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ONLINE PROFESSIONAL DEVELOPMENT: CRITERIA FOR SELECTION BY
TEACHERS AND EVALUATION BY ADMINISTRATORS

by

Joshua C. Elliott

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A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

University of Phoenix

The Dissertation Committee for Joshua C. Elliott certifies approval of the following
dissertation:

ONLINE PROFESSIONAL DEVELOPMENT: CRITERIA FOR SELECTION BY
TEACHERS AND EVALUATION BY ADMINISTRATORS

Committee


Patricia Shopland, EdD, Chair

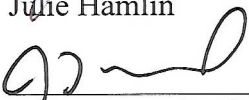
Robin Chambers, EdD, Committee Member

Julie Hamlin, EdD, Committee Member


Patricia Shopland


Robin Chambers


Julie Hamlin


Jeremy Moreland, PhD
Dean, School of Advanced Studies
University of Phoenix

Date Approved: September 09, 2014

ABSTRACT

The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when evaluating whether an online professional development program meets the needs of both the district and the teachers. The study also explored which criteria teachers use when they are selecting an online professional development program. The first research question was, *what criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?* The second research question was, *what criteria do teachers use in selecting online professional development programs?* Data were collected through interviews with administrators, interviews with teachers, and analysis of relevant documents. Participants in the study included district administrators who play a role in the approval process for professional development and district teachers who have completed online professional development. Several themes and subthemes for both administrators and teachers emerged. Administrators consider the structure, reputation, convenience, and district alignment when evaluating an online professional development program. Teachers consider the structure, topic, and convenience of online professional development when selecting a program. The primary suggestion for future research is an investigation into the reasons for the perception of teachers and administrators concerning the perceived discrepancy between how the two groups select effective professional development. Continued research may make the use of online professional development an increasingly productive means of professional growth. The findings of the current study may inform other public school districts of the value of such a collaborative effort.

DEDICATION

This work is dedicated to my family who were as much a part of this journey as I was. I owe them a great deal of thanks for their unconditional support.

To Sheilah, my mother-in-law, without whom this process would not have started much less finished. You were my biggest advocate with my doctoral work as you are in all aspects of my life.

To Martin, my father-in-law, who always helps me keep things in perspective. You have shown me what it is to be a good father, gentleman, and role model through your own example.

To Amy, my wife, who is my best friend. You are one of the best things in my life. The other good things are included in this dedication, and they would not be in my life without you.

To my three sons: Cormac, Cian, and Devyn. You gave me my most important title, Daddy. I love you boys very much!

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Chapter 1

Introduction

The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when evaluating an online professional development program to determine if the program meets the needs of both the district and the teachers. The study also explored the criteria teachers use when they are selecting an online professional development program.

Online learning is a growing opportunity in education. In 2011, every state of the United States, plus the District of Columbia, had some variation of accredited online learning program (Watson, Murin, Vashaw, Gemin, & Rapp, 2011). This number does not include accredited programs that operate across multiple states (Watson et al., 2011). In 2000-2001, over 3 million students were enrolled in online programs in the United States (National Center for Educational Statistics, 2003). The number of students enrolled in online programs more than doubled by 2011 to 6.7 million (Allen & Seaman, 2012). In addition, the options and potential for distance learning, and online learning in particular, are expanding as technology evolves (Prensky, 2010). Potential uses for online learning include education, corporate, and the military (Comish & Copley, 2010; Park, Kim, & Yu, 2011).

The online learning applications in education are not limited to students. Teachers can also benefit from online learning experiences. Both Bereiter (2002) and Garet, Porter, Desimone, & Yoon (2001) asserted that properly designed professional development can benefit teachers within the restrictions of their busy schedules. Online

professional development is one subset of online learning that is available in some of the states (Chen, 2011; Sprague, 2006).

Professional development is an essential component of a teacher's professional career (National Board for Professional Teaching Standards, 2002; National Staff Development Council [NSDC], 2001). The NSDC (2011) described effective professional development as a sustained program that fosters an academic environment where staff members are "continual learners who improve their performance" (para. 1). Continued learning is essential for educators to stay current on best teaching practices (Connecticut State Department of Education, 2010; Duncan, 2009; Fischer, 2011). Some examples of standards that teachers can learn in professional development, along with their applications, are Common Core State Standards (CCSS) and the three National Education Technology Standards (NETS) sets (CCSS Initiative [CCSSI], 2009; International Society for Technology in Education [ISTE], 2008a; ISTE, 2008b; ISTE, 2008c). Many educators perceive professional development as simply a requirement for maintaining teacher certification as opposed to an opportunity for continued learning and an opportunity that benefits their pedagogy (Hiemstra & Brockett, 1994). As a result, many teachers see professional development opportunities as a waste of time with no relevance to their teaching (Bereiter, 2002; Hiemstra & Brockett, 1994). Well-designed online professional development has qualities that can alleviate some of the issues often associated with professional development, including flexibility in scheduling and the ability for teachers to have a greater role in the direction of their learning (Sprague, 2006).

The study involved exploring the criteria teachers and administrators in a mid-sized public school district in Connecticut use when choosing online professional development. The results of the qualitative case study may help to inform district leaders making decisions regarding which online workshops qualify for professional development credit in a public school district. The results of the current case study may also help to inform teachers when they are selecting appropriate online professional development courses. The knowledge from the study may be beneficial for maximizing the effectiveness of the professional development process as experienced by educators.

Background of the Study

Teachers need to possess several skill sets beyond the content knowledge for the subject they teach. Educators must be able to plan appropriate learning activities, engage students in a safe environment so they are willing and able to learn, and assess the students' skills and content knowledge (Connecticut State Department of Education, 2010). Teacher education programs prepare prospective teachers in all these aspects. However, education is a perpetually evolving field (Kessinger, 2011). Professional development is necessary due to “ongoing research and changes in technologies” (Loveland, 2012, p. 26). The National Board for Teaching (2002) also asserted that teachers need to be lifelong learners. Multiple factors can lead to changes in perspective about what the best teaching practices are. The results of research by educational leaders and changes in technology may guide educational policies and standards are two examples. Research might also highlight a significant issue in the educational system resulting in legislation. Examples of research leading to legislation include government education initiatives like No Child Left Behind and Race to the Top (Townsend, 2011).

Government mandated shifts in educational policy make it essential for teachers to adjust their pedagogical practices to maintain compliance with current educational policy and standards. An example of a change in technology that necessitates professional development would be the teaching of best practices for using technology in the classroom (Schrum & Levin, 2013). The examples are just a few that illustrate why professional development is essential.

The focus and objectives of professional development have changed over time (Hirsh, 2006). The changes are in response to shifts in education that result from research and changes in technology (Loveland, 2012). As the shifts occur, there must be changes in the content, the way educators deliver the content, or the way educators assess student achievement (Ertmer & Ottenbreit-Leftwich, 2010). Teachers participate in professional development to learn the best practices for addressing the pedagogical needs resulting from these changes (Loveland, 2012).

The U.S. government has attempted to address shortfalls in student achievement. As an example, the Bush administration spearheaded the No Child Left Behind Act (NCLB) in 2002 (NCLB, 2002). The purpose of NCLB was to “ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (p. 1439). The act sought to ensure that every student received the best education possible through school and teacher accountability. Fischer (2011) later asserted the NCLB reform initiative was lacking alignment with national mandates. Fischer supported the assertion with evidence the NCLB legislation lacked incorporation of 21st century skills. Fisher’s assertion indicates that school districts were

not accountable for incorporation of 21st century skills into the curricula. The results of Fisher's research showed the need for teachers to learn how to teach 21st century skills effectively (Fisher, 2011; Trilling & Fadel, 2012). President Obama's administration sought to remedy the issue of school district administrators not enforcing the teaching of 21st century skills. Secretary of education Arne Duncan led the initiative (Garrett, 2009). President Obama's (2008) education intention was to set "ambitious goals for education that include advanced 21st century skills, good character, and informed citizenship" (para. 3). The result of this sequence of events is a need for professional development that focuses on 21st century skills and how to teach the skills effectively (Partnership for 21st Century Skills, 2011b).

Qualitative Problem Statement

A potential exists for effective learning in online professional development (Sprague, 2006). Online learning offers numerous options for content delivery and interaction between students and instructors (Richardson, 2010). Learners choose online professional development frequently because it is "customizable, up to date, and can be offered exactly when needed" (Patton, 2011, p. 53). Well-designed online professional development programs include a broad range of topics and concepts. The online format should also enable staff to access resources beyond the school district's own staff (Cornelius & Macdonald, 2008). A teacher's participation in online professional development can also result in a deeper understanding of how to use technology effectively in his or her own pedagogy due to the benefits of online professional development's potentially constructivist quality (Chen, 2011).

The standards ISTE created indicate that technology proficiency is essential for administrators, teachers, and students (ISTE, 2008a, 2008b, 2008c). Students need technology skills to be effective members of a society where technology continues to play an increasing role (ISTI, 2008b). Administrators and teachers should master technology so they can educate students about the technology while using it (ISTI, 2008a, 2008c). The ISTE has created a set of technology standards to measure the skills and knowledge each group; students, teachers, and administrators; should have mastery of (ISTI, 2008a, 2008b, 2008c).

Extensive research exists about online learning, professional development, and the potential of online professional development (Kamarul Kabilan, Wan Fara, & Mohamed, 2011; Little & Housand, 2011; Shumack & Forde, 2011). Holmes, Signer, & MacLeod (2010) indicated that further research might result in greater improvements in the instructional strategies used in online professional development.

Many public school districts face the issue of how online professional development compares to face-to-face professional development (Fabry, 2009a). Comparing online professional development to face-to-face professional development has become an issue because district leaders need to determine what qualifies as valid professional development in order to appropriately allocate scarce professional development funding. District administrators make the determination so professional development credit, and possibly financial compensation, can be allocated to teachers. The specific research problem of the current study was that school districts must create a clear set of guidelines when deciding which online professional development programs best fit the needs of both the individual teachers and the overall district. Selecting

effective online professional development remains a vague and subjective process without a clear set of guidelines. Educators may be more likely to select effective online professional development programs if they have a clear set of guiding criteria to use in the selection process (Hirsch, 2006; Killion & Kennedy, 2012).

Qualitative Purpose Statement

The purpose of the current qualitative embedded case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when evaluating whether an online professional development program meets the needs of both the district and the teachers. The study also explored which criteria teachers use when they are selecting an online professional development program. The results of the current qualitative case study may be useful to district leaders when making decisions regarding which online workshops qualify for professional development credit. The results of the current case study may also be useful to teachers when they go about selecting appropriate online professional development courses. Data were gathered from three sources. The three sources were teacher interviews, administrator interviews, and relevant documentation. Relevant documentation included electronic documents released by the Connecticut State Department of Education regarding professional development requirements in the state of Connecticut.

A qualitative embedded case study research design was the most effective to use in the current study. The design enabled the researcher to gather narrative data. Narrative data incorporates the perceptions of those already involved with online professional development into the results (Creswell, 2008; Simon & Goes, 2011). The qualitative data gathered from the teacher interviews, administrator interviews, and the

relevant documentation were analyzed for common themes and patterns. The themes and patterns indicated the types of criteria administrators use when evaluating online professional development. The themes and patterns also indicated the criteria teachers use when selecting online professional development programs. School administrators may find the results of the study useful as they establish criteria for evaluating online professional development. School teachers may also find the results helpful as they establish criteria for selecting online professional development. The study results may be helpful to district leaders when creating a framework for determining valid professional development for allocation of credit.

Significance to Field

The National Staff Development Council (NSCD, 2001) stated that educators should commit 25% of their professional time to learning and collaboration. Committing 25% of professional time is difficult for professionals who already have difficulty meeting the time demands of their field. Professional development is often restricted to isolated one-day workshops with preformatted topics resulting from the time constraints (Bereiter, 2002; Hiemstra & Brockett, 1994). Teachers often have little input into the subject matter of the workshops (Bereiter, 2002). The lack of input increases staff resistance in professional development workshops (Hiemstra & Brockett, 1994). Online professional development can alleviate these issues by providing an opportunity for teachers to guide their learning with a greater flexibility in scheduling (Adams, 2010; Garet et al., 2001). However, the online professional development design needs to be appropriate. An effectively designed online professional development can be a very effective resource (Fabry, 2009a). Creating an effective online professional

development program involves more than transferring a traditional professional development workshop into an electronic format (Fabry, 2009a, 2009b; Kranch, 2008; Simms & Knowlton, 2008). Online professional development should be built from the ground up using sound instructional design practice (Fabry, 2009a, 2009b; Gagne, Wager, Golas, & Keller, 2005; Hardre, 2013; Kranch, 2008). The process of building an online professional development course includes incorporating the proper tools and resources (Adams, 2010; Gagne et al., 2005; Holmes et al., 2010; Richardson, 2010). Arbitrarily choosing random tools and resources can result in a poor course design (Milburn, 2011). Research exists about effective online professional development. A gap exists in the research concerning online professional development that meets the needs of teachers and their public school districts. Achieving the purpose of the current study may reveal the criteria used by administrators to evaluate and by teachers when selecting effective online professional development. The information may help guide other districts when attempting to identify effective future professional development programs.

Qualitative Research Question

Professional development is a required component of a teacher's busy professional life. Therefore, it is essential that professional development experiences be valued and logistically manageable. Online professional development is an alternative to face-to-face professional development. District leaders are responsible for determining what qualifies as a valuable professional development experience worthy of credit allocation. Teachers need to participate in professional development opportunities that

will benefit them professionally. Two qualitative research questions will guide the current study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

Conceptual Framework

Professional development is essential for staying current with best teaching practices. The state of perpetual learning would be an example of scholarship as described by Humboldt (1810). Humboldt asserted that scholarship is a lifelong process that never ends. The idea of lifelong learning contrasts with a school academic career that has a finishing point. The perception is that professional development has lost the quality of continuous learning for many teachers (Hiemstra & Brockett, 1994).

Knowles (1990) proposed that desire to satisfy needs motivates adult learners. Researchers have also identified the importance of constructivism, where the learner builds his or her own knowledge (Gredler, 2009; Martinez, 2010). Social constructivists argue the tools and available resources affect the building of knowledge and understanding (Liu & Chen, 2010). With the advent of Web 2.0 in 2004, Internet use moved from data retrieval to a more interactive quality of technology (Brooks-Young, 2010). Dougherty (2012) called Web 2.0 the read-write web because of the interactive nature. Web 2.0 provides many tools and resources for constructivist learning because of its interactive qualities (Enonbun, 2010). Bloom created his taxonomy to enable easier identification of higher order thinking skills for incorporation into lessons (Lightle,

2011). Church (2011) later revised the taxonomy to incorporate digital technology. Fink (2003) proposed an alternative to the original Bloom's taxonomy. Fink referred to his learning taxonomy as *the taxonomy of significant learning*. The 21st century skills critical thinking, problem solving, communication, and collaboration compose the taxonomy (Fink, 2003). The importance of 21st century skills was clearly established by many authorities from the business and educational fields (Banta, 2009; Casner-Lotto, & Barrington, 2006; Duncan, 2009; Friedman, 2007; Marzano & Heflebower, 2012; Trilling & Fadel, 2012; Wagner, 2008). Twenty-first century skills relate strongly with the ISTE standards, Common Core of Teaching (CCT), and the CCSS (CCSSI, 2009; Connecticut State Department of Education, 2010; Trilling & Fadel, 2012). However, administrators rarely explicitly show the need to teach 21st century skills or the relationship across the skills and standards to educators along with a clear explanation or definition of the standards (Organization for Economic Development [OECD], 2009).

Research has indicated the activities, tools, and resources of a well-designed online professional development has the potential of providing an effective collaborative and constructivist learning environment where teachers can learn by authentically utilizing the skills they are learning (Adams, 2010; Fenton & Watkins, 2007; Taylor, 2011). Enonbum (2010) asserted the tools available through the technology of Web 2.0 commonly used in online learning environments are conducive to constructivist learning environments. The tools include blogs, forums, video conferencing, social networking, and Wikis (Duffy, 2008). However, the assertions of Enonbum are generalizations. No conclusive research exists about which tools are most effective and which are ineffective (Bradley, 2011). The tools have extensive uses both in and out of the classroom

(Richardson, 2010). Beyond being sound pedagogical practice, constructivist learning also aligns with the concept of 21st century skills and the ISTE NETS for teachers (NETS-T), NETS for students (NETS-S), and NETS for administrators (NETS-A) (Trilling & Fadel, 2012).

A benefit exists to online professional development workshops when using an asynchronous format to enable teachers to choose their participation schedule resulting in increased ownership of the learning (Holmes et al., 2010; Milburn, 2011). Research has indicated that college and post-graduate level students see the asynchronous discussion feature as a good reason to choose online learning as opposed to a face-to-face format (Holmes et al., 2010; Milburn, 2011). In addition, Peters, Schmerling, & Karren (2011) argued that an asynchronous learning environment could be more effective for constructivist learning if formatted correctly. One reason for the increased effectiveness is that students earn participation credit through actual participation rather than for seat time (Chiong, Jovanovic, & Gill, 2012; Kuyini, 2011; Nandi, Hamilton, & Harland, 2012). Another advantage of the asynchronous online learning format is that it removes the potentially limiting factor of differences in scheduling and time zone differences (Cheung, & Hew, 2010; Papachristos et al., 2010; Peters et al., 2011). Since not everyone needs to be in the same place at the same time, schedules do not have to be entirely compatible.

Synchronous online learning environments have advantages. Online learning allows learners to interact with each other even when interaction would not be an option otherwise due to geographic distance (De la Varre, Keane, & Irvin, 2010; Gaumer Erickson, Noonan, & McCall, 2012; Mayes, Luebeck, Ku, Akarasriworn, & Korkmaz,

2011). The ability to interact with others without geographic constraints has increased significance since adopting the CCSS, since many states now work off the same set of standards (CCSSI, 2009)

Online professional development is available in several designs. Some examples are asynchronous discussion and collaboration groups. These types of learning environments are evident in forums and group formats (Holmes et al., 2010). Webinars are an example of professional development in a synchronous format public school districts commonly use (Luhtala, 2012). Specialty groups, like ISTE for special needs to individuals, often provide online professional development to districts. Businesses will often provide online professional development to public school districts as part of their customer service package when the district purchases a product from the provider.

Methodology

The current qualitative research was an embedded case study. The research design was holistic in nature. The results of the current study may be useful to administrators when they are evaluating online professional development. The results of the current study may also be useful to teachers when they are selecting online professional development workshops. Identifying criteria may be beneficial for maximizing the effectiveness of the professional development process as experienced by educators. Triangulation is part of the research method. Triangulating measures in the study adds validity to the results (Christensen, Johnson, & Turner, 2010; Leedy & Ormrod, 2010; Neuman, 2006). The three sources of data triangulated in the current study were administrator interviews, teacher interviews, and relevant documentation.

A case study research design was appropriate because provided narrative data. Narrative data gathered through interviews allowed the perceptions of the study participants to be included. A case study was more appropriate than a phenomenological research method because not all participants experience the same phenomenon. Administrators and teachers work in different capacities and experience different phenomena as a result. Because of this dynamic, administrator and teacher experiences are similar, but they will not share the same exact phenomena as is required for a phenomenological research study (Moustakas, 1994).

The case study design was particularistic in nature. Researchers who choose a particularistic approach to a case study do so to seek answers for specific “questions, situations, or puzzling occurrences” (Merriam, 1998, p. 29). Administrators and teachers from a mid-sized public school district in Connecticut comprised the sample for the current qualitative case study.

Definitions of Terms

The language used in education consists of terms that may not be common knowledge to non-educators. Knowledge of these terms and their uses is essential for full comprehension of current educational research. The current section includes definitions of terms used in the current study.

- *21st century skills* – Twenty-first century skills are a “blending of specific skills, content knowledge, expertise, and literacy’s” (para. 1) seen as necessary for competing in the current global community (Partnership for 21st Century Skills, 2011a). The skill domains include life and career; learning

and innovation; and information, media and technology skills (Partnership for 21st Century Skills, 2011a).

- *Asynchronous discussion* - An asynchronous discussion allows users to have a conversation at any time from any geographic location (Cheung & Hew, 2010).
- *Blog* - The term blog is short for Weblog. People commonly use blogs as online diaries. However, people who write blogs usually intend them to be accessible by anyone with access to the Internet. Blogs are a good tool for reflection (Richardson, 2010).
- *Constructivism* - Constructivism is the process of building knowledge from preexisting information (Gredler, 2009).
- *Evaluating* – Evaluating is the process administrators use to determine whether an online professional development program meets the needs of the district the administrator represents (An Act Concerning Education, 2012).
- *Forum* - Forums are a tool for allowing people to hold discussions asynchronously. The discussions operate in threads to organize the different discussions and their paths (Horton, 2006). Educators also call forums groups (Little & Housand, 2011).
- *Information and communications technology (ICT) literacy*: Information and communications technology literacy addresses the ability to use and apply technology effectively (Partnership for 21st Century Skills, 2011a).
- *Information literacy* - Information literacy skills relate to a person's ability to seek out, locate, and evaluate research information effectively (Partnership for

21st Century Skills, 2011a). Information literacy is one of the 21st century skills.

- *Instructional design (ID)* – Instructional design is a process used to develop units of instruction based “principle of human learning” to maximize student learning (Gagne et al., 2005, p. 16).
- *National Educational Technology Standards for Teachers (NETS-T)*: The NETS-T is the commonly accepted technology standards ISTE created. The acronym stands for National Educational Technology Standards, although the full name is very rarely used. The ISTE designed the standards to be compatible with the concept of 21st century skills. A set of standards exists for students and administrators (ISTE, 2008b, 2008c).
- *Online learning* - Online learning is any type of formal learning that takes place using the Internet. Online learning is often confused with distance learning. Distance learning does not require the Internet.
- *Professional development* - Professional development is any formal program designed to educate teachers about either best teaching practices or the content area taught by the individual. Individual states also set requirements about the minimum amount of professional development required for a teacher to retain his or her certification (Hirsh, 2006). The National Staff Development Council added that effective professional development is “comprehensive, sustained, and intensive” (NSDC, 2011, para. 3).
- *Social network* - Social networks enable people to create a personalized online presence that allows them to interact with others who have done the same

(Kord & Wolf-Wendel, 2009). Social networks are a resource for collaboration activities (Richardson, 2010). Facebook and Twitter are two examples of social networking resources.

- *Synchronous discussion* - A synchronous discussion allows users to have a conversation from any geographic location at the same time (Cheung & Hew, 2010).
- *Web 2.0* - Web 2.0 is an evolution in Internet capabilities from a mode information delivery to a resource that “emphasizes collaboration, interactivity, and dynamism” (Enonbum, 2010, p. 17). Blogs, forums, video conferencing, social networking, and wikis are all examples of web 2.0 resources (Duffy, 2008).
- *Wiki* - A Wiki is a website or webpage that multiple users can edit as opposed to one webmaster (Moser, 2009; Richardson, 2010).

Assumptions

Case study researchers attempt to derive the meaning of a particular case through the eyes of a specific person or group of people (Ana Cristina Loureiro, Maria de Lourdes, Telma de Santa, & Ana, 2006; Simon & Goes, 2011). Assumptions are essential to the current study because of derivation of meaning through interpretation in a case study.

The current study was based on four primary assumptions. The first assumption was that administrators who participated in the study wished to pursue the option of online professional development as an option for the district. The second assumption was that teachers who participated in the study were willingly enrolling in online professional

development, without coercion from outside sources. The third assumption was that teachers had a desire to improve their teaching through the professional development learning process. The fourth assumption was that chosen online professional development programs were representative of the average online professional development program.

Scope and Limitations

The current study design allowed exploration of what criteria administrators and teachers in a mid-sized public school district use when determining if an online professional development program meets the needs of the district and the individual teachers. Teachers who have taken online professional development, and the administrators who approve those workshops, comprised the study sample. There were time constraints for completing the study.

Despite extensive planning, a study cannot be flawless. Limitations are inevitable (Roberts, 2010). The primary data collection tool used in the current study was interviewing. As a result, the data were inherently prone to opinion and researcher bias. Despite the advance written description by a researcher of his or her experiences with online professional development, the potential for inadvertent bias because of his or her experiences existed. The sample and the chosen online professional development programs are also sometimes prone to validity and reliability issues. The teachers in the sample participated in online professional development by necessity. The level of experience the participants had when they entered the study, and the precise quality and design of the program they used, varied. As a result, representative reliability and content validity were a potential limitation (Neuman, 2006). The participants in the

sample group might not have been representative of the population resulting in a representative reliability issue. Study participants could have dropped out of the study before its conclusion. Content reliability might have become a limitation because of the inherent variations between various online professional development programs. Case study research is not generalizable. The current research may not yield data representative of all public school districts.

Delimitations

The study focused on a clearly defined population in a mid-sized public school district in Connecticut. The sample in the current study was limited to secondary level teachers who participated in online professional development and the administrators who approve those programs. The criteria for the appropriate online professional development was limited to programs that incorporated some form of interactivity between the teacher and students, as well as student-to-student interaction. All participation in the study was voluntary. The results of the current study may not be representative to a larger population. The criteria identified for participation in the study were in place to provide consistency among the included programs.

Summary

The current qualitative case study explored what criteria administrators and teachers use when choosing online professional development opportunities. The results of the current study may be useful to administrators when evaluating online professional development. The results may also be useful to teachers when selecting appropriate online professional development.

The next chapter includes a review of the current and historical literature related to the current study. The review covers teaching best practices, research, and current paradigms.

Chapter 2

Literature Review

Professional development is an integral part of the teaching profession. Teachers must stay current in the different aspects of education to be effective in the classroom (Chung & Kim, 2010; Ducharme, Ducharme, & Dunkin, 2002; NSDC, 2001; The Content of Professional Development for Change Toward Differentiation, 2008). Time constraints often hinder teachers' abilities to initiate meaningful professional development other than what administrators incorporate into the school schedule. As a result, administrators often dictate the professional development agenda (Chung Wei, Darling-Hammond, & Adamson, 2010). Teachers and administrators do not always agree on what professional development topics are most important. Teachers often perceive professional development as only good for earning credit toward teacher certification retention (Hiemstra & Brockett, 1994). Online professional development opens possibilities for teacher choice of programs they consider meaningful and, at the same time, can allow flexible scheduling. Research on how online professional development affects teaching is limited. The purpose of the current qualitative case study is to explore which criteria administrators in a mid-sized public school district in Connecticut use when determining whether an online professional development program truly meets the needs of both the district and the teachers. The purpose of the current qualitative case study is also to explore the criteria teachers use when selecting online professional development.

Documentation

The literature review began with searches of the databases found in the University of Phoenix online library. Keywords used *included professional development, adult learning, online learning, online professional development, learning theory, educational technology, 21st century skills, knowledge management, and educational standards*. The databases used ultimately expanded to EBSCOhost, ProQuest, Gale Powersearch, the ISTE, Google Scholar, EdITLib, and the Association for Educational Communication and Technology databases. Microsoft Word, Lucidcharts, and NVIVO 10 aided in organization and analysis of information. Resources were stored in electronic folders by keywords.

History of Professional Development

Humboldt (1810) described scholarship as incomplete knowledge. Humboldt believed that scholarship is never complete. whether referring to research or teaching. The same is true with professional development. Imitation of other teachers' lessons will not yield the learning of best practices in teaching (Elton, 2009). Educators learn the best practices of teaching primarily through current research-based professional development. Well-designed professional development incorporates appropriate standards and tools (Elton, 2009). Elton suggested that as teachers progress through the perpetual learning process, they will practice what they have learned rather than disregard the knowledge. Elton's assertions are a combination of Humboldt's (1810) description of scholarship and Vygotsky's (1978) concept of the zone of proximal development, where learners build on previously learned information. As teachers go through the lifelong process of learning, ,

in the role of scholars, they build on previously learned information rather than each instance of learning occurring in isolation.

The concept of scholarship and practice are two parts of the scholarship, practice, and leadership model (Thompson, 2007). The leadership component is evident when the educator makes the transition from professional development participant to planner of professional development as well as participant (Thompson, 2007). The educator, as a leader, needs to think critically about what professional development works and does not work so that appropriate and effective learning experiences can be used (Burbach, Matkin, & Fritz, 2004). Burbach et al. reached this conclusion in their mixed method study of 80 students in a leadership course. Analysis of interviews and testing showed that students enrolled in courses involving active learning showed evidence of improved critical thinking skills (Burbach et al., 2004). Active learning activities in the study included journal writing, small group discussion, and service learning (Burbach et al., 2004). Part of the process of building or selecting appropriate professional development includes understanding learning theory so the educational leader can review the design of potential professional development for effectiveness (Knowles, 1990; Taylor, 2011).

Influence of learning theories on professional development. Learning is defined as “knowledge or skill acquired by instruction or study” (Zemke & Zemke, 1995, p. 32). This definition applies to a broad spectrum of learning approaches, ranging from essentialism to constructivist learning theory (Berg-Sorensen, Holtug, & Lipper-Rasmussen, 2010). Sound education is based on sound learning theory, like essentialism and constructivism, whether in a face-to-face or online format (Haythornthwaite & Andrews, 2011). Essentialist theory started with Bagley (Sadker & Zittleman, 2006).

Bagley proposed that educators spent too much time on the process of learning (Sadker & Zittleman, 2006). Bagley argued that there should be a greater focus on teaching the content (Sadker & Zittleman, 2006). Researchers who review the current best practices of teaching can trace the theoretical origins back to works of scholars such as Dewey (1938) and Vygotsky (1978). These scholars and their theories have direct applications to the development of effective professional development (Darling-Hammond, Chung Wei, Andree, Richardson, & Orphanos, 2009).

Most research in andragogy learning theory and professional development indicates a collaborative learning environment is in the spirit of experientialism and constructivism (Darling-Hammond et al., 2009). However, many teachers still view their professional development programs as lacking collaborative opportunities (Antoniou, Kyriakides, & Creemers, 2011; Chung Wei et al., 2010). In a study involving a quantitative assessment of 130 teachers, Antoniou et al. (2011) found that a holistic and collaborative teaching environment had a positive impact on the academic achievement of the students of teachers who participated in the study. Research supports teacher assertions that many of the existing professional development opportunities at the time of the current study have not been designed using sound learning theory based strategies like collaboration (Antoniou et al., 2011; Webster-Wright, 2009). The issue of ineffective professional development that does not incorporate sound learning theory has existed throughout the history of professional development (Meagher, 2011).

Origins of formal teacher professional development. The concept of professional development begins with teacher education in the form of the normal school in Massachusetts in the early 1800s (O'Connor, 1995; Tyack, 1967). The normal school

was a vocational school students could attend, after elementary school, to train to become teachers (Angus, 2001). Regionally, common curriculums begin to develop for normal schools in the late 1800s (Angus, 2001). However, some education historians thought that normal school education was inferior to the education provided by secondary schools at the time (Richey, 1957). School administrators realized that more needed to be done to improve the quality of teaching (Richey, 1957). The response by educational leaders to the need for improved quality of teaching was the Teachers' Institutes, which was the next significant event in teacher professional development (Richey, 1957).

Educational leaders started the Teachers' Institutes in the late 1800s across the United States (Spearman, 2004). The local counties within the states financed the weeklong workshops (Richey, 1957). The administrators of the normal schools responded to the competition from the Teachers' Institutes by creating a common curriculum that included "general education, professional study, specialization in subject areas, and extended practice in teaching" (Richey, 1957, p. 43). The common curriculum transformed the normal schools into something that more closely resembled the teacher colleges that exist currently (Meagher, 2011). Guskey (2000) noted that teacher education programs continued to evolve, while the Teachers' Institutes did not. Some have argued the similarities between Teachers' Institutes and professional development may have led to some of the negative attitudes held toward professional development going forward from that point in time (Angus, 2001; Guskey, 2000). Despite creating a common curriculum, the quality of primary and high school education was still poor well into the 1900s when many teachers still taught without having graduated high school (Richey, 1957).

In the 1920s, educational leaders used knowledge that most teachers at the time had not graduated high school to support the assertion the quality of American education was poor (Richey, 1957). Learned and Bagley responded to the deficiency in education with a proposal for state run normal schools that would call for consistency in teacher training (Meagher, 2011; Urban & Wagoner, 2008). Establishing state run normal schools was a significant step toward establishing teaching standards. Inconsistencies still existed in teaching, despite establishing standards (Meagher, 2011). The inconsistencies were the result of different states developing their own standards (Meagher, 2011; Richey, 1957).

Another influence in available professional development in a given area was economic in nature. Regional economics force districts to use professional development opportunities that are economically feasible (Richey, 1957). The combined factors of state developed standards and available educational funding has been a significant reason for disparities in available professional development across the United States (Meagher, 2011; Urban & Wagoner, 2008). It would take a nationwide drive for improved education to start movement toward consistency in standards on the national level. The movement would start with No Child Left Behind.

No child left behind. The results of a study in 1983 indicated there were significant deficiencies in the American educational system (National Commission on Excellence in Education, 1983). According to the report, major educational reform was imperative because the American educational system was failing (National Commission on Excellence in Education, 1983). The report influenced later major legislation such as

NCLB (Kessinger, 2011). The Bush administration led the efforts to pass the NCLB Act in 2002 (NCLB, 2002).

The objective of NCLB was to “ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (NCLB, 2002, p. 1439). No Child Left Behind focused on fair education through school and teacher accountability. Several educational leaders argue that NCLB had flaws because it focused too much on sub groups based on race, socioeconomic, or special education status and allowed states to create their own standardized measurements (O'Lear & Dahl, 2008; Ravitch, 2009; Verbruggen, 2012). Tavakolian and Howell (2012) asserted the sub groups allowed students to pass through the system without notice. Tavakolian and Howell’s review of the research led them to the assertion that schools tend to focus on the scores of the larger groups that have a greater impact on the success of the school and district. Not including subgroups with a population under 40 students in the testing results supports the assertion that schools tend to focus on larger groups (NCLB, 2002). The focus of NCLB to provide a “fair, equal, and significant opportunity to obtain a high-quality education” shifted the responsibility for student achievement to the schools and teachers (NCLB, 2002, p. 1439).

Researchers argue the focus on school and teacher accountability brought an increased urgency to the need for effective professional development (Hirsch, 2006). No Child Left Behind caused a push towards a systems approach where professional development occurred in series as opposed to stand-alone workshops (Cobb, 2005). However, the push did not always result in changes to professional development design.

Many teachers continued to report their districts still primarily conducted standalone professional development workshops (Darling-Hammond et al., 2009). Later the focus of professional development shifted away from NCLB to the NSDC (Hirsch, 2006). The National Staff Development Council's development standards "emphasized the importance of working simultaneously on context and process issues, as well as content issues" (Hirsch, 2006, p. 59). No Child Left Behind focuses only on content (Hirsch, 2006).

Importance of Professional Development

Professional development is a requirement for maintaining a professional teacher certification in every state. In the state of Connecticut, a teacher with a professional teaching certification is required to complete 90 hours of professional development in a 5-year period (SDE: 107 Continuing Education Units, n.d.). The National Staff Development Council stated that educators should commit 25% of their paid professional time to learning and collaboration (NSDC, 2001). However, the percentage of paid professional time that teachers actually devote to professional development is usually closer to the state minimum requirement, which is much lower than the prescribed 25% (Hill, 2009).

The guidelines for the percentage of paid professional time teachers should devote to professional development suggested by the NSDC are in place so teachers stay current on best practices in teaching. Professional development helps teachers meet the needs and goals of the district (Spanneut, Tobin, & Ayers, 2012). Spanneut et al. (2012) researched administrators' perceptions of what professional development the teachers in their respective districts needed the most. Spanneut et al. conducted the preliminary

study anonymously through a needs assessment. Spanneut et al. asked the administrators to assess their districts' needs from the perspective of the New York State Educational Leadership Policy standards. Working toward the needs and goals of the district through professional development is essential for moving toward meeting the objectives of educational reform (Desimone, 2009).

Effective professional development affects teacher attitudes and skills positively leading to an increase in quality education (Hien, 2008). Professional development is an excellent opportunity for teachers to collaborate and learn from peers despite spending a significant amount of their work time in a classroom separated from each other (Beavers, 2009). Organizers of professional development often focus more on earning the professional development credit required for teaching certification retention than the process of lifelong learning as a teacher (Hiemstra & Brockett, 1994). The tendency to choose professional development for the purpose of earning professional development credit rather than based on the teachers' needs can result in resentment by the teachers for being required to participate in a program perceived as a waste of time (Bereiter, 2002; Hiemstra & Brockett, 1994).

Programs that focus on continuous professional development workshops that are relevant to teacher needs reduces teacher resentment if designed effectively (Bereiter, 2002; Garet et al., 2001). In a quantitative descriptive study, Garet et al. supported the research of Bereiter with a national survey of randomly chosen teachers. Although the study was broad in scope, Garet et al. risked the potential of only gathering feedback from only engaged teachers who took the time to complete the survey. However, other

researchers have conducted studies that support the research of Garet et al. (Bereiter, 2002; Darling-Hammond et al., 2009).

Much research exists on the most important features of effective professional development (Darling-Hammond et al., 2009; Lutrnick, 2012; Lutrnick & Szabo, 2012). Lutrnick and Szabo interviewed principals about their role as instructional leaders regarding effective instructional design in a qualitative case study. Lutrnick and Szabo questioned the instructional leaders about their beliefs regarding effective professional development, and analyzed study results for common themes, comparing the results to the existing research literature at the time of the study. Results indicated instructional leaders agreed that five common qualities are necessary for effective professional development to occur (Lutrnick & Szabo, 2012). According to the instructional leaders, professional development should be ongoing, collaborative, data driven in design, interest driven in design, and interactive (Lutrnick & Szabo, 2012).

Another qualitative case study by Lutrnick (2012) yielded the same results as her collaborative research with Szabo. Lutrnick and Szabo (2012) compared the results of their study with the NSDC professional development standards. The NSDC standards consist of seven components for productive professional development (NSDC, 2011). The NSDC standards included seven components that an effective professional development program should have: learning communities, leadership, resources, data, learning design, implementation, and outcomes. Lutrnick and Szabo found a significant overlap between the qualities of effective professional development the instructional leaders in their study suggested and the qualities of professional development the NSDC prescribe. Lutrnick and Szabo identified the overlap as evidence the instructional leaders

were using the NSDC professional development standards to guide their professional development programs.

The NSDC has published several studies on professional development. Researchers designed a study to reveal the qualities of professional development that improves teachers' practice and student achievement (Darling-Hammond et al., 2009). The results of the study indicated that professional development must be ongoing, be relevant to the teachers' needs, and provide opportunity for teacher collaboration (Darling-Hammond et al., 2009). The teachers in the study found that much of their professional development experience did not meet these criteria (Darling-Hammond et al., 2009). Most teachers found their professional development programs disjointed rather than ongoing. Only 23% of the teachers felt their professional development had relevance to their teaching (Darling-Hammond et al., 2009). In a grounded theory study, only 16% of the teachers questioned felt that there was intentional collaboration incorporated into their professional development programs (Chung Wei et al., 2010).

In a qualitative study, Schrum and Levin (2013) conducted a review of exemplary schools in regards to success with professional development. Five schools were part of the study. The researchers chose the districts based on the combined factor of having earned state or national professional development awards and for their high level of student and staff diversity (Schrum & Levin, 2013). The results indicated that a successful professional development program should have both formal and informal opportunities, including choices for staff to select from opportunities so their needs can be better met (Schrum & Levin, 2013).

The research results indicate that standards and skills should guide effective professional development (Darling-Hammond et al., 2009). Effective professional development design is interactive, collaborative, interest driven and differentiated, ongoing, designed with appropriate resources, and implemented correctly (Lutrick & Szabo, 2012). The goal of professional development is to improve student learning through improved teaching (Gagne et al., 2005). Instructional leaders should evaluate the success of professional development programs so they can modify future professional development accordingly for further improvements. Figure 1 shows a visual of the aspects of effective professional development.

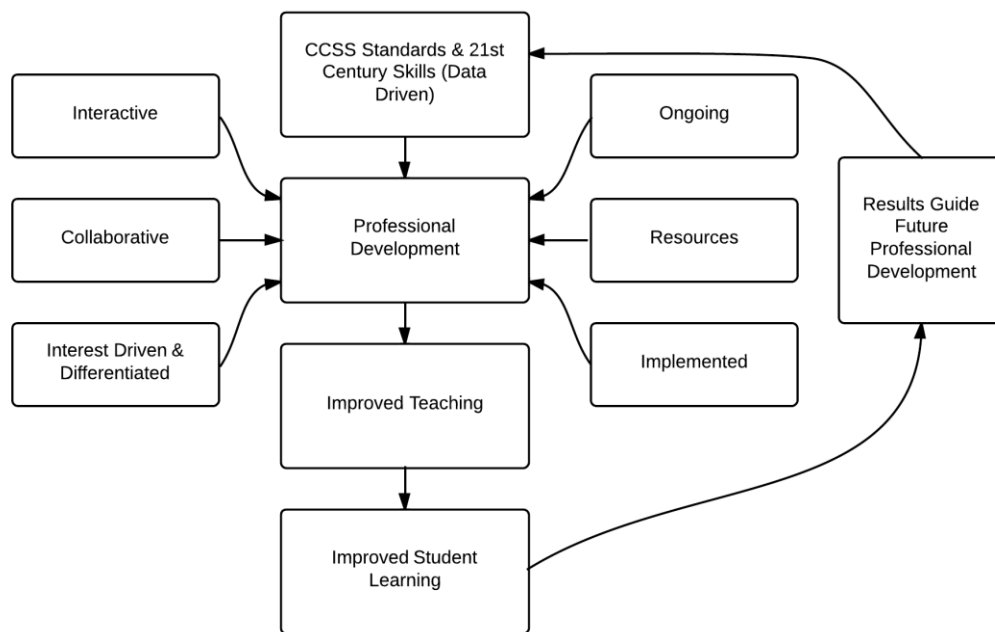


Figure 1. Graphic organizer displaying the aspects of effective professional development. Adapted from “Instructional Leaders’ Beliefs about Effective Professional Development,” by E. Lutrick and S. Szabo, 2012, *Delta Kappa Gamma Bulletin*, 78, p. 6-12. Copyright 2012 by Delta Kappa Gamma Society International.; “Teachers’ technology professional development: Lessons learned from exemplary schools,” by L. M. Schrumm and B. B. Levin, 2013, *TechTrends*, 57, p. 38-42. Copyright 2013 by TechTrends: Linking Research & Practice to Improve Learning.

Political and Professional Influences on Professional Development

Thoughts have changed over the last 50 years about the most pressing needs in education. The changes in thought stem from efforts by the government to address shortcomings in American education whether those affected welcome the changes or not (Katz, 2010). The objectives of these initiatives have included everything from efforts to provide equitable education for everyone to raising the overall quality of American education (Katz, 2010). Twenty-first century skills and CCSS are two initiatives resulting from the perceived shortcomings in American education.

21st century skills. No Child Left Behind stressed the importance of content knowledge as measured through standardized testing. Later, the need for mastery of skills was established (Singh, 2011). Educational leaders asserted that students need to be able to master skills that allow them to operate on a global level as well as solve problems never encountered (Banta, 2009). These are some of the skills included in the 21st century skill set (Trilling & Fadel, 2012).

Snape and Turnbull (2011) asserted that while content knowledge is important, it is also essential to build skills. Skills should enable students to function adequately in a world where they will commonly encounter problems and scenarios they have never before encountered (Ananiadou & Claro, 2009; Snape & Turnbull, 2011). The need for skills has created a push for incorporating 21st century skills into many public school curriculums (Partnership for 21st Century Skills, 2011a; Trilling & Fadel, 2012).

The individual skills for students within the 21st century skill set are not entirely new. However, taken collectively, the skills have a renewed importance because of changes in what is necessary for success in the current global economy. Knowing

reading, writing, and mathematics is no longer enough (Wagner, 2008). In the 21st century, required are four skill sets. The first skill set is core content knowledge and the second is learning and innovation (Partnership for 21st Century Skills, 2011a). People need to think creatively and critically to solve problems effectively. The third skill set is information, media, and technology skills (Partnership for 21st Century Skills, 2011). The third skill set is most commonly associated with the overarching concept of 21st century skills (Quillen, 2010). The fourth skill set is life and career skills. The skill set includes flexibility, initiative, social and cross-cultural skills, productivity, and responsibility (Partnership for 21st Century Skills, 2011a). These 21st century skills are a result of the new legislation and the changing dynamics of an increasingly global civilization.

The importance of 21st century skills derives from the need to become more competitive on a global level. Member countries of the OECD acknowledge the importance of 21st century skills (OECD, 2009). In a survey, more than 400 employers listed critical thinking, problem solving, and leadership as some of the most important skills employers look for when hiring new employees (Casner-Lotto & Barrington, 2006). All of the skills are 21st century skills. Banta (2009) also contended that many U.S. workforce entrants are significantly deficient in these skills. Mastery and a deep understanding of 21st century skills will enable teachers to teach the skills to the students more effectively. Using an online professional development that require using 21st century skills can help to facilitate the skill mastery process through a constructivist design (Enonbun, 2010).

Teaching 21st century skills is essential to prepare students for success in the workforce. A significant gap in achievement already exists among minority students and students of lower socio-economic status (Wagner, 2008). Fox (2011) reported the average high school faculty member exhibits a lack of understanding or misimpressions about 21st century skills. Fox (2011) drew the conclusion in a mixed method phenomenological study from a combination of survey results and interviews with 10 teachers of varying experience in a public high school. Students and administrators in the same school also participated in the study (Fox, 2011). In addition, the OECD (2009) reported the U.S. educational system is a participating nation that acknowledges that their teacher education programs do not commonly incorporate 21st century skills into curricula. It makes sense the teachers need to have a firm understanding of 21st century skills and how to incorporate them effectively into the curriculum. An education about 21st century skills needs to be incorporated into either teacher education programs or professional development, if not both. In response, The Partnership for 21st Century Skills created a skills framework for 21st century professional development (see Appendix A).

Prensky (2010) coined the term “digital native” for the generation born after the 1980s. Prensky asserted they are natives because they grew up with the associated technologies, including the Internet and computer-based programs like office programs and Internet based collaboration tools. However, further research indicated that growing up with exposure to the technologies does not inherently indicate proficiency with the technologies (Selwyn, 2009). Selwyn supported his assertion about the term digital native being a myth with an extensive review of relevant studies. Some examples for

areas of concern are digital citizenship and media literacy (Selwyn, 2009). Digital citizenship is cited as a concern because of the use of technology as a tools by bullies and predators to access children's lives (Ohler, 2011; Trilling & Fadel, 2012). The importance of media literacy stems from the overwhelming amount of data that can be accessed quickly via the Internet (Domine, 2011; Martin, 2011; Share, 2010). Considine (2002) argued against Prensky and supported the need for media literacy when stating that students "do not necessarily possess the ethics, the intellectual skills, or the predisposition to critically analyze and evaluate their relationship with these technologies or the information they encounter" (p. 24).

A need exists for professional development that focuses on 21st century skills resulting from the perceived deficiencies of 21st century skills in education programs combined with the realization that students are not necessarily as technology proficient as many educators originally thought (Brathwaite, 2011; Fischer, 2011). Both Brathwaite and Fischer surveyed and then interviewed administrators in separate qualitative studies to determine the need for professional development related to 21st century skills. Both researchers reached the same conclusions. Teachers need to reinforce their working knowledge of 21st century skills so they can properly teach and model the skills (Geiselhofer, 2010; Fox, 2011). Geiselhofer identified the need for a working knowledge of 21st century skills through a survey and interviews with 20 study participants identified as literacy experts. The International Society for Technology in Education created several sets of standards to provide a framework for what students, teachers, and administrators need to be able to do to demonstrate 21st century skill proficiency (ISTE, 2008a; ISTE, 2008b; ISTE, 2008c).

International Society for Technology in Education created the NETS-T for teachers to serve as a benchmark for what teachers should know and be able to do (ISTE, 2008a). According to the NETS-T, teachers need to be able to “facilitate and inspire student learning and creativity (ISTE, 2008a, para. 2), design and develop digital age learning experiences and assessments (ISTE, 2008a, para. 3), model digital age work and learning (ISTE, 2008a, para. 4), promote and model digital citizenship and responsibility (ISTE, 2008a, para. 5), and engage in professional growth and leadership (ISTE, 2008a, para. 6). The student set of standards and performance indicators, NETS-S, are divided into six strands: creativity and innovation; communication and collaboration; research and information fluency; critical thinking, problem solving, and decision-making; digital citizenship; and technology operations and concepts (ISTE, 2008b). The student standards make a concrete connection between 21st century standards, CCSS, and what the students need to be able to do (Trilling & Fadel, 2012). The NETS-T illustrates what teachers need to be able to do to address a students’ needs as shown in the NETS-S (Partnership for 21st Century Skills, 2011a; Trilling & Fadel, 2012).

Common Core State Standards. The National Governor’s Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) created the CCSS jointly to help achieve consistency on a national level (CCSSI, 2009; Council of Chief State School Officers, 2012). The standards emphasized evidence-based higher order standards that are clear and consistent (CCSSI, 2009). Creating the standards helped to ensure the individual states and territories were operating on a level base. At the time of standards, 49 states and territories have joined the common core initiative (National Governor’s Association, 2009). The states that have not adopted the CCSS are

Alaska, Minnesota, Nebraska, Texas, and Virginia along with the American Samoan Islands, Northern Mariana Island, and Puerto Rico territories (CCSSI, 2012b). The NGA Center and CCSSO created the CCSS on the state level as opposed to the federal level (CCSSI, 2009). They chose state level collaboration with the intention of achieving consistency in standards across the nation (CCSSI, 2009; CCSSO, 2012; NGA, 2009). The consistency would allow educational leaders to benchmark American students against other top performing nations (NGA, 2009). NGA vice Chair Vermont Douglas supported the train of thought by asserting that American education needs “to maintain America's competitive edge, we need all of our students to be prepared and ready to compete with students from around the world” (NGA, 2009, para. 4). Not everyone in the educational field completely agrees with adopting the CCSS. Several educational researchers have argued that policy makers, intentionally or not, are deciding what is and is not important in education (Biesta, 2010; Cuban, 2010; Oakley, 2002).

A distinct connection exists between CCSS and 21st century skills (Ballard, 2010, Tucker, 2012). Cosmah and Saine (2013) stated that teachers need to understand their “teaching practices must integrate technology to ensure students become digitally fluent” (p. 82). The CCSS requires students to “use technology including the Internet, to produce and publish writing and to interact and collaborate with others” (CCSSI, 2012b, para. 7). Students are also required to master research skills within the writing, social studies, and science common core skill sets (CCSSI, 2012a). These common core strands connect directly to the information literacy, media literacy, and information and communication technology literacy 21st century skill strands (Trilling & Fadel, 2012). The shift towards

the CCSS, coupled with the established importance of 21st century skills, is making the need for relevant professional development more important than ever (Ash, 2012).

Legislation Affecting Professional Development

At the time of the current study, the Connecticut State Department of Education is revising the evaluation and professional development process and requirements for teachers in the state (An Act Concerning Education, 2012). The changes will affect how administrators and teachers choose professional development.

Teacher certification legislation. In the state of Connecticut, a teacher with a professional teaching certification is required to complete 90 hours of professional development in a 5-year period (SDE: 107 Continuing Education Units, n.d.).

Connecticut is creating new legislation concerning many aspects of teaching as part of a school reform effort. Senate Bill No. 458, Public Act No. 12-116 states that professional development will,

- (1) be a comprehensive, sustained and intensive approach to improving teacher and administrator effectiveness in increasing student knowledge achievement, (2) focus on refining and improving various effective teaching methods that are shared between and among educators, (3) foster collective responsibility for improved student performance, and (4) be comprised of professional learning that
- (A) is aligned with rigorous state student academic achievement standards, (B) is conducted among educators at the school and facilitated by principals, coaches, mentors, distinguished educators, as described in section 37 of this act, or other appropriate teachers, (C) occurs frequently on an individual basis or among groups of teachers in a job-embedded process of continuous improvement, and

(D) includes a repository of best practices for teaching methods developed by educators within each school that is continuously available to such educators for comment and updating. (An Act Concerning Education, 2012, sec. 39)

Although the legislation has changed, the practice of 90 hours of quality professional development remains intact.

Several pieces in the An Act Concerning Education (2012) document show compatibility with effective professional development. Item one states that professional development should “be a comprehensive, sustained, and intensive approach” (sec. 39). The needs outlined in the Act Concerning Education for this approach to professional development shows compatibility with the statement by Darling-Hammond et al. (2009) that effective professional development needs to be ongoing. The assertion in the document that professional development needs to be a collective responsibility that is “conducted among educators at the school” suggests a need for collaboration and interactivity (An Act Concerning Education, 2012, sec. 39). Collaboration and interactivity are more qualities of effective professional development (Chung-Wei et al., 2010, Darling-Hammond et al., 2009; Lutrick & Szabo, 2012). The document also refers to the need for standards alignment (An Act Concerning Education, 2012). Research has clearly established the need for standards alignment in professional development (Baran & Thompson, 2012; Capps, Crawford, & Constas, 2012; Gagne et al., 2005; Killion & Kennedy, 2012; Taylor, 2011). Baran and Thompson (2012) reviewed literature from 20 years before the start of their search. They started with a broad search of the literature and then narrowed to seminal works that focused on online teacher roles and competencies (2012). Capps et al. found similar results in a literature review focused on

professional development that emphasize inquiry. The new legislation concerning teacher professional clearly indicates alignment with the qualities of effective professional development.

Online Professional Development

Online learning is an option for professional development with much potential (Cornelius & Macdonald, 2008; Yoder, 2001). Online learning is also an option that instills much apprehension and fear (Dunst & Raab, 2010; Yoder, 2001). The online professional development format presents both formal and informal professional learning opportunities if teachers and districts can overcome apprehensions.

Instructional design. Instructional designers can build online professional development within the district, or the district instructional leaders can outsource to an external source that specializes in online professional development (Dunst & Raab, 2010; Little & Housand, 2011; Muñoz, Guskey, & Aberli, 2009). In a quantitative descriptive study of 225 teachers from 26 states, Dunst and Raab collected self-evaluations from the participants regarding the effectiveness of either short 1 to 2 day workshops or weeklong intensive workshops. A statistically significant percentage of the group found both types of outsourced professional development programs effective, particularly the weeklong intensives (Dunst & Raab, 2010). However, Dunst and Raab did not compare the results to professional developments developed within the teachers' districts to provide a point of comparison.

Teacher learning in a professional development program is maximized when the program has been designed based on instructional design that incorporates best practice 21st century skills. Such professional development is rooted in educational theory and

best teaching practices (Gustafson & Branch, 2007). Maximizing learning for the teachers in the online professional development workshops is one crucial method for reaching that objective. Ideally, instructional leaders would build online professional development in district. Building online professional development within a district would allow instructional designers to build the professional development in direct response to the needs of the district as well as meet the job-embedded prescription proposed by the latest education legislation in Connecticut (An Act Concerning Education, 2012). However, in-district building of professional development may not always be an option. Sometimes, professional development might need to be outsourced (Dunst & Raab, 2010). Either way, administrators and instructional design experts need to use effective instructional design practice to maximize teacher learning.

Potential of online professional development. Geographic boundaries are not a limiting factor with online professional development because online learning is Internet based. Online learning opens up opportunities for collaboration across districts regardless of distance. Gaumer et al. (2012) conducted a study that supported increased opportunities. The mixed method study was comprised of 149 participants. Eighty-six participants were from rural communities while 63 were from non-rural communities. Gaumer et al. designed the study to “examine the effect of asynchronous online professional development in rural and non-rural settings” (p. 22). The results indicated the educators from the rural communities felt that online professional development provided collaborative efforts with other special educators the district could not otherwise provide (Gaumer et al., 2012). Districts may have limited resources resulting from geographic remoteness or lack of funding (Johnson & Strange, 2009; Lindahl, 2011).

The study delivered promising results regarding using online professional development. However, the study design focused on rural and non-rural professional development that may not apply to other district environments.

Little and Housand (2011) found similar results to Gaumer et al. (2012) in their study of the advantages of online professional development for teachers of gifted students. Gifted teachers also have difficulty finding other teachers of gifted students to collaborate with (Little & Housand, 2011). Online professional development helped alleviate the problem. Several researchers have cited the ability to collaborate with other professionals who are too far away for reasonable face-to-face interaction as one of the key advantages of online professional development on an international level (Coughlin & Kajder, 2009; Kamarul Kabilan et al., 2011). In a quantitative quasi-experimental study, Coughlin and Kajder found a 72% achievement improvement in the students of teachers who participated in online professional development with a strong collaborative component. The control group in the study showed only a 5% improvement in achievement (Coughlin & Kajder, 2009). A review of the work and reflective statements of 142 Malaysian teachers who collaborated to produce newsletters in small online groups of three to four showed the importance of “sharing and exchanging, and socializing” (Kamarul Kabilan et al., 2011, p. 94).

Online professional development can be either formal or informal. Examples of informal online professional development are personal learning networks (PLNs) or professional learning communities (PLCs) (Cox, 2010). Personal learning networks and PLCs are resources for teachers to stay current on various professional topics. However, informal professional development has little structure. Little structure results in increased

probability of poor results (Servage, 2009). Formal professional development links directly to educational standards resulting in more structure (Lutrick & Szabo, 2012). Competent educators use current standards in the instructional design process of formal professional development (Fabry, 2009a). The outcome is more favorable results regarding having a positive impact on teaching performance. Educators must participate in formal professional development to maintain their teaching certifications (An Act Concerning Education, 2012; SDE: 107 Continuing Education Units, n.d.).

Online learning allows learning tool options. One example is the learning setting can be synchronous or asynchronous. Examples of synchronous learning include webcasts, chat rooms, and audio-visual technology. Examples of asynchronous learning include e-mail, threaded forums, and news groups (U.S. Department of Education, 2010). A common theme across these tools is they each enable social interactions among the users. Holmes et al. (2010) found that both social interaction and teacher presence had a significant positive relationship among 95 urban K-12 private school teachers enrolled in online professional development. When asked an open ended question about the impact they professional development had on their teaching, 95% of the teachers who responded stated there was a direct impact. One limitation of the mixed-method correlational study related to the process of participant selection. The participants had to have completed an online professional development within a year previous of the study (Holmes et al., 2010). Desimone (2009) asserted that research would be more robust if there were variations in the elapsed time since the participant's last online professional development completion. Desimone (2009) suggested variation so the retention of the material and skills could be ascertained more accurately.

Just as Holmes et al. (2010) found social interaction to be a significant factor in online professional development, other important interaction components are found in effective online professional development. Studies designed to examine the key components of effective online professional development identify three primary types of interaction. These three types of interactions are student to teacher, student to student, and student to content (Annetta, Cheng, & Holmes, 2010; Aranda, 2011; Bradley, 2011; Nandi et al., 2012).

Limitations found in online professional development. Just as online professional development presents opportunities, several perceived deficiencies exist in most professional development programs (Chung Wei et al., 2010; Darling-Hammond et al., 2009). Many professional development programs lack the commonly accepted qualities that are essential for creating effective professional development (Chung Wei et al., 2010; Darling-Hammond et al., 2009). Properly designed professional development should be interactive, collaborative, interest driven and differentiated, ongoing, consisting of the proper resources, and properly implemented (Lutrick, 2012; Lutrick & Szabo, 2012; NSDC, 2011). Instructional leaders who choose or instructional designers who design online professional development without these features risk significantly reduced results (Lutrick & Szabo, 2012). Online professional development that does have all the mentioned features does not produce automatic results (Dash, Magidin de Kramer, O'Dwyer, Masters, & Russell, 2012). Dash et al. (2012) surveyed 92 fifth grade mathematics teachers who participated in online professional development modules. Analysis of the results of the quantitative correlational study indicated that an increase in teacher outcomes did result in increased results in the students of the participating

teachers in the study to a significant degree (Dash et al., 2012). However, online professional development does “offer one promising direction for providing increased professional learning opportunities across a range of topics and initiatives as well as for promoting professional collaboration and teacher facility with technology resource” (Little & Housand, 2011, p. 19).

Modes of delivery. Little and Housand (2011) suggested five modes of delivery for online professional development. The five modes are (a) accessible websites or online resources, (b) technology for interacting with face-to-face audiences in real time, (c) professional development supported with asynchronous online discussion, (d) video conferencing, and (e) the construction and facilitation of an ongoing online community (Little & Housand, 2011).

Mode 1. The first mode of online professional development is accessible websites or online resources. The way knowledge “is produced, stored, and distributed” (p. 26) has changed because of changes in technology (Pirmoradi, Allahyari, & Soluki, 2011). This organization of information is knowledge management (McBride, 2011). Educators can access information through the Internet easily instead of having to go to a library. Information on any topic is accessible from any device with Internet including mobile phones (Hong-Ren & Hui-Ling, 2010). However, accessible information does not indicate credible or reliable information (McBride, 2011). The ability to find and evaluate information for use is a 21st century skill called information literacy. Being able to evaluate online resources for validity and reliability is important (Trilling & Fadel, 2012).

Accessible websites and online resources are useful tools for educators who are looking for a resource to help them (Pirmoradi et al., 2011). However, knowledge management resources lack the collaborative and interactive components of well-designed and effective online professional development (Chung-Wei et al., 2010; Darling-Hammond et al., 2009; Lutrick & Szabo, 2012). Self-paced formal tutorial programs are a potential online resource that may have an interactive component (Mazoue, 2013). Self-paced formal tutorials are found in the form of massive open online courses (MOOC's) (Mazoue, 2013). Learners interact with the programs and technology in MOOC's as part of the learning process (Mazoue, 2013). The learning can be interactive in the form of student to content. However, students participate in MOOC's as individuals (Mazoue, 2013). No interaction occurs with other learners or with a teacher (Mazoue, 2013).

Mode 2. The second mode of online professional development is technology for face-to-face interaction with audiences in real time (Little & Housand, 2011). The second mode of professional development does not fit the strict definition of online professional development (Arano-Ocuaman, 2010). Technology for face-to-face interaction with audiences in real times fits the definition of blended learning (Caulfield, 2011; Rose & Smith, 2010). Blended learning is any type of learning that falls along the continuum between online and face-to-face learning (Rose & Smith, 2010). Therefore, educational researchers cannot directly compare the blended learning mode of professional development to strict online professional development.

Mode 3. The third mode of online professional development is professional development supported by asynchronous online discussion (Little & Housand, 2011).

Mode 3 may be blended or strict online in format depending on the design (Little & Housand, 2011). Whether the initial professional development portion is online or face-to-face in format, it is followed by online asynchronous discussion so the learning experience may continue and possibly become a richer experience for the participants (Cheung & Hew, 2010; Cook, Dickerson, Annetta, & Minogue, 2011; Vitale, 2010). Cheung and Hew (2010) observed 40 online forums in a quantitative correlational study. The analysis of the results revealed a significant positive correlation between more participants and an increase in higher-level knowledge construction (Cheung & Hew, 2010). Cook et al. concluded the same in a pre-test and post-test quantitative study. In the study, a statistically significant percentage of the group found an asynchronous discussion component beneficial to a professional development program (Cook et al., 2011).

Several options exist regarding asynchronous discussion resources. The options include blogs, groups, social networks, wikis, and other cloud-based collaboration tools like Google Docs (Little & Housand, 2011; Prensky, 2010; Richardson, 2010). An asynchronous discussion tool allows users to have a conversation at anytime from anywhere (Cheung & Hew, 2010).

Professional development supported by asynchronous discussion does meet several of the criteria for effective professional development (Chung-Wei et al., 2010; Darling-Hammond et al., 2009; Lutrick & Szabo, 2012). Asynchronous discussions are interactive and collaborative by design; they are also interest driven and differentiated as long as the participants choose to continue with the program. As long as the participants maintain that interest, the asynchronous discussion is also ongoing. As with any

discussion, the participants can share resources. The ability to share resources can also make the synchronous discussion useful as knowledge management tool.

Mode 4. The fourth mode of online professional development delivery is videoconferencing (Little & Housand, 2011). The technology used for videoconferencing can include webinar software, including Skype and Google Hangouts, along with several other options (Prensky, 2010). Many videoconferencing resources are capable of recording the conference for later access (Rush, Walsh, Guy, & Wharrad, 2011). However, instructional designers normally design videoconferencing professional development workshops as single units of instruction (Rush et al., 2011). Therefore, they do not have the ongoing quality needed to fit the definition of effective professional development (Chung-Wei et al., 2010; Darling-Hammond et al., 2009; Lutrick & Szabo, 2012).

Mode 5. The fifth mode of professional development is constructing and facilitating an ongoing online community (Little & Housand, 2011). Mode 5 of professional development is seen in social network formats like Twitter or Facebook (Little & Housand, 2011). A successful online community is interactive, ongoing, and interest driven as seen in effective professional development (Little & Housand, 2012). However, the online community form of professional development is not always standards driven (Davis, 2011).

Course management system. Sometimes instructional designers use multiple modes in an online professional development program. Course management systems are a collection of online learning tools contained in one system (Adams, 2010; Holmes et al., 2010). Learning management system is another term for course management system

(Badawood, 2011; Unal & Unal, 2011). Common examples of course management systems are MOODLE and Blackboard (Payette & Gupta, 2009). Multiple instances of professional development are offered through course management systems (Adams, 2010; Holmes et al., 2010; Oliver, Kellogg, Townsend, & Brady, 2010; Thomas, 2010).

Course management systems designers build the programs for maximum tool compatibility so that users may use the tools in conjunction with each other or independently (Tella, 2011). In a quantitative descriptive study, Tella (2011) administered a survey to 503 students in Botswana to create a scale to measure the success of other course management systems.

Research indicates that course management systems are effective for those familiar with technology, but that user satisfaction diminishes as user familiarity with technology declines (Taylor, 2011; Tella, 2011; Thomas, 2010). Taylor (2011) used a qualitative social constructivist case study research method to study the use of course management systems for professional development. Taylor chose the social constructivist method to study the interactive component needed for effective professional development. The choice of a qualitative study was to enable the development of a holistic picture of the collected data (Taylor, 2011). Thomas (2010) reached the same conclusion when interviewing online professional development participants and instructors. Both online professional development participants and instructors stated that their satisfaction and comfort level with online professional development increased as they gained experience with the program (Thomas, 2010).

Bereiter (2002) and Garet et al. (2001) stated that effectively designed online professional development programs provide a rich learning experience that teachers can

fit into their already hectic work schedule. However, a common misconception is that experts can develop online professional development by transferring a conventional face-to-face professional development into an electronic format (Fabry, 2009b). The perception is unrealistic. The dynamics of the online professional development environment differ from the conventional face-to-face environment (Fabry, 2009a; Fabry, 2009b; Kranch, 2008; Simms & Knowlton, 2008). Online professional development workshops should ideally be built from the ground up to be effective (Fabry, 2009a; Fabry, 2009b; Gagne et al., 2005; Kranch, 2008). Competent instructional design requires an intentional instructional unit design that takes the different content delivery medium into consideration (Gagne et al., 2005). Evaluation must then occur during and after the instructional unit, so appropriate modifications can be implemented (Gagne et al., 2005; Gustafson & Branch, 2007).

The most common instructional design models use some variation of the ADDIE model (Hardre, 2013). The components of the ADDIE model are analyze, design, develop, implement, and evaluate (Gagne et al., 2005). Instructional design theorists have asserted that some variation of each of these steps is important for effective instructional design (Aden, 2010; Fabry, 2009a; Fabry, 2009b; Gagne et al., 2005; Kranch, 2008).

Summary

Online learning has several applications. Online learning exists in the corporate and military arenas, as well as the field of education. Educators use online education for both student and professional education. Online professional development is an attractive option because it can transcend geographic and time constraints depending on its design

and features (Adams, 2010). However, instructional leaders need to design professional development programs correctly to maximize the results in teacher learning and the meeting of standards. Any format of effective professional development should be standards driven and meet the needs of the teachers to maximize student learning. Effective professional development should be interactive, collaborative, interest driven and differentiated, ongoing, built with available and relevant resources, and properly implemented for optimal results (Chung-Wei et al., 2010; Darling-Hammond et al., 2009; Lutrick & Szabo, 2012).

The same criteria apply to online professional development. Ideally, instructional leaders will build professional development in district directly to the district's need as well as be job-embedded (An Act Concerning Education, 2012). However, customized online professional development may not always be an option. However, instructional leaders should build online professional development from the ground up rather than transfer an existing face-to-face program to an electronic format either way (Gagne et al., 2005).

Chapter 3 includes an overview of the research methodology and design followed for identifying the criteria administrators use when evaluating online professional development and teachers use when selecting online professional development. The chapter includes an over view of the research methodology and a description of the study population. Data collection and analysis practices, along with statements of internal and external validity, are also discussed.

Chapter 3

Research Methods

The current qualitative case study involved identifying the criteria used by administrators when evaluating online professional development in a mid-sized suburban public school district in Connecticut. The case study also involved identifying the criteria teachers use when selecting online professional development in the same district.

Chapter 3 includes an overview of the research methodology and design followed for identifying the criteria administrators use when evaluating online professional development and teachers use when selecting online professional development. The chapter includes a description of the study population and the methods for identifying the criteria. Data collection and analysis practices, along with statements of internal and external validity, are also discussed in Chapter 3.

Two research questions guided the current qualitative case study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

The research questions guiding the study reflected the need to identify the criteria teachers use to select online professional development programs as well as the criteria administrators use when evaluating online professional development.

The goal of the study was to identify which criteria administrators in a mid-sized public school district in Connecticut use when evaluating online professional development as well as the criteria teachers use when selecting online professional

development. The purpose of the current qualitative case study was to explore what criteria administrators in a mid-sized public school district in Connecticut use when determining whether an online professional development program truly meets the needs of both the district and the teachers. The study also explored which criteria teachers use when they are selecting an online professional development program. The results of the current qualitative case study may inform district leaders making decisions regarding which online workshops qualify for professional development credit in a public school district. The results of the current case study may also help to inform teachers when they are selecting appropriate online professional development courses. The chapter also includes research design appropriateness, study population identification, data collection and selection process, factors affecting validity, and data analysis techniques.

Research Method and Design Appropriateness

Choosing an appropriate research method and design is essential to ensure accurate results (Leedy & Ormrod, 2010). The choice of method and design is important for ensuring accurate results. Part of the process for deciding which method and design is most appropriate is determining why the alternative designs and methods are not appropriate (Leedy & Ormrod, 2010).

Research method choice. Researchers choose qualitative research to explore an area of interest. The objective of the exploration is to gain a deeper understanding of a topic. A qualitative method is appropriate for the current study because it can yield narrative data. Narrative data allows for the inclusion of participant perceptions. The narrative data may be used to explore which criteria administrators use when evaluating online professional development. The narrative data may also be used to explore which

criteria teachers use when selecting online professional development. Understanding the criteria will result in a better understanding of how administrators evaluate online professional development and how teachers select online professional development.

Quantitative research yields statistical data (Creswell, 2007). Researchers objectively collect quantitative data for statistical analysis. The researcher interprets the analyzed data to reach conclusions that generalize to a larger population objective (Patton, 2002). Researchers use quantitative data is to classify information into numbers and statistics, whereas qualitative data allows for identifying themes and patterns through analysis (Cheek, Onslow, & Cream, 2004). Quantitative research was not appropriate for the current study for several reasons. Quantitative research is generalizable to a larger population (Leedy & Ormrod, 2010). The results of the current study may not be generalizable to a larger population. Quantitative research would not yield narrative data to allow for exploration of the criteria used by administrators when evaluating online professional development and by teachers when selecting online professional development.

Research design choice. Selecting an appropriate qualitative research design depends on the intent of the study. Qualitative research requires exploring participant responses to find themes or patterns (Patton, 2002). The intent of the current study was to explore the criteria teachers and administrators use when evaluating and selecting online professional development. Several qualitative research designs were considered and disregarded before an exploratory case study was judged the most appropriate research design.

Case study research provides a detailed description of a case. A case can be a person, group, organization, activity, process, or event (Christensen et al., 2010). Case study research allows researchers to study a specific case and retain a holistic perspective simultaneously (Yin, 2014). The case in the current study was the online professional development selection process in a mid-sized suburban public school district in Connecticut. Case study research is ideal for current and complex social phenomena (Yin, 2014). Online professional development in public school districts is a current issue (Gaumer Erickson et al., 2012). The relationship between teachers and administrators regarding online professional development and educational standards was a complex social phenomenon that could only be thoroughly investigated by conducting interviews with the participants.

Some researchers propose that generalizability is a lacking component of case study research (Jensen & Rodgers, 2001). However, Jensen and Rodgers (2001) asserted that case study research is cumulative across related research topics. Thus, research opportunities where a case study design is most appropriate add to the overall body of knowledge in a cumulative manner (Jensen & Rodgers, 2001). Schramm (1971) defined the essence of a case study as an illumination of a “decision or set of decisions: why they were taken, how they are implemented, and with what result” (p. 6). The current qualitative case study research sought illumination or clarification regarding a set of decisions as well. The decisions in the current case study may influence the criteria used by administrators when evaluating whether online professional development meets the needs of their district and teachers. The decisions in the current case study may also

influence the criteria teachers use regarding the selection of online professional development.

Phenomenological research investigates the shared experience of a phenomenon (Moustakas, 1994). The objective of phenomenological research is to determine the meaning or essence of a shared experience or phenomenon (Christensen et al., 2010). The online professional development process could be categorized as an experience. However, administrators and teachers do not experience online professional development in the same way. Therefore, administrators and teachers do not have the same experience.

Researchers choose grounded theory studies to generate theories based on the gathered data (Charmaz, 2006). Theory creation is pursued to fill a gap the existing theories do not address adequately. The objective of the current research did not include theory creation. A grounded theory design was not appropriate for the current study because no need exists for theory creation.

Ethnographic and narrative study designs were inappropriate for the current study. Ethnographic research focuses on the ethnicity of a specific group. There was no shared ethnicity in the study for analysis. Researchers conduct a narrative study in a sequential nature to tell a person's story (Neuman, 2006). Narrative research was inappropriate for the current study because a sequential analysis in narrative format may obscure the overall scope of the topic.

Case study design. Researchers may choose to study a single case or multiple cases in a study (Yin, 2014). Five rationales exist for choosing a single case study design (Yin, 2014). The rationales for using a single design are the case is “critical, unusual,

common, revelatory, or longitudinal” (Yin, 2014, p. 51). The public school district chosen for the current study has many commonalities with other districts within its district reference group (DRG). The commonalities include average income, average parental education level, primary languages spoken, district enrollment, poverty level, primary occupations of residents in the district, and primary family structures (Connecticut State Department of Education, 2011). The commonalities make a single case study approach an appropriate choice.

Single case studies are either holistic or embedded in their design (Yin, 2014). A holistic case study consists of only one unit of study. In contrast, an embedded study consists of multiple units of study within the single case. The use of an embedded case study design allows analysis from multiple perspectives (Yin, 2014). Analysis of subunits is also a possible pitfall of embedded case study research unless a broader analysis of the results occurs to provide context to the nature of the organization as a whole (Scholz & Tietje, 2002).

The current study had an embedded case study design. The units of study were the administrators and the teachers in the district. A more accurate picture of the nature of the district overall is realized by studying the diverse perspectives of the administrators and the teachers.

Population and Sample

The studied district serves a variety of socioeconomic and ethnic groups with mostly White middle class students. The districts includes six schools: one high school, one middle school, one intermediate school, and three elementary schools. The high school includes Grade 9 through 12. The middle school includes Grades 7 and 8. The

intermediate school includes Grades 4, 5, and 6. The elementary school includes kindergarten through the third grade. The class size average is 18.1 to 23 students, as opposed to the state average of 18.4 to 20.6. At the time of the current study, all the schools in the study were transitioning to the Connecticut State Department of Education's new teacher evaluation program and adopting CCSS (Connecticut State Department of Education, 2011).

Qualitative researchers often use purposeful sampling to yield the most information relevant to the research topic (Leedy & Ormrod, 2010). The population of the current study was a purposeful sample. The sample was based on criteria specific to the study that differentiated the chosen participants from other administrators and teachers in the public school district.

Administrators and teachers needed to meet certain criteria to participate in the current study. The teachers in the study were those who were eligible to teach either kindergarten through Grade 6, or Grade 7 through Grade 12, depending on their Connecticut teaching certification endorsement. A teaching certification endorsement indicates the subjects and grade levels a teacher is qualified to teach in the state of Connecticut. The teachers must also have completed at least one online professional development program.

The administrators in the study were administrators who play a role in the scheduling and approval process of professional development in the district. Participant administrators included building assistant principals, building principals, and the district assistant superintendent.

The sample size for case study research may be contingent on available participants (Merriam, 2009). The current study consisted of six administrators and 13 teachers. The criterion for selecting administrators was the role they play in the decision making process related to professional development approval. Administrators who did not play a role in professional development approval were not included in the study. The criterion for the teachers included in the study was prior experience with online professional development.

Geographic Location

The current qualitative case study took place in a public school district in the state of Connecticut. The district is located in the northwestern part of the state. State officials in the department of education group districts with similar socio-economic characteristics. The district is in the D DRG (Connecticut State Department of Education, 2011). This is a mid-level DRG labeled DRG D on a continuum of DRG's that ranges from A to I (Connecticut State Department of Education, 2011). The characteristics are average income, average parental education level, primary languages spoken, district enrollment, poverty level, primary occupations of residents in the district, and primary family structures (Connecticut State Department of Education, 2006).

Informed Consent

Informed consent indicates an understanding by the study participants that they are volunteers, their information will be confidential, they know the details of the research, and they will not be deceived or harmed. The Institutional Review Board requires evidence of informed consent, ethical treatment, confidentiality, and withdrawal procedures before granting approval to a study. The superintendent of the district in the

current study provided written permission to use district premises (see Appendix B). The superintendent also provided written permission to recruit study participants from within the district. Teacher participants signed a statement of informed consent (see Appendix C) affirming they understood they were volunteers who could withdraw from the study, the nature and steps of the research, and the potential benefits or harming factors as explained in the teacher information letter (see Appendix D). Administrator participants received an administrator information letter (see Appendix E). The administrators also received and signed a statement of informed consent (see Appendix C) that affirmed they understood they were volunteers who could withdraw from the study, the nature and steps of the research, and the potential benefits or harming factors. They signed the consent form after reading the administrator information letter. There were no evident benefits or harmful aspects to the current study. Both groups were provided with the researcher's e-mail and phone number so they can withdraw from the study without any harm or loss of benefits. The participants received an e-mail from the researcher to schedule a face-to-face interview after signing the informed consent documents.

Instrumentation

Several possibilities exist when selecting instrumentation in case study research. The two instruments used in the current case study were interviews and document analysis. The interviews were with two different groups--administrators and teachers in a mid-sized public school district in Connecticut.

Interviews. Researchers use three types of interviews: informal-conversational, general interview guide approach, and standardized open-ended (Turner, 2010). An informal-conversational interview is more informal and less structured, similar to an

everyday conversation (Turner, 2010). Yin (2014) argued that some level of structure is necessary so the interviewer asks the questions in a non-confrontational manner, while still addressing the research questions of the study. The possibility of not all research questions being answered adequately is significant with an informal-conversational interview (Yin, 2014). The possibility results from the lack of structure. Therefore, an informal-conversational interview format was not the appropriate choice for the current study.

A standardized open-ended interview consists posing a predetermined set of questions to every interviewee in an open-ended format (Turner, 2010). This approach to interviewing provides consistency across the interviews, but does not allow further investigation without deviating from the original questions (Turner, 2010). The chance of bias increases if the interviewer seeks further clarification by deviating from the predetermined set of questions. Therefore, a standardized open-ended interview format was not appropriate for the current study.

A general interview guide approach is a compromise between the informal-conversational and standardized open-ended interview approaches. A general-interview guide enables the researcher to create a guide to ensure the interviewer addresses each research point while allowing for further investigation and clarification as needed (McNamara, 2009). Other terms for general-interview guide are intensive interview approach and in-depth interview approach (Weiss, 1994). The ability to provide a guide, while allowing for further investigation and clarification, made the general-interview guide the best approach to the interview process. Both the teacher interviews and the administrator interviews were conducted using general-interview guide format. A

different interview guide was created for the administrator sample and the teacher sample (see Appendices I and J).

Yin (2014) asserted that preparing a case study protocol is essential to proper case study research. A case study protocol is a map of the case study. A case study protocol has five levels of questions (Yin, 2014). Level 1 and 2 questions relate to the interview process. Level 1 questions are the questions posed during the interview. The questions posed to the interviewee in the current case study were open-ended to allow for individualization of responses (Patton, 1990). Wording of the questions was neutral to minimize the possibility of biasing the interviewee (Patton, 1990).

The researcher answers Level 2 questions during a case study (Yin, 2014). Level 2 questions are identical to the research questions (Yin, 2014). Level 2 questions serve as a guide for interview question creation (Jacob & Furgeson, 2012). In turn, the interview questions help answer the research questions by generating relevant data through gained insight (Jacob & Furgeson, 2012). The relationship between the interview questions and the research questions aids in maintaining alignment and consistency throughout the study (Hays & Singh, 2012).

Alternative modes of instrumentation, such as questionnaires or surveys, were not considered an effective means of data collection for the current study. The general-interview guide format allowed the interviewer to pursue further clarification. The open-ended formatting of the questions allowed the interviewee to elaborate on answers more thoroughly.

Surveys and questionnaires do not have the same quality as interviews without raising the level of imposition to the study participant (Merriam, 2009; Yin, 2014).

Surveys and questionnaires are also less likely to yield responses than scheduled interviews (Merriam, 2009). The number of study participants and their close geographic proximity to each other presented few obstacles to scheduling and conducting the interviews.

Documentation data. The third data source for the current case study was relevant documentation. Researchers value documentation for triangulation because of its potential to corroborate or augment data from other sources (Yin, 2014). Documents are created primarily for purposes other than research (Merriam, 2009). Documentation also has a less intrusive effect than an interviewer or observer (Merriam, 2009). The potential result is a less biased source of data to draw from when triangulating information.

The documentation used for the current qualitative case study was electronic documents released by the Connecticut State Department of Education regarding professional development requirements in the state of Connecticut. All teachers and administrators employed by the district were considered members of the district. The relevant topic of the documents focused on professional development, professional development opportunities, and professional development requirements and policy changes. All information was publicly accessible through the Freedom of Information Act (National Forum on Education Statistics, 2012).

Although document creation occurs primarily for reasons other than research, potential still exists for bias (Merriam, 2009). Researchers must answer questions about relevant documents to identify bias or other compromising factors. Guba and Lincoln

(1981), citing Clark (1967), created a list of questions a researcher could ask when reviewing documents:

- Is the document complete, as originally constructed?
- Has it been tampered with or edited?
- Who was/is the author?
- What was he trying to accomplish? For whom was the document intended?
- What were the maker's sources of information?
- What was or is the maker's bias?
- Do other documents exist that might shed additional light on the same story, event, project, program, context? If so, are they available, accessible? Who holds them? (pp. 238–239)

These questions were used as part of the analysis process before inclusion in the study. The document analysis process was richer by integrating the questions. The questions provided a framework for analyzing documents for corroboration with other data collection sources (Yin, 2014).

Creating a framework for analyzing documents helps with the analysis of documents against other collected data sources for the purpose of triangulation (Yin, 2014). The documentation in the current case study was used to “corroborate and augment evidence from other sources” (Yin, 2014, p. 107). The documentation collected during the current case study was analyzed for information to support, refute, or expand upon revealed patterns, themes, or concepts that were revealed during the interview process. Using each of the three data sources to verify the legitimacy of each other

served as part of the triangulation process; doing so increased the validity of the research results.

Instrumentation alternatives. The current study required the most current information on the topic of online professional development. Therefore, archival records were not relevant to the current study. Direct observations offer an immediacy and rich detail (Yin, 2014). Direct observations and participant observations may also be subject to skewed results because of the potentially intrusive nature of the observer (Yin, 2014). Direct observations are also time-consuming and difficult to arrange (Baker, 2006; Yin, 2014). Physical artifacts usually have less relevance in traditional case studies (Yin, 2014). The tendency for a lack of relevance when using physical artifacts applied to the current case study because of the fluid nature of the topic.

Data Collection and Storage

Data were collected through interviews and analysis of relevant documents. The current section includes discussion of the data collection steps for both the interviews and documentation. Also included is discussion of the storage of collected data.

McNamara (2009) mapped out steps that need to occur before an interview for optimal effectiveness. The steps McNamara recommended occurred before each teacher and administrator interview. The interviews occurred in a place with minimal distractions familiar to the interviewee. The interviewer explained the purpose of the interview, interview format, and the possible length of the interview to the interviewee. The interviewer reiterated the terms of confidentiality and how to get a hold of the interviewer if needed. The interviewer answered any questions the interviewee had. The interviewer recorded every interview with the interviewee's permission. The interviewee

granted permission to record the interview by signing the informed consent form. Each pre-interview practice paralleled the steps suggested by McNamara (2009).

Collected data were stored using an electronic storage device. The chosen device was a password protected external hard drive. The minimum storage time for research study data mandated by the Institutional Review Board is 5 years (University of Phoenix, 2012). Therefore, all data will be stored on the hard drive for 5 years from the conclusion of the study. File deletion from the hard drive will happen at the end of the 5-year period. Collected data included audio recordings of interviews, transcripts of the interviews, notes taken during the interviews, electronic copies of documentation data collected during the study, and all files associated with the NVIVO 10 software.

The researcher transcribed the audio recordings of the teacher and administrator interviews into Microsoft Word format. Interview transcription aids in the analysis process due to the format being the same as the electronic documentation data (Yin, 2014). Data were entered into the NVIVO 10 software for coding purposes. After coding, the researcher reviewed the results for revealed patterns, themes, or concepts. The researcher entered any notes taken during the review process also for further coding.

Data Analysis

Data analysis occurred using an explanation building approach. The goal of an explanation building approach is to clarify what, how, or why something happened (Bennett, 2010). The analysis occurred during the explanation building process (Yin, 2014). Unlike other case study analysis techniques, a researcher may not provide a full explanation at the outset of the study (Yin, 2014). The explanation building process involves supporting or refuting rival explanations until a conclusive explanation is

reached (Yin, 2014). Using three data sources is important for identifying and analyzing these possible rival explanations. One or more data source may be used for corroboration purposes to support or refute an explanation.

A common challenge of an explanation building analysis approach is the increased possibility of the researcher moving away from the original study purpose (Yin, 2014). Two methods for reducing the possibility of moving away from the original study purpose are to reflect back to the purpose of the study often and to investigate alternative explanations regularly (Yin, 2014). Corroboration of data sources to support or refute any revealed patterns, themes, or concepts is a method for investigating possible alternative explanations. Interview data were transcribed into the NVIVO program and the documentation data were copied and pasted into the program. All data were reviewed for generalities. The data were then coded based on these generalities and analyzed one section at a time to find themes that were revealed.

Validity and Reliability

Reliability signifies the reproducibility of a study (Leedy & Ormrod, 2010). Internal validity indicates the degree of errors to which the instrumentation, measures, or chosen participants are the cause (Neuman, 2006). External validity addresses how generalizable the results of a study are to the general population addressed in the study (Yin, 2014). A high degree of reliability, internal validity, and external validity is essential to credible research (Leedy & Ormrod, 2010; Neuman, 2005; Yin, 2014).

A negative correlation exists between degree of validity and probability of errors (Yin, 2014). A high degree of validity indicates a low probability of errors, whereas a low degree of validity indicates a high probability of errors. A high degree of validity is

obtained through rigorous study that draws from multiple data sources (Neuman, 2006; Yin, 2014).

Case study research requires three sources of data for a reasonable level of validity (Christensen et al., 2010). The term for drawing from three data sources is triangulation (Christensen et al., 2010). Authorities on research protocol indicate the need for triangulation of data when conducting qualitative case study research (Merriam, 1998; Merriam, 2009; Oliver-Hoyo, & Allen, 2006; Yin, 2014). Researchers use triangulation to gain a broader view of the research topic (Yin, 2014). Neuman (2006) described triangulation as looking at a subject from multiple angles to gain a more accurate picture of the subject. Researchers use triangulation to improve the construct validity of their study (Yin, 2014). Improving construct validity decreases the possibility of subjective data that may simply confirm the researcher's thoughts (Flyvberg, 2006; Ruddin, 2006; Yin, 2014).

Four types of triangulation exist: data triangulation, investigator triangulation, theory triangulation, and methodological triangulation (Yin, 2014). Data triangulation was the most appropriate source of triangulation for the current study because of the multiple sources of relevant data available. The three data sources in the current case study were teacher interviews, administrator interviews, and documentation analysis. Using these three sources allowed corroboration of findings against each other and alternative explanations to be revealed and investigated (Bickman & Rog, 2009). The researcher may disregard or incorporate the alternative explanations after further corroboration against the triangulated data (Yin, 2014). Corroboration of relevant

documentation against the interviews also reduces the possibility of interviewer bias that may compromise the validity of the research.

External validity refers to how applicable a study's findings are beyond the immediate study (Merriam, 2009). Case study research does not normally generalize well to the larger population represented in the study (Merriam, 2009). Therefore, the research method used is unrelated to the reliability factor (Yin, 2014). Results are typically limited to the studied population in case study research (Christensen et al., 2010). The purpose of the current case study was to explore the criteria teachers use when selecting online professional development, as well as the criteria administrators use when evaluating online professional development. Although not generalizable, interested readers may draw valuable information from the study for application to their own district.

The purpose of checking for reliability in a study is to ensure that a future researcher will reach the same conclusions if they follow the same procedures of a previous study (Yin, 2014). The reason for checking reliability in a study is to reduce the chances of bias or error in the given study (Yin, 2014). The accepted method for ensuring a high degree of reliability is to lay out the procedure steps as thoroughly and clearly as possible (Yin, 2014).

Shenton (2004) proposed that research trustworthiness consists of four factors: credibility, transferability, confirmability, and dependability. Credibility, transferability, and confirmability are established as the validity of the research is established (Shenton, 2004). The dependability of the research is strengthened as research reliability is

addressed. Trustworthiness is established when the researcher addresses the validity and reliability of the research, and any threats to trustworthiness are reduced (Shenton, 2004).

Summary

The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when determining whether an online professional development program truly meets the needs of both the district and the teachers. The study also explored which criteria teachers use when selecting an online professional development program. A qualitative case study design was appropriate so the research yielded detailed narrative data on the case (Christensen et al., 2010). The case in the current study was a mid-sized public school district in Connecticut. Smaller units of study existed within the case study. One unit of study was teachers in the district who have participated in online professional development. The other unit of study was administrators who are responsible when evaluating online professional development for approval purposes. The multiple units of study within one case indicated the qualitative case study is a single-case embedded case study (Yin, 2014).

Before the study began, all participants read informational letters and signed a document of informed consent. The document stated that participation was voluntary, a participant could exit the study at any time, and any potential benefits or harmful results associated with the study. There were no evident benefits or harmful results associated with the study. The document also had an overview of the study provided for participants to review. All data were stored on a password protected external hard drive. The hard drive will be erased 5 years after completion of the study.

Triangulation occurred by collecting three data sources. The three sources were teacher interviews, administrator interviews, and analysis of relevant documents. The purpose of triangulation is to increase the validity of the study (Yin, 2014). Thorough documentation of research procedures throughout the study increased the degree of reliability in the study.

All data were entered into the NVIVO 10 software program for coding and analysis. The researcher reviewed the results for revealed patterns, themes, or concepts. The researcher used an explanation building data analysis approach.

The data collected during the study and the results of the analysis of the collected data appear in Chapter 4. Chapter 4 includes a discussion of the results of the data collection and analysis process using the instrumentation described in Chapter 3.

Chapter 4

Results

Chapter 3 included discussion of the rationale for the research method and design chosen for the study. The chosen method and design for the current research was a qualitative case study. A description of the sample and the instrumentation was also provided. Chapter 4 details the results of the data collection and analysis process using the instrumentation described in Chapter 3.

The purpose of the current qualitative case study was twofold. The first purpose was to explore which criteria administrators in a mid-sized public school district in Connecticut use when evaluating whether an online professional development program meets the needs of both the district and the teachers. In addition, the study explored which criteria teachers use when they are selecting an online professional development program. Two research questions emerged from the purpose of the study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

Data were gathered from three sources. The three sources were teacher interviews, administrator interviews, and relevant documentation from the Connecticut State Department of Education website. Once collected, the data were coded and analyzed.

Chapter 4 includes an overview of the procedures for data analysis. The overview includes the coding process, the analysis process, and the themes revealed during the

coding and subsequent analysis process. Revealed themes for each data source were triangulated as part of the analysis process.

Data Sources

The study included administrators and teachers from a mid-sized public school district. Thirteen teachers participated in the study. Teacher experience ranged from 1 year to 18 years on the elementary, intermediate, middle school, and high school level (see Appendix F). Six administrators participated in the study. Administrator experience ranged from 3 years to 9 years. The participating administrators represented the elementary, intermediate, middle school, and high school levels (see Appendix G). In the participating district, the elementary school consists of kindergarten through third grade. The intermediate school consists of Grades 4 through 6. The middle school consists of seventh and eighth grade. The high school has Grades 9 through 12.

The third data source consisted of documents released by the Connecticut State Department of Education. The original purpose of the documents was to provide information related to the parameters and expectations associated with the purpose and requirements of professional development in the state of Connecticut. These documents were retrieved from the Connecticut State Department of Education website.

Data Collection and Analysis

Both the teacher interviews and the administrator interviews followed an interview guide. The teacher interview guide is located in Appendix H. The administrator interview guide is located in Appendix I. All interviews were recorded for later transcription with the participant's permission. Participants indicated permission by signing the informed consent form (see Appendix C). Preparation for data analysis

occurred after recording the interviews with each participant. Analysis preparation included transcribing the teacher and administrator interviews into a Microsoft Word format for importing into the NVIVO 10 software program.

Before beginning the coding within the NVIVO 10 program, hard copies of all the data were reviewed. The purpose was to gather initial possibilities for themes or trends found in the data. The NVIVO 10 software program enables the user to scan either all the data or smaller units of data for themes. The user can also assign pieces of data to nodes as part of the coding and analysis process. The NVIVO 10 software program allowed for a deeper analysis of identified themes; deeper analysis occurred using keyword searches followed by further queries related to the identified keywords associated with the identified thematic groups and subthemes.

Teacher Interview Results

The teacher sample for the current study consisted of 13 participants. Each interview followed a teacher interview guide (Appendix H). The participating teachers had online professional development experience ranging from 1 to more than 30 workshops.

Analysis of teacher interview transcriptions revealed three thematic groups, as well as subthemes within those groups. The three identified thematic groups were topic, convenience, and structure (see Table 1). The thematic group of topic reflected the importance of the topic of an online professional development workshop to the participant when selecting a program. Structure reflected the importance of the organization and features of the workshop to participants when selecting online professional development. The thematic group of structure was also the most multi-

faceted with five sub-theme categories. The thematic group of convenience reflects the importance of flexibility in scheduling or reduced travel requirements to the participant when selecting online professional development.

Table 1

Major Thematic Groups Identified for Teacher Criteria

Theme	Teacher response
Topic	13 (100%)
Structure	11 (85%)
Convenience	10 (77%)

Thematic Group 1: Topic. Topic was the dominant thematic group for teachers when asked about criteria used when selecting online professional development. All 13 participants (100%) cited the topic of the online professional development workshop as an influencing factor when selecting a program. The topic thematic group relates to what the online professional development is designed to teach.

Two categories of topics emerged during the analysis process: content and pedagogy. A content related topic relates to the subject the participant teaches. A pedagogical topic relates to best practices for teaching the content to students. These categories were classified as subthemes within the topic thematic group.

Table 2 displays the percentage of teachers who cited pedagogy content, topic content, or both as criteria to consider when selecting online professional development. Five of the thirteen (38%) teacher participants cited both content and pedagogy as influencing criteria when selecting online professional development. Teacher 9 stated,

“the particular topic... would override most anything else” when selecting a professional development program. Teacher 7 spoke to the potential benefits of online professional development for addressing both content and pedagogy. The teacher enrolled in an online professional development program designed to address the content for a high school level engineering class and the best approaches to teaching the curriculum.

Teacher 7 shared,

Each workshop was pretty strong in that it was led by a master teacher who had good knowledge of the courseware and experience in that particular area of teaching. So that was an area of strength plus the ability to have very detailed content because the area that I teach is very detail oriented. So having access to not only words, but also documents, pictures, files, and links made them more accurate to me.

Teacher 7 went on to explain that the approach helped address how to teach this specific engineering course most effectively since it was new to him.

Teachers 4 and 9 spoke to the benefit of specific programs as a resource for topics of interest related to both pedagogy and content. Both teachers spoke about the benefits of Twitter chats for this purpose. Teacher 4 said, “Someone will post a topic and a hashtag so we can join if we are interested in the topic. Some of us with similar interests follow each other as well.” The remaining eight teacher participants (62%) cited one factor or the other based on their objective when seeking online professional development. Table 2 shows the percentage of participating teachers who chose pedagogy, content, or both as a criteria used when selecting online professional development.

Table 2

Subthemes Identified Within the Thematic Group 1: Topic

Subtheme	Teacher response
Pedagogy	12 (92%)
Content	7 (54%)
Pedagogy & Content	5 (38%)

Subtheme 1: Pedagogy. The subtheme of pedagogy relates to best practices for teaching content to the students. Twelve of the 13 teacher participants (92%) identified pedagogically oriented online professional development as significant when selecting a program. Teachers cited staying current with educational initiatives or best teaching practices as reasons for seeking pedagogically oriented online professional development. Teacher 9 took at least one workshop related to Common Core. Teacher 1 spoke at length about the need to stay current in response to the new teacher evaluation system in Connecticut.

I think based on all the new stuff coming out and stuff like SEED and new ways to present content and with my work with my graduate work with special education I am seeing that there are a lot of new ways to reach students at different levels of kids we have. So, I wanted to learn what else can I do that would better help me instruct my kids. I have been trying to think of ways to better reach my kids, not just the special education, but all of my kids. I think when they get more involved in the process and the learning than just sitting and taking notes. There is a place for that but there is so much more as well. So, I

want to see if I can put them more in charge of their own learning and it is something I have thinking a lot about this year. So, I have been checking out webinars and things like that to learn more about it.

Teacher 2 spoke about seeking professional development to prepare for a leadership role in the district's preparation for new standardized testing. She sought training that enabled her to "answer questions as they came up."

Teacher 1 found her online professional development program through email advertisements designed for enrolling teachers, but others participated in online professional development available within the district to interested teachers. Teacher 12 utilizes the Bloomboard management system available to teachers as part of the new teacher evaluation system. She did this because she "was looking for resources that would offer me some other lens or perspective than my own." She went on to say she based her decisions to use Bloomboard on an individual case basis of how "relevant they were to my particular day to day teaching." Four of the thirteen teachers (31%) connected the chosen pedagogy to district aligned initiatives.

Subtheme 2: Content. The subtheme of content related to the teacher's certification area. Seven out of the 13 interviewed teachers (54%) cited certification specific content as an influencing factor in their selection of online professional development. Teachers 7 and 8 both enrolled in online professional development designed to teach content related to engineering. This particular online professional development program served as part of the certification process qualifying them to teach a piloted engineering curriculum within the district. The program name was Project Lead the Way. Teacher 7 described the content of Project Lead the Way as being "both

education content and professional support, which is important in terms of best teaching practices and what has worked for them and what hasn't worked for them in different aspects of the courses." The same teacher also commented the program had "very detailed content because the area that I teach is very detail oriented." The teacher cited documents, pictures, files, and links as examples of content related resources. Teacher 8 enrolled in the Project Lead the Way program also. She supported the assertions of Teacher 7 by noting content related information "ranging from auto desk inventor to robotics." Teacher 8 went on to add that sometimes the content related information was too shallow and the program would have benefitted by providing a deeper content knowledge level.

Teacher 13 was the only teacher to use only the content related topic as criteria when selecting online professional development. The participant used the program iTunes University to enrich her content knowledge for teaching U.S. history on the high school level. The participant found the content of the course "both interesting both personally and to enrich my own course." The participant also expressed the information provided by the instructor "was also useful."

Thematic Group 2: Structure. The second most prominent thematic group to emerge during analysis of teacher data was structure. Structure refers to the features, design, and organization of an online professional development program. Five subthemes emerged in the structure thematic group during data analysis: interaction/collaboration, clarity, review, and accountability. Table 3 shows the subthemes ranked in order of prominence.

Table 3

Subthemes Identified Within Thematic Group 2: Structure

Subtheme	Teacher response
Collaboration	11 (77%)
Clarity	9 (69%)
Review	4 (31%)
Accountability	3 (23%)

Subtheme 1: Collaboration. Collaboration, as a subtheme, refers to the ability to work with other teachers within the online professional development workshop. The workshops discussed during the interview process ranged from a completely collaborative experiences, where the success of the program depended on these qualities, to very isolated experiences. In the examples of workshops with little to no collaboration, the teacher only accessed the program, not other teachers. Eleven of the 13 teachers (77%) cited collaboration as a valuable criterion when selecting online professional development.

Two types of collaboration emerged during data analysis: collaboration with the instructor and collaboration with peers. Only one teacher, Teacher 13, identified collaboration as a valued criteria experienced interaction only with the instructor. She explained that, “It was an American History course with a professor from Yale University. I took notes and corresponded with the professor. It was a video lecture series on the American Revolution.”

Teachers who experienced collaboration with both the instructor and peers still noted the strengths of the instructor. Teacher 5 expressed the opinion that “having the professor there at the ready” was a positive factor of the program in which she participated. She explained that it was helpful because “If I had a question, the professor was always there kind of waiting and facilitating.” Teacher 1 identified the instructor as a valuable resource by saying they “were very knowledgeable. It [the workshop] was well planned. They had a presentation up while they talked. You could ask questions that they would answer. They were available later if you had more questions.” Teacher 4 supported these statements by saying, “The strengths [of the workshops] were having experts present and to see how people were doing things in other places.”

Other teachers focused on their collaboration with other teachers. Seven teachers referred to the ability to hold discussion with others in remote locations as a strength. Two online professional development discussion formats were mentioned in conjunction with peer collaboration: asynchronous discussion forums and chat rooms. Teacher 7 found the asynchronous quality of his workshop helpful “because of the collaboration. I could get ideas from others as well as share ideas with others so collaboration was key to my participation.” Teacher 6 engaged in a chat room format. She described the workshop as

a cohort organized in a chat room format with 15 other students and an instructor. I would download the text from an email and submit weekly assignments to a discussion board of sorts. I had access to everyone else’s responses and they had access to mine and the instructor would comment on all of them.

She went on to describe the strength of receiving “a lot of feedback from other people in my profession which was nice because I am usually alone in my field. I don’t get time to talk to others like me very often so it was very nice professionally.”

One commonality that emerged between Teachers 3, 4, and 6 was that they all emphasized the value of the collaborative format of their respective programs for their professional growth. Each teacher described his or her position in the district as relatively isolated. Teacher 3 was the only library media specialist in her school. Teacher 4 was the only library media specialist in his school. Teacher 6 was the only art teacher at her school. Teacher 6 explained that she “got a lot of feedback from other people in my profession, which was nice because I am usually alone in my field.” She went on to explain that she does not get opportunities “to talk to others like me very often so it was very nice professionally.”

Two teachers identified the collaborative quality of some programs as a potential negative to avoid when selecting online professional development. Teacher 11 described the biggest weakness in online learning as

collaborative work. Some people [participants] are from Europe or Asia and the United States so if there is anything that we need to work on at the same time as opposed to us doing our part and them doing their part.

He described the collaborative component as difficult to coordinate. Teacher 10 said the asynchronous format “made it difficult because if someone responded at 12 o’clock on a Thursday we would have to try to catch up.”

Subtheme 2: Clarity. The participating teachers in the current study defined clarity as the ability to participate in an online professional development without

encountering any confusing factors that made participation in the online professional development workshop difficult. Nine of the 13 participating teachers (69%) cited clarity as a quality to seek when selecting online professional development. Five of the nine teachers referenced positive experiences with online professional development due to ease of use and navigation. The remaining five felt the lack of clarity led to a negative online experience and clarity should be a factor to seek in the future.

Teacher 12 valued “having the professor there at the ready. If I had a question, the professor was always there kind of waiting and facilitating. Having the information there to refer back to later was very useful.” Teacher 5 found clarity in the “steps and check-ins that helped me if I had to switch gears. It helped me break things down, which was helpful. The webinars enabled me to stop the video and come back or to review later.” Teacher 11 felt the consistency in the routines of the workshop added clarity to the program. He said,

I actually feel that the courses and course materials were pretty good. They had embedded video tutorials with some experts in the field of education. Maybe a 30-40 minute video, they will talk about a strategy, maybe a lesson planning strategy and how it’s implemented in various grade levels. I thought most of the materials were pretty good.

Pacing was the main factor that diminished the clarity of the programs the teachers attended. Three of the 13 teachers (23%) identified pacing as a factor that affected clarity negatively. Teacher 1 felt that her workshops were well planned, but “thought they went really fast. They try to cram a lot in a short period of time. So the instructors would move from topic to topic very quickly.” Teacher 7 voiced similar

concerns by identifying factors that impact pacing in an online professional development. Teacher 7 shared, “Sometimes there can be a little too much detail or a little too much to handle. Sometimes the navigation can be a little difficult.”

Subtheme 3: Review. Four of the 13 teachers (31%) valued the ability to review material after a workshop concludes. Teacher 12 found “having the information there to refer back to later was very useful.” Teacher 5 and Teacher 9 exhibited similar values. Teacher 5 stated that, “The webinars enabled me to stop the video and come back or to review later. Teacher 9 valued being able “to watch the presentation or do the workshop at a time after the workshop had ended.”

Subtheme 4: Accountability. Three out of the 13 participating teachers (23%) expressed concern about the need for accountability in online professional development. Teachers in this category voiced concerns about the level of engagement when teachers are not held accountable for the material. Teacher 9 expressed this by saying that there is often “no real way to be held responsible. In other words, there was no motivation to really pay attention or interact because you could just sit and watch it. You could get easily distracted with a lot of them also.” Teacher 5 preferred online professional development that incorporated some sort of assessment for accountability, rather than online videos that she could just watch. Teacher 5 stated, “I liked that it had an assessment. Some videos in Bloomboard had assessment questions as well.” Teacher 10 found the “regular weekly assignments in a discussion forum format” useful because she knew they were reviewed and put more thought in to the assignment.

Thematic Group 3: Convenience. The second identified thematic group was convenience. Ten of the thirteen (77%) participants cited convenience as an influencing

factor when selecting online professional development. Eight of the thirteen (62%) participants cited convenience of not having to travel as an influencing factor, whereas 5 of the 13 (38%) participants stated that convenience in scheduling was an influencing factor. The data in Table 4 portrays the percentages for teachers who identified convenience in scheduling and travel as an important factor when selecting online professional development.

Table 4

Subthemes Identified Within Thematic Group 3: Convenience

Subtheme	Teacher response
Scheduling	5 (38%)
Travel	8 (62%)

Three of the 13 participating teachers (23%) cited both scheduling convenience and travel convenience as influencing factors. Teacher 9 stated the basic strength to look for when selecting online professional development is overall flexibility. He went on to say,

The strengths [of online professional development] would have been the flexibility or the ability, in many cases, to watch the presentation or do the workshop at a time after the workshop had ended. I could do it at work or from home.

Teacher 4 supported Teacher 9's comments by saying that he looks at the overall convenience when selecting online professional development.

Subtheme 1: Travel. Eight out of 13 teachers (62%) identified the convenience of not having to travel as an important factor when selecting online professional development. Teacher 8 and teacher 11 explained the ability to work from home was compatible with their family responsibilities. Teacher 11 explained, “The main reason [for participating in online professional development] was because with two little kids at home I did not want to be traveling back and forth to wherever.” Teacher 8 said that enrolling in online professional development allowed her to participate in a program that would not have been an option otherwise due to travel. She explained,

The program is only offered by one university in Connecticut, the University of New Haven. The only other university that offers this training would require me to drive to Massachusetts, which I can’t do with my kids, so any lack of quality isn’t enough for me to affect my choice. I would still go this route.

Subtheme 2: Scheduling. Seven out of 13 teachers (54%) consider flexibility and convenience in scheduling when selecting online professional development. Some teachers explained during the interviews how they valued the ability to set their learning time schedules. Teacher 11 explained the draw of online professional development was “really just the ease of having it online--having it on my time as opposed to a university’s time.” Teacher 11 elaborated that he could check in to the class at any time as long as he met assignment deadlines successfully. Teacher 11 shared, “I had to submit my assignments by a certain time, but it didn’t have to be at a certain time of the day or week.” Teacher 1 said, “I wanted to try doing something with that format, so they had the webinars on a Saturday and I signed up for two.” She later explained, “I liked being

able to do the webinar from home on a Saturday morning with a cup of coffee.” Teacher 9 summarized his feeling by saying,

I think the particular topic or convenience would override most anything else....I think the strengths would override the weaknesses. In other words, the strengths...[of] being able to watch half or complete half and go back at a later time would be more important.

Two teachers identified the flexibility in scheduling as a possibly negative factor. Teacher 12 stated, “I need the structure and the time constraints. I know that if I have the assignment just waiting there online I will procrastinate.” Teacher 10 felt the asynchronous discussion format that enables the flexible scheduling in some online professional development workshops could make a participant too dependent on other participants completing their work responsibilities. She explained, “It was in an asynchronous format which sometimes made it difficult because if someone responded at 12 o’clock on a Thursday we would have to try to catch up.”

Administrator Interview Results

The administrator sample for the current study consisted of six administrators. Each interview followed an administrator interview guide (see Appendix I). Administrators from the elementary, intermediate, and high schools were represented in the study. Analysis of administrator interview transcripts revealed four thematic groups. The four thematic groups were structure, reputation, individualized value, and district alignment (see Table 5). Two of the thematic groups--structure and reputation--contained subthemes.

Table 5

Major Themes Identified for Administrator Criteria

Theme	Administrator response
Structure	6 (100%)
Reputation	6 (100%)
District alignment	4 (67%)

The thematic group of structure reflected the importance of the organization and features of a workshop to the administrators when evaluating online professional development. The reputation thematic group addressed the perceived reputation through three lenses: teacher feedback, previous professional developments from the same source, and input from other districts who have experience with a particular online professional development provider.

Thematic Group 1: Structure. The structure thematic group related to the structure and organization of an online professional development program. As the structure thematic group emerged during data analysis, four subthemes emerged as well: collaboration, clarity, interaction, and resources (see Table 6).

Subtheme 1: Collaboration. The subtheme of collaboration related to the administrator’s perception of the importance of teachers being able to work with other teachers in an online professional development workshop. Three of the six participating administrators (50%) identified collaboration as important criteria when evaluating online professional development. Administrator 4 felt that collaboration is important because teachers can be very isolated working in in the isolated environment of a classroom.

According to Administrator 4, “Teachers work in such isolation. They are just in their four walls and they don’t really know what is going on outside those four walls. They assume it is the same as in their classroom but it is not.”

Table 6

Subthemes Identified Within Thematic Group 1: Structure

Theme	Administrator response
Collaboration	3 (50%)
Clarity	3 (50%)
Interaction	2 (33%)
Resources	2 (33%)

Administrator 5 cited the importance of active learning through collaboration. He said that, “One of the things I would look at is the level of active engagement through collaboration.” Administrator 3 expressed concern over any professional development without a collaborative component. He explained the district reserves less interactive online professional development for when they “need something done in a certain fashion or we need to track it like blood borne pathogens.” He went on to say that, “If we were looking for something more instructional, we might look at something with a more hybrid environment.” Administrator 3 felt that many strictly online professional development programs are lacking in an adequately collaborative quality so the district often uses a more blended learning environment. However, he went on to explain he would prefer to use a strictly online environment if he became aware of one.

Subtheme 2: Clarity. For the administrators participating in the current study, clarity referred to ease of navigation, as well as a clear outline of the objectives of a program. Three out of the six administrators (50%) identified clarity in the structure of online professional development as an important factor. Administrator 1 stated that confusion could be a significant issue in online professional development programs, so clearly structured programs should be actively sought. Administrator 1 shared, “I look for structure because professional development, especially online professional development, can be very unstructured and actually set a teacher behind.” Administrator 6 also shared “ease of navigation of the site and the direct application to their teaching” as important factors. Administrator 6 also felt that answering the question “is it changing their teaching?” was a good way to measure these factors. Administrator 3 built on the assertions of administrator 6 by saying, “There needs to be a clear idea of what the outcomes should be. If there is a clear purpose of what the need is then we can look afterward and see if it worked.”

Subtheme 3: Interaction. The interaction subtheme relates to online professional development programs that require the user to interact with the program in some way. Possible examples of interaction may include responses to questions, online discussions, and assessments. Two of the six administrators (33%) identified interaction as an important factor when evaluating online professional development. Administrator 4 warned that many “online professional development [workshops] can be just a sit and get.” Administrator 4 described a “sit and get” as any online professional development that only requires the teacher to watch an online video passively. She asserted that online professional development with an interactive quality is more likely to yield improved

learning. Administrator 5 expressed similar concerns over online professional development lacking in an interactive component. Administrator 5 shared, “If I was encountered with online professional development, I would look for... you know, just watching something passively like in a webinar, whether for teachers or for kids, is not the most effective way for someone to learn.”

Subtheme 4: Resource. Two of the six administrators (33%) expressed the perception that educators should seek online professional development that offers resources teachers can apply to their teaching. Administrator 1 described resources as anything that a teacher can use as a resource in the classroom. He advocated for “multiple resource links because everyone coming into an online professional development has a different background.” Administrator 5 provided a slightly different explanation. He defined resources as “items that teachers can use in their teaching or even actual lesson plans” instead of vague lesson ideas.

Thematic Group 2: Reputation. Six out of six administrators (100%) identified reputation of an online professional development as a factor to consider when evaluating online professional development. Reputation is based on positive feedback from teachers or districts who have used a given online professional development program. Three subthemes emerged during analysis of the administrator interviews: teacher feedback and peer district feedback (see Table 7).

Table 7

Subthemes Identified Within Thematic Group 2: Reputation

Theme	Administrator response
Teacher feedback	5 (83%)
Peer district feedback	2 (33%)

Teacher feedback was the primary source regarding the reputation of an online professional development program according to five of the six administrators (83%). Administrators identified two ways to collect teacher feedback regarding online professional development. Administrators gathered feedback using either formal or informal collection methods. Administrator 1 would “look at the feedback from the participants and see what they got out of it and how it could be improved.” Workshop instructors often hand these feedback forms out at the end of some workshops for attendance purposes. Administrator 2 seeks out specific information from online professional development feedback forms. He feels that all professional development programs should be personalized. As a result, he looks for answers to questions like “What is it and how is it going to help them? What are their objectives and what are they hoping to attain? Whether it met their objectives. Did they see the opportunity as fulfilling their professional goals?”

Because not all online professional development programs use these feedback forms, Teacher 4 explained that she creates her own form. Teacher 4 shared, “I usually ask for feedback through a form. How will you use this? Was it effective?” Administrator 3 explained that gathering feedback depends on whether the program is

mandated or not. Administrator 3 stated, “Sometimes there is no choice. If there is a mandate, then it is happening anyway, but with other endeavors, it is all by choice or need.” In scenarios where the program is not mandated, “it is driven by teacher need. If they come back and say that was terrible, then we will not be using that vendor again.” Administrator 3 also solicits informal feedback, evidenced when stating, “Oftentimes it is informal--like shoot me an email and let me know how it went.” Administrator 5 and Administrator 6 indicated they ask informal questions of participants about how the experience is changing their teaching.

Subtheme Group 1: Peer district feedback. Two of the six administrators (33%) identified feedback from other districts regarding online professional development as important when evaluating online professional development. Administrator 1 partially evaluates online professional development by “talking to colleagues or professionals that I work with, but basically most of it is based on experiences and what seems to work for school districts that I have connected with.” Administrator 3 warned against relying on information provided by online professional development vendors, sharing “If there are 26 vendors, there will be 26 different rubrics as opposed to just one.” Because of this concern, Administrator 3 asserted,

Peer review, at least from where I am sitting, is the most effective. Any vendor is going to have a lot of research about how their resource is the most effective. The peer group in, not just Connecticut schools, but all schools are helpful. Sometimes it is okay to be a pioneer but this is not a very risk tolerant environment.

Administrator 3 elaborated that input from other districts and online professional development reviews provides valuable information about programs that are new to the district. He added,

We like to talk to other districts that have used the resource. Was it useful? Were there hidden costs? We will start with regional or state, and expand farther if we have to. We will do the search by similar districts.

Subtheme 2: District alignment. Four of the six administrators (67%) identified alignment with district initiatives as an important consideration when evaluating online professional development. Each of the four administrators expressed the feeling that district initiatives should guide teacher growth. Administrator 6 summarized the common perception when he said, “If there isn’t a match between what the online professional development is offering and our current goals then it’s a waste of time.”

The two administrators who did not identify district alignment as important criteria to consider, asserted that mandated professional development addresses alignment issues adequately. Administrator 3 explained, “If there is a mandate, then it is happening anyway; but with other endeavors, it is all by choice or need. We do not do those type of professional developments in a top down fashion.” He further explained that since limited time exists for choice of topic on predetermined professional development days, the district leaders try to be accommodating and supportive with those who pursuing online professional development on their own. Administrator 2 supported these assertions by saying that teachers normally pursue online professional development on an individual basis, so it should meet the needs of the individual.

Documentation Analysis

The third source of data gathered for the current study was relevant documentation. Four documents were analyzed for the current study: (a) the 2013 SEED Handbook, (b) the CCT rubric for effective teaching, (c) the CT guidelines for educator evaluation (core requirements) and state model (SEED), and (d) the memo to superintendents regarding changes to requirements for the professional educator certificate and new professional development requirements. Each document was imported into the NVIVO 10 program. A text frequency search was conducted on the documents. Three themes emerged during the analysis process. They were collaboration, district alignment, and standardized testing scores. Table 8 displays the frequency of each term for each document.

Table 8

Results of NVIVO Text Frequency Search for Each Theme

	Collaboration	District alignment	Test data
2013 SEED Handbook	15	152	115
Common Core of Teaching (CCT) rubric for effective teaching	20	22	16
CT guidelines for educator evaluation (core requirements) and state model (SEED)	2	22	7
Memo to superintendents regarding changes to requirements for the professional educator certificate and new professional development requirements	3	14	3

The term collaboration appeared 15 times in the 2013 SEED handbook, 20 times in the CCT rubric for effective teaching, two times in the CT guidelines for educator evaluation and state model, and three times in the memo to superintendents. The theme of collaboration was the least frequent of the three emerged themes. Collectively, the term collaboration appeared 40 times throughout the analyzed documents. District alignment was referenced 210 times throughout the four documents. District alignment was the most frequently found term in the text frequency search. Test data were found 141 times throughout the documents in the text frequency search.

Further analysis of the documents revealed a relationship between the three themes. The authors of the documents prescribed that test data should guide district, school, and teachers' professional goals. The teaching standards in the documents indicate that teachers and administrators should work collaboratively "to develop and sustain a professional learning environment to support student learning." Furthermore, teachers and administrators should use testing data and district aligned goals to guide the professional learning.

Common themes. The analysis of data from each data source revealed numerous themes and sub themes. A review of all the data in an aggregated format reveals common themes from the three sources. Table 9 displays an overview of all revealed themes for all three data sources. The table shows two common themes that appear in all three categories: collaboration and district alignment. Seven common themes emerged in both the teacher and administrator interviews: structure, clarity, collaboration, topic, perceived value, convenience, and district alignment.

Table 9

Overview of Emerged Themes from the Three Data Sources

Criteria	Teacher	Administrator	Documents
Structure	X	X	
Clarity	X	X	
Collaboration	X	X	X
Interaction		X	
Resources		X	
Review	X		
Accountability	X		
Topic	X		
Content	X		
Pedagogy	X		
Perceived value	X	X	
Reputation		X	
Peer district feedback		X	
Teacher feedback		X	
Convenience	X	X	
Scheduling	X		
Travel	X		
District alignment		X	X
Testing scores data			X

Thematic differences. Differences in the chosen criteria by administrators and teachers emerged just as commonalities did. Although both administrators and teachers identified clarity and collaboration as criteria in the structure theme, only administrators identified interaction and resources as criteria to consider when considering an online professional development program. Teachers selected the ability to review and accountability as important criteria when selecting online professional development. Administrators did not identify these factors as considerations when evaluating online professional development.

Administrators selected reputation and peer district feedback as considerations when evaluating online professional development. Administrator 3 explained that input from other districts and online professional development reviews provide valuable information about programs that are new to the district. Administrator 3 added that teachers sometimes report to an administrator about an online professional development program they found to be of possible value to other teachers.

Both administrators and teachers identified convenience as an important criterion. Teachers identified two subthemes within the convenience thematic group: scheduling and travel. Administrators did not identify any subthemes within the convenience criterion theme.

Perceptive differences. None of the administrators expressed discord between themselves and the teachers when evaluating and selecting online professional development programs. However, three teachers (Teacher 1, 6, and 11) did express their perception that they felt “unsupported” as stated by Teacher 6, or “faced resistance” as

stated by Teacher 11, when seeking online professional development. Teacher 11 explained that she pursued her online professional development independent of the district because “the district didn’t really acknowledge it for credit.”

Summary

The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when determining whether an online professional development program truly meets the needs of both the district and the teachers. The study also explored which criteria teachers use when selecting an online professional development program. Three data sources were used as part of the research process: teacher interviews, administrator interviews, and analysis of relevant documentation retrieved from the Connecticut State Department of Education website. Four documents were analyzed for the study: (a) the 2013 SEED Handbook, (b) the CCT rubric for effective teaching, (c) the CT guidelines for educator evaluation (core requirements) and state model (SEED), and (d) the memo to superintendents regarding changes to requirements for the professional educator certificate and new professional development requirements. Participants in the study included 13 teachers and 6 administrators.

Data analysis revealed numerous themes for each data source. Two themes, collaboration and district alignment, emerged with each data source. Seven common themes emerged in both the teacher and administrator interviews: structure, clarity, collaboration, topic, perceived value, convenience, and district alignment.

Chapter 5 focuses on the conclusions and recommendations derived from the study results. Chapter 5 includes conclusions and recommendations based on the

study results. The chapter includes a discussion of the results, limitations, suggestions, and recommendations for future research.

Chapter 5

Conclusions and Recommendations

The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when evaluating whether an online professional development program meets the needs of both the district and the teachers. The study also explored which criteria teachers use when they are selecting an online professional development program. Two research questions guided the qualitative case study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

Chapter 4 included the results of the data analysis of the current qualitative case study. Themes emerged from each data source. The revealed themes from the teacher interviews were topic, structure, and convenience. The themes that emerged from the administrator interviews were structure, reputation, and district alignment. The three themes revealed during document analysis were collaboration, district alignment, and that student testing data guides the professional development.

Chapter 5 includes a discussion of themes through perceptions of the administrators participating in the current qualitative case study. A discussion of themes through perceptions of teachers is also included. How these themes relate to current research literature is also addressed.

Teacher Themes

The themes revealed during analysis of teacher interview transcripts were structure, topic, and convenience. Each teacher theme consisted of subthemes. The subthemes identified in the structure category were clarity, collaboration, ability to review, and accountability. The subthemes identified in the topic theme were content and pedagogy. The two subthemes that emerged from the convenience theme during data analysis were convenience of scheduling and the convenience of not having to travel.

Thematic Group 1: Structure. Analysis of the teacher interview data showed four themes. The teacher structure theme was comprised of clarity, collaboration, the ability to review, and accountability subthemes. The teachers in the study expressed that they sought online professional development that is clear and user-friendly. The teachers also valued online professional development that allows for interaction with others. A collaborative quality was consistently cited as valuable among the teachers in the study who work in isolation from teachers in the same content area, as opposed to working in a department with other teachers in the same content area. The teachers working in isolation included library media specialists and art teachers. Each teacher was the only teacher in his or her building who taught in their particular content area.

The teachers in the study also identified the ability to review as valued criteria when selecting online professional development. Teachers preferred programs that allowed access to the materials after the workshop finished. They valued the ability to be able to refer back to what they learned in the program, allowing the teachers to review materials and access any associated resources.

Accountability was the last valuable criterion identified teachers in Thematic Group 1: Structure. Teachers expressed that some level of accountability, as found in an assessment or a participation requirement, helped keep them engaged in the online professional development workshop. Workshops that could be completed without accountability, or passively, were less desirable due to a perceived lower level of engagement on the part of teachers resulting from the passive nature of the workshop.

Thematic Group 2: Topic. Teachers identified the topic of an online professional development as a criterion they use when selecting online professional development. This criterion consisted of two subthemes. The subthemes were content and pedagogy. Online professional development chosen based on content related to the subject matter the teachers taught. Online professional development chosen based on pedagogy related to specific teaching methods or practices. Some teachers identified both content and pedagogy as valued criterion when selecting online professional development. A need for professional growth in the area of one of these subthemes may be chosen collaboratively between a teacher and their administrator. Therefore, the administrator could advise the teacher with district goals in mind. Researchers have documented the importance of topic relevance in effective professional development multiple times (for example, see Darling-Hammond et al., 2009; Lutrick & Szabo, 2012).

Thematic Group 3: Convenience. Some teachers in the study (77%) chose online professional development programs based on convenience. Online professional development may provide convenience in two ways. One manner of convenience is provided through flexibility in scheduling. Some teachers (32%) identified the ability to participate in online professional development on their own time schedule as a deciding

factor when selecting online professional development. The other type of convenience is found in the ability to complete the online professional development program without traveling to a specific location. Both convenience factors, scheduling and travel, allows some teachers to participate teachers to participate in professional development opportunities that would not be a possibility if a set schedule or travel were a factor.

Administrator Themes

Administrators used three identified criteria when evaluating online professional development. These themes emerged during analysis of the administrator interviews conducted for this study. The criteria used by the administrators in the current study were structure, topic, reputation, and district alignment. Although structure is a criterion teachers also identified using when they select online professional development, some differences exist in the subthemes between the two groups.

Thematic Group 1: Structure. The first criterion identified by administrators during the interview process was structure. The structure thematic group was comprised of four subthemes. The subthemes that emerged from the structure thematic group during data analysis were clarity, collaboration, interaction, and resources.

Clarity was identified as a criterion administrators use when evaluating online professional development. Some administrators stated that many online professional development programs are not clear in their formatting and navigation. These administrators intentionally review online professional development programs to determine if they are structured in a clear and user-friendly manner.

Administrators also valued a collaborative quality in online professional development programs. The administrators identified collaboration as an important

factor in any type of professional development program--online or face-to-face. Therefore, administrators identified collaboration as something to look for when evaluating online professional development programs.

The factors of clarity and collaboration were identified in the research of Darling-Hammond et al. (2009), Lutrick and Szabo (2012), and Chung Wei et al. (2010). Each of these researchers identified collaboration and clarity as essential features for professional development to be effective. Burbach et al. (2004) and Knowles (1990) expressed similar results in the form of active learning in professional development. Regarding clarity, both groups expressed the importance of being able to navigate the online professional development program, as well as being able to understand how to work the program effectively.

Administrators identified interaction and the ability to access resources as valuable when selecting when evaluating online professional development. An interactive quality incorporated into structure of an online professional development program allows for a more active learning environment. Active learning is shown as a component of effective professional development in the research of Burbach et al. (2004). Administrators value the ability to access resources after a professional development workshop, because doing so enables the teacher to refer back to resources from an online professional development that they valued.

Thematic Group 2: Reputation. Administrators review the reputation of professional development when evaluating potential programs. Administrators can gather information regarding the reputation from two sources. One source is teachers who have experience with a potential professional development program. A teacher may

recommend an online professional development program they found particularly helpful or informative. The other source is peer districts. The assistant superintendent in this study is responsible for coordinating professional development opportunities for teachers in the district. The assistant superintendent stated he will often seek feedback on professional development opportunities he is unfamiliar with from individuals in peer districts.

Thematic Group 3: District alignment. District administrators ensure that online professional development programs align with the goals of the district. If no clear connection is seen between an online professional development program and the teacher's professional growth in the district, they may not support the opportunity. The teacher may still decide to participate in the online professional development program, but without any support from the district. Support may include release time or funding for the opportunity.

Relevant Documentation

The third source of data in the current case study was analysis of relevant documentation. The documentation for the study was retrieved from the Connecticut State Department of Education website. Three themes emerged from the analysis of relevant documentation. One theme evident in the relevant documentation was collaboration. The other two were district alignment and testing scores data. These two themes appear to have a strong connection with each other. Testing scores data can guide district initiatives in many cases if there is a need to raise scores in a particular area. The criterion of district alignment found in the relevant documentation analysis was also evident in the administrator data. Administrators should consider the goals of the district

when evaluating online professional development or when selecting mandated professional development. Although teachers did not identify district alignment as a criterion, the criterion is often compatible with the criteria the teachers did identify. This compatibility stems from the teacher evaluation documentation in which teachers and administrators are supposed to choose teacher goals that relate to district initiatives.

Although teachers expressed a lack of compatibility between their professional development needs and the professional development provided by the district, the results of the current study indicated otherwise. This indication is in contrast to the research findings of Bereiter (2002) and Hiemstra and Brockett (1994). Several of the administrators were initially unsure of what criteria they used or if they had any criteria to use. Further probing during the interviews also revealed that many administrators based their decisions on the criteria they used for conventional face-to-face professional development. When evaluating online professional development, administrators sought information from peer districts concerning what professional learning opportunities they have used successfully or unsuccessfully.

Examples of times when administrators did not use the identified criteria were instances when the online professional development was mandated. An example of a mandated professional development includes watching an online video and the teacher signing off to confirm they have done so. Instances like these rarely, if ever, incorporated any of the criteria teachers and administrators identified in the current qualitative case study. They rarely included a collaborative element and were usually isolated workshops rather than ongoing programs. It is likely the sentiments of incompatibility expressed by the teachers in the study stem from using mandated professional development programs

lacking in the criteria of effective professional development. The likelihood of this perception of incompatibility stemming from poor program design is supported by the research of Garet et al. (2001), Bereiter (2002), and Darling-Hammond et al. (2009).

The data analysis indicated the teachers and administrators used compatible, and sometimes identical, criteria when selecting or evaluating online professional development. The methods teachers and administrators used for selecting and evaluating indicated that the procedure was a learning process for both the teachers and administrators. The way administrators implemented mandated online and face-to-face professional development led to teacher impressions that the criteria used by their group and the administrators were incompatible.

Research Questions

Two research questions guided the current qualitative case study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

The research questions guiding the study reflected the need to identify the criteria teachers use to select online professional development programs, as well as the criteria administrators use when evaluating online professional development.

Research Question 1. Administrators review the structure of online professional development when evaluating a program. According to the administrators in the study, online professional development should meet specific criteria: a program should have clarity, a collaborative quality, an interactive quality, and provide resources to teachers

who participate in the program. The program should also have a positive reputation. The reputation can come from teachers who have participated in the program or from peer districts. Potential online professional development programs should also align with district initiative and goals.

Research Question 2. Teachers seek online professional development programs that meet certain criteria regarding the structure of the program. An online professional development program should be clear, have a collaborative quality, enable the teacher to review the materials after the program has concluded, and incorporate some type of accountability. Online professional development programs should also be relevant to either the content the teacher teaches or their teaching practices. Teachers also use convenience as a criterion when selecting online professional development opportunities. Convenience can be found in flexible scheduling or not having to travel when completing the course work.

Summary of Findings

The results described in Chapter 4 indicate several overlaps and connections between the criteria administrators use when evaluating online professional development and teachers use when selecting online professional development. To some degree, the criteria of district alignment appeared to be evident within each data source. There were several overlapping criteria administrators use when evaluating online professional development and teachers use when selecting online professional development. The primary overlapping themes were structure and convenience.

Limitations of Study

The current study has some limitations. The study was bound by limitations that prevented the results from being descriptive of all public school districts. The study was limited due to potential bias in participant responses due to varied professional and educational backgrounds. Varied experiences due to unique online professional development experiences may have also been a factor. The total number of participants in the sample, as well as any unique district characteristics, restricted the study. Generalizability of the data is restricted to the district in the study due to these limitations. Though there are limitations, administrators and teachers from other public school districts may still find the results of the study helpful in guiding their development of criteria for selecting and evaluating online professional development.

Recommendations for Future Research

Future research in one primary area may be beneficial. The suggestion is for further study of the perception of teachers and administrators concerning the perceived discrepancy between how the two groups select effective professional development. A perception of incompatibility exists despite the results of the current study, indicating significant overlap in the criteria teachers and administrators use. Research that may reveal ways to address the issue of perceived incompatibility may help alleviate discord between the two groups, resulting in a more effective movement toward improved teaching for the teachers and learning for the students.

Summary and Conclusion

The current qualitative case study involved identifying the criteria administrators use when evaluating online professional development in a mid-sized suburban public

school district in Connecticut. The current case study also involved identifying the criteria teachers use when selecting online professional development in the same district.

Two research questions guided the current qualitative case study:

RQ 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

RQ 2: What criteria do teachers use in selecting online professional development programs?

The research questions guiding the study reflected the need to identify the criteria teachers use to select online professional development programs, as well as the criteria administrators use when evaluating online professional development.

The goal of the study was to identify which criteria administrators in a mid-sized public school district in Connecticut use when evaluating online professional development, as well as the criteria teachers use when selecting online professional development. The purpose of the current qualitative case study was to explore which criteria administrators in a mid-sized public school district in Connecticut use when determining whether an online professional development program truly meets the needs of both the district and the teachers. The study also explored which criteria teachers use when they are selecting an online professional development program. The results of the current qualitative case study may inform district leaders making decisions regarding which online workshops qualify for professional development credit in a public school district. The results of the current case study may also inform teachers when they are selecting appropriate online professional development courses.

Chapter 5 concludes the current study. The results of the current study revealed several overlapping themes among the three data sources. The primary themes common to both the teachers and the administrators who participated in the study were structure and convenience. The non-overlapping themes were compatible with each other despite not being overlapping.

The primary suggestion for future research is an investigation into the reasons for the perception of teachers and administrators concerning the perceived discrepancy between how the two groups select effective professional development. Continued research may make the use of online professional development an increasingly productive means of professional growth.

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Appendix A

Skills Framework for 21st Century Professional Development

The skills framework from The Partnership for 21st Century Skills (2011b, p. 21) are below.

- Highlights ways teachers can seize opportunities for integrating 21st century skills, tools, and teaching strategies into their classroom practice--and help them identify what activities they can replace/de-emphasize.
- Balances direct instruction with project-oriented teaching methods.
- Illustrates how a deeper understanding of subject matter can actually enhance problem-solving, critical thinking, and other 21st century skills.
- Enables 21st century professional learning communities for teachers that model the kinds of classroom learning that best promotes 21st century skills for students.
- Cultivates teachers' ability to identify students' particular learning styles, intelligences, strengths, and weaknesses.
- Helps teachers develop their abilities to use various strategies (such as formative assessments) to reach diverse students and create environments that support differentiated teaching and learning.
- Supports the continuous evaluation of students' 21st century skill development.
- Encourages knowledge sharing among communities of practitioners, using face-to-face, virtual, and blended communications.
- Uses a scalable and sustainable model of professional development.

Appendix B

Premises, Recruitment, and Name (PRN) Use Permission



PREMISES, RECRUITMENT AND NAME (PRN) USE PERMISSION

New Milford Public Schools

Name of Facility, Organization, University, Institution, or Association

Please complete the following by check marking any permissions listed here that you approve, and please provide your signature, title, date, and organizational information below. If you have any questions or concerns about this research study, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

X I hereby authorize Joshua C. Elliott, a student of University of Phoenix, to use the premises of New Milford Public Schools to conduct a study entitled Identifying Criteria used by Administrators when Evaluating and Teachers when Selecting Online Professional Development.

X I hereby authorize Joshua C. Elliott, a student of University of Phoenix, to recruit subjects for participation in a study entitled Identifying Criteria used by Administrators when Evaluating and Teachers when Selecting Online Professional Development

JeanAnn C. Paddyfote
Signature

1/10/14
Date

JeanAnn C. Paddyfote
Name

Superintendent
Title

Address of Facility:
New Milford Public Schools
50 East Street
New Milford, CT 06776

Appendix C
Informed Consent

Dear Participant,

My name is Joshua Elliott, and I am a student at the University of Phoenix working on an Educational Leadership in Educational Technology degree. I am conducting a research study entitled Identifying Criteria Used by Administrators When Evaluating and by Teachers When Selecting Online Professional Development.

Your participation will involve a brief interview with possible follow up interviews. The interview may be recorded for accuracy purposes. You may choose to not participate or withdraw from the study at any time. There will be no penalty or loss of benefit to yourself. The results of the research study may be published, but your personal information will be kept confidential and will not be disclosed to any party.

There is no risk to you. Although there may not be any benefit directly to you, your participation may aid in the development of improved understanding of the criteria used by teachers and administrators when evaluating and selecting online professional development.

Please contact me if you have any questions concerning the research study. You may call me at [REDACTED] or e-mail me at [REDACTED].

By signing this form, you acknowledge that you understand the parameters of the study, the possible risks, and how your personal information will be kept confidential. Your signature also indicates that you are 18 years of age or older, and that you give your permission to participate in the study voluntarily.

Name (Print) _____ Signature _____

School e-mail address _____

Appendix D

Teacher Information Letter

Dear Teacher,

My name is Joshua Elliott, and I am conducting a study of online professional development as part of a doctoral program. In particular, I will be studying the criteria teachers use to select online professional development and the criteria administrators use when evaluating online professional development for approval. I would appreciate your participation in the study. The assistant superintendent of the participating district is aware of the current study. She has granted permission for it to proceed.

Your participation in the study will involve a brief interview. You will need to sign a statement of informed consent. This statement states that I will protect your personal information and not reveal any details about you to any parties. Your information will be kept confidential, and you will be free to withdraw from the study at any time.

I encourage and value your participation. Please feel free to contact me at any time and for any reason with the information provided below. Thank you in advance for your participation.

Joshua Elliott

[REDACTED]

[REDACTED]

Appendix E

Administrator Information Letter

Dear Administrator,

My name is Joshua Elliott, and I am conducting a study of online professional development as part of a doctoral program. In particular, I will be studying the criteria teachers use to select online professional development and the criteria administrators use when evaluating online professional development for approval. I would appreciate your participation in the study. The assistant superintendent of the participating district is aware of the current study. She has granted permission for it to proceed.

Your participation in the study will involve a brief interview. You will need to sign a statement of informed consent. This statement states that I will protect your personal information and not reveal any details about you to any parties. Your information will be kept confidential, and you will be free to withdraw from the study at any time.

I encourage and value your participation. Please feel free to contact me at any time and for any reason with the information provided below. Thank you in advance for your participation.

Joshua Elliott

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████████████████

Appendix F
Teacher Demographics

Participant	Subject area	Grade(s)	Number of online workshops
Teacher 1	General science	7 and 8	3
Teacher 2	Elementary literacy coach	K-6	2
Teacher 3	Library media specialist	4-6	30+
Teacher 4	Library media specialist	7 and 8	24+
Teacher 5	Special education	9-12	3
Teacher 6	Art	Pre-kindergarten-3	1
Teacher 7	General science, physics, and engineering	9-12	4
Teacher 8	Physics	9-12	15-20
Teacher 9	Library media specialist	9-12	10-12
Teacher 10	Spanish	9-12	7-8
Teacher 11	Mathematics	9-12	10
Teacher 12	Special education	9-12	5-8
Teacher 13	Social studies	9-12	2-3

Appendix G

Administrator Demographics

Participant	Position
Administrator 1	High school vice principal
Administrator 2	High school principal
Administrator 3	Assistant superintendent
Administrator 4	Elementary school principal
Administrator 5	High school vice principal
Administrator 6	Intermediate school principal

Appendix H

Teacher Interview Guide

Research Question 2: What criteria do teachers use in selecting online professional development programs?

- How many online professional development workshops have you attended?
- Please describe the content and format of these workshops.
- Why did you choose to attend these workshops?
- What criteria, if any, influenced your choice?
- What were the strengths of each workshop?
- What were the weaknesses of each workshop?
- How would these strengths and weaknesses affect your future decisions regarding the selection of online professional development?

Appendix I

Administrator Interview Guide

Research Question 1: What criteria do school administrators use in evaluating online professional development programs as effective professional development for teachers?

- What criteria do you use in evaluating online professional development programs as effective professional development for your district?
- How did you select these criteria?
- Why are these criteria important to you?
- What criteria do you use in evaluating online professional development programs as effective professional development for your teachers?
- Why are these criteria important to you?
- How did you select these criteria?
- What input, if any, do you ask from teachers when evaluating online professional development workshops?
- What do you look for regarding teachers' feedback for online professional development workshops they have attended?