progress of their profession. They (teachers) began to acquire new teaching strategies that could be implement into classroom practice. They (teachers) would share how they implemented these new practices in their classrooms, sharing their own personal success stories. It (online professional development) helped to pull our learning community and teaching staff closer together. The feedback about our (online professional development) program has been overwhelmingly positive. The professional discussion boards have been incredible and teachers have really come together to share what they do in the classroom.

Superintendent B

Superintendent B expressed that their district's program success lies in the opportunities for teachers to have input into the professional development topics offered, and to ultimately focus on specific professional development areas that meet their individual professional needs. In superintendent B's district, teachers are "excited about the opportunity to get more professional development on specific topics that they feel are needed for their own professional growth."

Along with teacher input into program offerings is the flexibility that online professional development offers teachers. In the online model, "teachers have a flexible timeframe to complete the professional development as opposed to it being scheduled."

Superintendent B believes that the input and flexibility, that the online professional development model has to offer, "changed the culture of teacher learning and collaboration, and raised the expectation for professional conduct."

Superintendent B stated that the teacher feedback on the professional development program has been "all positive." Teachers "love the flexibility and the professionalism of the online program." Teachers have expressed an appreciation for the opportunity to engage in professional dialogue, but in a forum that is online as opposed to face to face. "It has really changed our culture of professional learning and opportunity to share professional resources with their peers."

Superintendent C

Superintendent C indicated that their district's online professional development program success comes from the district providing teachers with the opportunity to engage in "professional learning with choices." The model in Superintendent C's school is based on "what do the teachers believe they need to make them a better teacher, rather than the administration establishing professional development offerings that they (the administration) think the teachers need."

Superintendent C indicated that the movement to online professional development has allowed their district to move from a "traditional model" of collecting survey data from teachers about their professional development needs, to an online model that provides opportunity for teachers to evaluate what their professional needs are, and choose the "appropriate activities that best fits their needs, wants, and professional interests."

Online professional development has increased the opportunities for teacher leaders

to share their expertise with their colleagues. A concept that Superintendent C describes as "very powerful."

> We have teachers teaching teachers. Very powerful. It (online professional development) quickly allowed for us to establish teacher leaders and content experts in the mini-course offerings. Teachers are not afraid to try new strategies and techniques in the classroom making it more inviting and engaging for the students.

Superintendent C described the feedback from the online professional development program as increasing teacher excitement about professional learning. Superintendent C stated,

> Teachers are excited about professional development because they can engage in mini-courses that directly meet their individual needs. All the feedback has been positive because online professional development is flexible as to when teachers engage in the learning. The courses have really opened up the lines of communication, and the teachers are spending a great deal of time online, and even in the school house talking about teaching, teaching techniques and strategies, best practices and about student learning. It would be nice if, as districts, we can begin to share our teachers as resources to each other, thus growing the professional learning community. It (online) allows for that type of sharing to be a reality.

Superintendent D

Superintendent D believes the success of their online professional development program can be attributed to the involvement of the teachers "at the ground level." Superintendent D explained that teachers in their district have responded extremely well to the change from the traditional professional development model to the online model. Superintendent D explained the teachers in their district are a major component to the effectiveness of the program as the teachers are involved throughout the process; especially in the delivery of online professional development content to their colleagues. Superintendent D expressed,

We (administration) have been especially impressed by the positive reaction of teachers when they are given the opportunity to craft the framework of the professional development modules. That includes the needs assessment and research of resources. Additionally, we have had a strong positive reaction from teachers when we (district administration) have used them (teachers) as instructors in the delivery of professional development content.

Superintendent D considers "the seemingly old-fashioned way of producing professional development days are over. Now, we use the technology associated with online professional development to assess teacher needs accurately, produce programs that offer teachers more choices, and allow teachers to work independently to achieve their personal professional goals." In this "new model" of online professional development, teachers are no longer bound by the confines of a "traditional workday" for professional learning. Teachers have the flexibility to access professional development opportunities anytime and anywhere "and they do access it."

Superintendent E

Providing a forum for teachers to engage in quality discussion and personal reflections has been met with "great feedback" as indicated by Superintendent E. One of the greatest identified benefits of the online professional development program in Superintendent E's school district is the flexibility of when teachers engage in professional learning, and the ability for teachers to individually select programs that will meet their personal professional needs. Superintendent E highlighted the online professional development program in their district by explaining,

When you review the discussions taking place online, you begin to see the value of the online program. Our teachers are engaged in great discussions that get to the root of some major educational issues. I saw a great benefit to our teacher professional growth just reading the discussions and reflections that teachers generated. Professional development has become an activity with flexibility as to

when these programs can be completed. Moving online has allowed our district to offer quality professional development opportunities over the summer. We all know that during the school year, engaging in professional learning communities, like a book club, would be difficult just based on the busy schedules of our teachers, but by having the opportunity to offer these programs online, with a flexible timeframe has created the ability to mold the program to meet the time needs of each individual participant.

Superintendent E classified the teacher reactions to online professional development program as "extremely positive." However, because it's a new experience, some teachers have commented "they would rather have a person in front of them, while the majority have expressed their satisfaction and appreciation for the freedom and flexibility that the online professional development program has to offer."

Superintendent F

Initially, Superintendent F was negatively met with "pushback" from the teacher's union leadership when they began to explore the possibility of online professional development for teachers in their district. Once the union and the administration were able to resolve their differences, and agree to the terms of the online professional development model, the reaction from the faculty has been positive and more relaxed as the intent of the program "focused on individual needs of teachers, giving them (teachers) the choice to pursue their own interests."

Superintendent F believes the online professional development has allowed their district to offer more individually focused professional development as opposed to a one size fits all in-service session; which has ignited a change in the learning culture and climate of the school district, making it a more collaborative culture and safe learning environment for adults and students. Additionally, Superintendent F sees online professional development in their district as providing more professional development in

a system with limited time and stated, "online professional development has really grown in our district because teachers see this as the wave of the future and if we can't get needed professional development into the time frames we have scheduled, online professional development gives us the opportunity to address the needs of our teachers and to meet our district goals."

Superintendent G

Superintendent G is pleased about the increasing number of teachers who engage in online professional development opportunities in their district and stated, "I believe more teachers are doing professional development online because of the flexibility of when they complete the activities and where they complete the activities." Online professional development has presented teachers with flexibility and choice necessary to meet their personal needs and professional requirements, and by offering more choices for teacher professional development, plus the opportunity to tailor a program to meet the individual needs of the teaches, there has been a "positive impact on the number of teachers who engage in professional learning." Superintendent G compares the increasing movement of teachers into online professional development to the increasing number of students entering into cyber learning programs, and recognized,

> Just like cyber learning, it is about flexibility and about learning at anytime during the day. For the adult learner, online learning allows the professional to have the opportunity to tailor their program into a timeframe that best fits their busy schedule. Our teachers are more willing to enroll in online professional development opportunities, or take the courses if they get the flexibility to choose the topic and time needed to complete the activities. If they want to stay at home and do professional development, online learning allows for that and offers the flexibility to engage in topics that they want to learn more about.

> When asked to describe the feedback that the district has received regarding online

professional development in the district, Superintendent G received mixed reviews and stated, "Very good reviews on the ones we are developing and offering, but there are others that some of our teachers have taken that are developed by university staff that have been classified as 'buyer beware' as some are excellent and some are not so much, leading staff to warn 'you get what you pay for.'"

Superintendent G has found that the courses developed by "non-accredited institutions have been seen as not rich in relevance or in rigor" for quality professional development." However, the online opportunities developed by school district staff have been given very good reviews. Superintendent G attributes the positive reviews to the fact that the district conducts a survey of the teachers regarding the topics they are interested in exploring for professional development and then develop the online offerings based upon survey results and teacher input. "We are basically providing the program to meet their needs in the specific areas they are asking for."

Superintendent G sees their district's greatest indication of program success is the number of teachers who voluntarily enroll in online professional development through the district's summer academy. The district's summer academy population has "more than doubled each year since we offered it to the point where about 300 teachers are involved in the summer online professional development program each year. Online professional development has truly established a culture of life-long learners in our district."

Superintendent H

In Superintendent H's school district, it was through the successful receipt of grant funding that created the online professional development opportunities in the district.

This movement began with the Reading First Grant, but it was the Classrooms For the Future Grant (CFF) that has allowed the district to expand the online professional development program through the use of Moodle. Superintendent H attributes the district's successful online professional development program to their technology director and CFF coaches who have developed online learning opportunities that focus on using technology in the classroom. "We have focused on some very simple tasks like learning how to set-up and use a blog in the classroom, how to develop a web page for your classroom to increase communication with the parents and students."

Superintendent H appreciates the flexibility that the online program has to offer their teachers and has worked with district staff to create online classes that run after school, on Saturdays, and as portions of the full professional development days scheduled by the district.

When asked to describe the feedback that has been received by teachers regarding the online professional development program, Superintendent H stated,

> The feedback really varies from people who embrace it, particularly the younger teachers who grew up using technology, they really enjoy this style of learning and are used to this format. On the other hand we have people, who despite all the training we have provided, get really nervous and the administrators must provide a tremendous amount of support. Our program success runs the gamete from people who feel really comfortable and enjoy the flexibility and collaboration, to people who do not like the change from traditional professional development and attempt to avoid the online format at all costs.

Figure 6 below organizes the identified themes into consensus, supported, or individual themes from Research Question 4. Theme data in Figure 6 reveals an increase in teacher collaboration and teacher sharing of ideas and provides teachers with flexibility, thus changing the culture of teaching and learning. Many superintendents attributed the success of their program to providing teachers with input into the

professional development programs being offered. The opportunity to choose topics for

professional learning allows for individual program customization in an attempt to meet

each teacher's professional needs and interests.

Identified Themes Research Question 4

Consensus Themes (Frequency of 5 or more)	Supported Themes (Frequency of 3 or 4)	Individual Themes (Frequency of 1 or 2)
• Increased teacher collaboration and sharing of ideas • Flexible use of professional development time • Flexible use of where professional development takes place • Provides teacher choice to customize a program to meet their individual needs • Increased teacher input into professional development topics being offered	• Treated teachers as professional learners • Changed the culture and climate of professional learning • Prefer online professional development compared to face-to-face professional development • Offer quality professional development during the summer • Increased teacher participation in professional development	• Professional development no longer disrupted by teachers absences • Raised the expectation for professional conduct • Teachers work independently to achieve professional goals

Figure 6: Research Question 4: From the superintendent's perspective, what are the indicators of success for districts using online opportunities for teacher professional development?

According to the U.S. Department of Education (1996), the primary purpose of

professional development is to prepare and support teachers by giving them the

knowledge and skills they need to help all students achieve high standards of learning and

development. Challenging student performance standards and rigorous accountability

policies require teachers to master their professional practice and enhance their ability to

make pedagogical changes that will result in increased student achievement (French,

1997).

The data gathered to answer the research questions in this study reveal that online

professional development provides a forum to meet the challenges put forth to public

educators. With the primary purpose of professional development focused on the

improvement of professional knowledge and skills to impact student achievement, it is

imperative for building principals to establish a professional development program, with

the support of central office personnel, that is flexible in nature with the structure to allow

individual program customization based on teacher needs and interests. Only through

online professional development can school administrators develop a program that takes

into consideration the personal and professional responsibilities of their teaching staff,

eliminates the traditional "one-size-fits all" professional development model, and

provides a forum for teachers to collaborate, reflect upon, and share experiences of

teaching and learning as a vehicle to improve their instructional practice and the practice

of their colleagues. Researcher conclusions, reflections, and recommendations for future

research are discussed in detail in Chapter 5 of this dissertation.

5.0 CHAPTER FIVE

CONCLUSIONS, PERSONAL REFLECTIONS, AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter Five of this dissertation restates the problem statement and reviews the major methods used in the study. Subsequent sections will summarize the results of each research question, discuss the results, include a personal reflection from the researcher, provide recommendations further research, and concluding remarks.

As detailed in Chapter 1 of this study, traditional teacher professional development programs have been criticized for being irrelevant, ineffective, and fractured; not giving teachers what they actually need to teach students (Corcoran, 1995). While little is known about the impact professional development has on student achievement, a study by Killeen, Monk, & Plecki, (2002) estimated the amount of money spent annually on professional development was approximately at $9 billion. I am certain that a decade later, this figure has increased. However, most teachers do not trust that traditional professional development is useful, relevant to their classroom practice, and convenient to their personal learning styles and professional needs. Teachers often find that traditional professional development does not meet their individual needs; nor does it include critical follow-up and leadership support necessary to implement strategies covered in professional development sessions (Darling-Hammond, 2009).

As education is faced with stringent content standards and high-stakes testing, teachers are turning to new and different sources for quality professional development and many teacher and school districts are turning to online sources for teacher

professional development (Garet, et al., 2001).

Sparked by a need to meet student achievement goals mandated by the No Child Left Behind legislation, a plethora of professional development programs have arisen, and administrators have added workdays devoted to professional development to teachers' already busy schedules. But this improvement comes at a price in resources and time. While we need to build teachers' capacity for improvement, we also need to be sure that time, effort, and scarce resources are expended only on quality programs utilize and focus on best practices (Killeen, Monk, & Plecki, 2002).

The purpose of this study was to focus on how school districts are using online opportunities, activities, and programs for teacher professional development. The goal of this study was to identify the impact online professional development has on principals and central office personnel and to discover key indicators of success for online professional development programs for teachers from the superintendent's perspective.

To address the goals and research questions established in this research, Chapter 3 of this study explains how the researcher conducted this descriptive, qualitative examination to explore the ways in which public school districts located in Western Pennsylvania are using online opportunities for teacher professional development and to detail the impact online professional development programs have on the role of the building principal and central office staff from the perspective of superintendents.

The researcher began data collection by initially surveying the 109 superintendents of public school districts located in Intermediate Unit 1, Intermediate Unit 3, Intermediate Unit 4, and Intermediate Unit 27 to explore the ways in which public school districts located in Western Pennsylvania are utilizing online opportunities for teacher

professional development and the impact online professional development has on the role of building principal and central office staff. The selected intermediate units comprise public school districts located in Allegheny, Beaver, Butler, Fayette, Greene, Lawrence, Mercer, and Washington Counties. Data from this initial data collection was analyzed to determine the public schools districts in Western Pennsylvania using online professional development opportunities for teacher professional development, the extent in which online professional development was utilized, and the type of online professional development opportunities available in each district.

Through the analysis of the initial survey data, the researcher developed a sample group of eight (8) initial survey respondents with varying student and faculty populations, who have indicated they have been using online professional development opportunities for teachers K-12 for at least one (1) year. Final data was collected through the use of semi-structured interviews of district superintendents to examine the role of online activities for professional development in Western Pennsylvania public school districts, how school districts are structuring online professional development opportunities for teachers, the strengths and weaknesses of online professional development programs in the area, and to discover the role of building principals, and central office administrators in the development and facilitation of online professional development opportunities for teachers.

For the final data analysis, the researcher used content analysis to analyze the data. Lincoln and Guba (1985) identify three ways to code themes: consensus themes- when the majority of the participants state the same theme, supported themes- when approximately half of the participants state a theme, and individual themes- when only

one or two participants state a theme.

5.2 RESEARCH QUESTION CONCLUSIONS AND PERSONAL REFLECTIONS

5.2.1 Research Question 1 - In what ways are public school districts using online professional development opportunities for teachers?

As online professional development opportunities continue to grow in the field of education, content management systems like Blackboard and Moodle have provided an interface for school districts to develop and implement online professional development content to meet the learning needs of their faculties. Additionally, two prominent state funded grant initiatives, Reading First Grant and Classrooms for the Future (CFF) Grant, use online professional development through Wilkes University as a requirement to receive the grant funding. With these tools available, and the teacher demand for online professional development high, districts have addressed their teacher's professional and personal needs through the offering of online professional development opportunities. It was discovered that these online opportunities occur throughout the school year and during the summer vacation in a workshop, webinar, or mini-course format. Additionally, districts are using online professional development as a component, in whole or in part, for their new teacher induction programs, and for the professional learning of their athletic program coaches.

With the emergence of interactive technologies and through the use of online collaboration tools like wikis, blogs, online discussion boards, or skype, districts have created the opportunity for teachers to engage in professional learning and professional discourse in an online environment that creates the flexibility to meet the time constraints of the adult learner, with the opportunity to choose the programs that individual teachers need to grow professionally.

Additionally, two superintendents indicated they have online components for the professional growth of the coaches in their athletic department, although not all coaches in the district are teachers, this statement is an indication of how school districts are using online professional development opportunities.

As indicated in Chapter 4, the interviewed superintendents identified a variety of ways their district is using online professional development opportunities for teachers and they identified six consensus, four supported, and five individual themes.

Consensus themes included:

- Blackboard Learning System for content management

- Workshop, Webinar, Mini-Course, Professional Learning Module format

- Quality of professional development improved

- Use of online collaborative technologies (wiki, blog, Online discussion Boards, Skype)

- Online Professional Development Offers flexibility

- Offers differentiation and teacher choice

Supported themes included:

- Moodle Learning System for content management

- Used for New Teacher Induction Program

- Used for Summer Academy

- Used for athletic coaches professional learning

Individual themes included:

- Wilkes University for online content management

- Atomic Learning for online content

- Intermediate Unit program for online content

- Sanctuary Institute

- Grant initiated

Online professional development topics identified as being used by superintendents include:

- 21st Century Teaching and Learning

- Anticipatory Set

- Co-teaching

- CPR and First Aid in the Classroom

- Curriculum Mapping

- Differentiated Instruction

- Effective Closure Strategies

- Effective Lesson Delivery

- Inclusion Practices

- Instructional Design

- Integrating Technology into Instruction

- Positive Behavior Support

- Promethean Board/SMART Board Training

- Questioning Strategies

- Reading Instructional Strategies

- Response to Intervention

- Scaffolding Practices

- Teaching the Gifted Learner

- Using Online Instructional Resources

- Writing Instructional Strategies

In summary, school districts that have implemented an online professional development model for teachers and have developed a progressive program that is designed to meet the personal and professional needs of the adult learner. The combination of flexibility and opportunity to customize a program that suits the individual needs of teachers addresses the concerns brought forth by Darling-Hammond, (2009) who stated traditional professional development does not meet teacher individual needs, nor does it include critical follow-up and leadership support necessary to implement strategies covered in professional development sessions. The analysis of data confirms Serim (1996) argument that online professional development is emerging as an international revolution, motivated by the vision of free flowing knowledge, with teachers taking responsibility for their own learning, and embracing networks that foster the exchange of new ideas in a spirit of community.

Upon reflecting on research question 1 and the ways in which school districts are using online professional development, the researcher asserts that the major impact of online professional development is collaboration and collegiality from its participants. However the data lacks details as to specifically how the quality of professional development improved and based on what measures. Each theme listed above, whether consensus, supported, or individual, made sense to me. Any school district considering the implementation of an online professional development model could learn a great deal of information by reading the themes that were identified by the superintendents in this study. Additionally any administrator currently utilizing online professional development in their school district can learn a great deal about how to build upon their program by

reviewing the themes and the topics being offered from the respondents of this study.

5.2.2 Research Question 2 - From the superintendent's perspective, what is impact of online professional development for teachers on the role of building level administrators?

The most prominent theme that emerged through this research is that the superintendents believe that the principal plays the "key role" in the district's online professional development for teachers. Principals are the instructional leaders and are responsible for leading the district's faculty making it natural that any effective professional development program for teachers would have the building leadership as the prominent role. Principals have the difficult task of working on leadership teams with fellow administrators and teacher leaders to determine online professional development content offered, serve in the role of content developer, designer, facilitator, and monitor of the online professional development activities for teachers. Without a quality principal, poised to be an instructional leader, in an ever changing technological environment, trained in the art of online content development and online pedagogy, a district will have a difficult time developing a quality online professional development program for teachers.

As indicated in Chapter 4, the interviewed superintendents stated from their perspective as to what they believed to be the role of the building principal in a district using online professional development opportunities for teachers. Superintendent's perspective produced data that revealed six consensus, three supported, and three individual themes.

Consensus themes included:

- Principals play the "key role"

- Serve an the "Instructional Leader of the online program

- As a member of a team, determine professional development content

- Design online content

- Facilitate online teacher professional development activities

- Monitor teacher participation in online professional development activities

Supported themes included:

- Monitor impact of professional development programs through classroom observations

- Engage in specific discussions regarding professional development in post observation conferences

- Identify and work closely with teacher leaders in online content development and implementation

Individual themes included:

- Conduct research into potential professional development topics

- Develop outlines of professional development activities

- Approve teacher participation in online initiatives not developed by the district

In summary, Guskey (2000) states professional development is an extremely important endeavor and is central to education's advancement as a profession. High-quality professional development is at the center of every modern proposal to enhance education. Educational researchers are constantly discovering new knowledge about teaching and learning. As professional knowledge expands, new expertise is required of educators of all experience levels. Thus, because it is the principal who serves as the key component in online professional development programs, it is imperative that school

district have strong instructional leaders as their building principals. It is the principal as the instructional leader that establishes the quality of programs for the professional development of teachers; thus, giving them the vital role in districts that are using online professional development for the professional improvement of their teachers.

Principals have the responsibility to recognize the members of their staff as learners, just as they are teachers, and need quality professional development experiences that support their learning and their work in classrooms. Principals have the opportunity to create the culture and the climate of adult learning in their building with the use of instructional technology and online learning at the forefront.

Upon reflecting on research question 2 and the impact online professional development has on the building principal, the researcher affirms from the research data that the success of any online professional development program relies on the effectiveness of the principal as an online instructional leader. However, it is important to understand the relationship between central office administration and building level administration. I can assume from the results of the interviews that each superintendent interviewed has a positive working relationship with their building principals. How might these responses differ if that relationship is strained, or a principal has indentified deficiencies or is in need of improvement? Each theme listed above, whether consensus, supported, or individual, creates a clear and consistent picture that the principal is the major factor to the success or failure of a district's online professional development program. Any school district considering the implementation of an online professional development model could ascertain the necessity of a building principal that is proficient in online learning, online instruction, and online course development in order to properly

lead an online professional development model.

5.2.3 Research Question 3 - From the superintendent's perspective, what is the role of central office staff members in districts utilizing online professional development opportunities for teachers?

As compared to the building principals, superintendents believe that central office personnel play a minor role in the online professional development programs in surveyed Western Pennsylvania public school districts. Central office personnel's primary responsibility in the online professional development model is to provide mission, vision, expectations, and overall goals. It is important for, the success of the program, that central office administration garners the support of the board of education, properly funds the initiative, and ensures that the staff members are properly trained and supported in the online professional development format utilized by the district. Data revealed that successful programs resulted when central office administrators worked with union leadership to resolve issues related to online professional development.

As indicated in Chapter 4, the interviewed superintendents stated from their perspective what they believed to be the role of the central office administration in a district using online professional development opportunities for teachers and they identified five consensus, three supported, and five individual themes.

Consensus themes included:

- Provide Vision, Mission, Expectations or Goals

- Plays a minor or secondary role

- Provide support for building principals

- Secure funding for the program

- Ensure staff is properly trained

Supported themes included:

- Provide time for the program

- Purchase the necessary technology to support the program

- Resolve issues with the teachers union

Individual themes included:

- Obtain School Board Support and approval

- Focus on strategic plan

- Provide technical support

- Be an active participant in the program

- Secure grant funding

In conclusion, it is the superintendent and the central office staff that establishes the mission, vision, goals, and strategic plans of the overall district operations, that is certainly true of online professional development programs as well. As with all matters, central office administrators obtain school board support for the initiatives within the school district, ensure appropriate program funding, and provide a global level of support for the building level administrators develop, monitor, and facilitate the online professional development program, and to the teachers who engage in the professional learning activities.

Upon reflecting on research question 3 and the impact online professional development has on the central office personnel, the researcher asserts that as with any major district initiative that impacts teachers, it is the role and the responsibility of the central staff to provide mission, vision, funding, and support to the online professional development initiative. One of the ways to provide support, and to clear obstacles, is to

establish a positive working relationship with the teacher's union leadership. A positive

working relationship will help to ensure both parties agree on the roles, responsibilities,

and expectations of the professional development program, and to be certain all parties

understand the rules of acceptability within this initiative. Any school district

considering the implementation of an online professional development model could learn

a great deal of information as it impacts central office personnel by reading the themes

that were identified by the superintendents in this study.

5.2.4 Research Question 4 – From the Superintendent's perspective, what are the indicators of success for districts using online professional development opportunities for teacher professional development?

Based on their perspective, superintendents indicated successful online professional

development programs reveal an increase in teacher collaboration and teacher sharing of

ideas and provides teachers with flexibility, thus changing the culture of teaching and

learning. Many superintendents attributed the success of their program to providing

teachers with input into the professional development programs being offered. The

opportunity to choose topics for professional learning allows for individual program

customization in an attempt to meet each teacher's professional needs and interests.

As indicated in Chapter 4, the interviewed superintendents identified a variety of

indicators of success for districts using online professional development opportunities for

teachers and they identified five consensus, five supported, and three individual themes.

Consensus themes included:

- Increased teacher collaboration and sharing of ideas
- Flexible use of professional development time

- Flexible use of where professional development takes place

- Provides teacher choice to customize a program to meet their individual needs

- Increased teacher input into professional development topics being offered

Supported themes included:

- Treated teachers as professional learners

- Changed the culture and climate of professional learning

- Prefer online professional development compared to face-to-face professional development

- Offer quality professional development during the summer

- Increased teacher participation in professional development

Individual themes included:

- Professional development no longer disrupted by teachers absences

- Raised the expectation for professional conduct

- Teachers work independently to achieve professional goals

Finally, the movement to online professional development has permitted school districts to establish quality online professional development programs that change the culture of adult learning.   Superintendents indicate their program success is obvious as teachers prefer the online professional development model as opposed to the face-to-face model and indicate a greater teacher participation rate in online professional development as compared to the traditionally scheduled professional development sessions.   An increased participation in voluntary summer online professional development academies is an indication of success.   Due to the flexibility of time in the online professional

development model, professional growth initiatives are no longer limited as a result of teacher absences or inability to "attend" the professional development session, as the traditional model requires. Use of online professional development has raised the expectation for teacher professional conduct and has created an opportunity for teachers to work independently to achieve their professional goals.

Upon reflecting on research question 4 and the indicators of success for districts using online opportunities for teacher professional development, the researcher is convinced that a professional development program that increases teacher collaboration and sharing of ideas in an environment that is flexible and meets the individual and professional needs of the teachers are clear indicators of a successful program.   Most importantly, a program that provides for teacher input into professional development topics offered, while providing for the possibility of teacher customization of a professional learning program, clearly describes a successful professional development program.   The researcher believes that a major impact online professional development provides is that professional growth initiatives are no longer stifled as a result of teacher absences or inability to "attend" the professional development session, as the traditional model requires.

5.3 RECOMMENDATIONS FOR FUTURE RESEARCH

This study is a beginning exploration into the use of online professional development and confirms the research and review of literature that focused on the need for teacher professional development followed by a brief history of teacher professional development in the United States. Additionally, the review of literature detailed the

challenges associated with teacher professional development in the 21st century and effective online opportunities for teacher professional development. But this study and the review of literature provide for the possibility of future research topics and deeper exploration. I recommend future researchers:

- Investigate how public school districts located in various regions of the state of Pennsylvania are using online professional development and compare and contrast the results of this study.

- Conduct a case study of a specific school district or a group of school districts that conduct online professional development opportunities for teachers and to establish procedures for implementation that can be initiated by any district interested in pursuing online professional development.

- Replicate the study and gather similar data on the perspective of the Principal in school districts that are using online professional development and compare and contrast the results to this study.

- Replicate the study and gather similar data on the perspective of the classroom teacher in school districts that are using online professional development and compare and contrast the results to this study.

- Replicate the study and investigate of how public school districts located in other states are using online professional development.

- Investigate through the use of a case study, the impact of online professional development on teaching practice in a specific school district.

- Investigate through the use of a case study, the impact of online professional development on student achievement in a specific school district.

I recognize that the data in this study reveals a positive image of online professional development programs from the perspective of the school superintendent. The school districts that participated in the semi-structured interviews are offering online professional development and the superintendents are pleased with and excited about their programs, thus revealing no issues, warning signs, or negative descriptions of the online professional development programs surveyed. I believe a future research project that delves into the barriers that online professional development poses is a warranted research initiative.

The issues of school finance and the impact that deteriorating school funding has on professional development or the ability to offer online professional development was not addressed in this study. Future research would warrant an investigation into the cost structure of online professional development programs and its impact on district budgets. It would be interesting to explore how public school districts allocated funding for their professional development budgets, and how online professional development impacts superintendent decisions regarding school finances when faced with budget constraints as those placed on Pennsylvania Public School Districts under the Governor Corbett administration.

There are several school district programs that I am extremely impressed with after talking to the superintendent. These districts provide a future researcher the opportunity to explore the answers to the questions created from this research study.

5.4 CONCLUDING REMARKS

Through the course of this project, it became clear to me that online learning is a

phenomenon in education that is here to stay. With this initiative, online professional development is not the wave of the future, it is in the now and clearly meets the growing needs and wants of school district professional staff members. Although research question 4 was searching for indicators of success, I believe that it revealed district satisfaction regarding online professional development and was very subjective in nature. Indicators of success would be difficult to measure, but could be considered for future research, as the true indicators of success are the improvement of teacher practice and the improvement of student achievement as a result of any professional development program.

Because it is the responsibility of school district administration to provide opportunities for their teaching professionals to improve their professional practice, effective professional development programs are a necessity in every school district. With very busy work schedules and adult lives, it becomes difficult to engage professionals in learning activities that require in person, or face to face classroom style learning, in an era that allows for online learning and collaboration. Online professional development truly provides the flexibility to meet the personal demands of our teaching professionals.

I have learned that the superintendents believe that the building principal is the key to any successful online professional development program. A district without strong building level principals will not be able to successfully establish an online professional development program. A district must have building principals with the knowledge and ability to develop online content with meaningful online pedagogy, and successfully monitor teacher engagement in the online program. The principal is the key component

to the success of the program because of their instructional leader relationship with their faculty. Online learning is a relatively new initiative and may be met with resistance from teachers, a true building leader will have a greater success rate in leading their teachers into an online learning initiative. Online professional development programs will only be as strong as their building leadership.

As I met with district superintendents, and reviewed the professional development programs occurring in Western Pennsylvania public school districts, I was excited to learn how districts established leadership teams to review the professional development needs of the teachers. These leadership teams are comprised of teachers who have significant input into the professional development topics for their district.   I discovered that the leadership teams establish excellent communication and collaboration between teachers and administrators, providing the teachers with a forum to discuss, with administration, the learning needs of the faculty.

I was impressed to learn how school districts in the area have captured valuable professional learning time through the establishment of summer academies. In these summer academies, teachers engaged in professional learning and continued the discussions of teaching and professional practice in a time frame that is not mandated by the district.

Many of the superintendents in this study indicated that they are using Blackboard Learning System to engage teachers in online professional development. In the future, I would like to develop a consortium of school districts that share their professional development programs and topics to broaden each district's offerings with a collective catalog of subjects, taught by a variety of professional experts. With the movement to

online professional development opportunities, districts have the potential to share resources and best practices without the limitations of location. Online professional development gives school districts the opportunity to collaborate with colleagues located anywhere on the globe. I believe we begin to impact teaching and learning when our teachers have the opportunity to share ideas and collaborate with colleagues; online professional development allows this collaboration to be truly with anyone, anywhere, and anytime.

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