The Best Kept Secret in Pedagogy: High School English Teachers' Use of Educational Blogs for Professional Development

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“THE BEST KEPT SECRET IN PEDAGOGY”: HIGH SCHOOL
ENGLISH TEACHERS’ USE OF EDUCATIONAL BLOGS FOR PROFESSIONAL
DEVELOPMENT

By

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For Mom, Dad, & Alex.
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# TABLE OF CONTENTS

List of Tables ............................................................................................................................... viii
List of Figures ................................................................................................................................ ix
Abstract ............................................................................................................................................ x

**CHAPTER ONE: INTRODUCTION** ..............................................................................................1
  - Background of Study ...........................................................................................................3
  - Statement of the Problem ...................................................................................................11
  - Research Questions ............................................................................................................12
  - Significance of the Study ...................................................................................................12
  - Definition of Terms ............................................................................................................13
  - Limitations & Delimitations ..............................................................................................16
  - Summary ............................................................................................................................17
  - Overview of the Study .......................................................................................................18

**CHAPTER TWO: LITERATURE REVIEW** ................................................................................20
  - NCTE 21st Century Literacies Framework ........................................................................20
  - Professional Development .................................................................................................35
  - Blogging Practices .............................................................................................................43
  - Summary ............................................................................................................................53

**CHAPTER THREE: METHOD** ................................................................................................54
  - Mixed Methods Research Background ..............................................................................55
  - Conceptual Framework ......................................................................................................57
  - Data Sources and Procedures .............................................................................................59
  - Sampling Frame ..................................................................................................................64
  - Data Collection Techniques ...............................................................................................65
  - Data Analysis .....................................................................................................................66
  - Inter-Coder Agreement ......................................................................................................69
  - Intra-Coder Agreement ......................................................................................................73
  - Limitations ..........................................................................................................................75
  - Summary ............................................................................................................................76

**CHAPTER FOUR: RESULTS** ....................................................................................................77
  - Tier One Results ...............................................................................................................77
# LIST OF TABLES

Table 2.1- Educational Blog Participants .................................................................46
Table 3.1- Aggregated Research Questions ..............................................................55
Table 3.2- Case Study Categories .............................................................................63
Table 3.3- Participant List and Attributes .................................................................64
Table 4.1- Participants Characteristics .......................................................................110
Table 4.2- Initial Coding Scheme .............................................................................115
Table 4.3- Interview Data 21st Century Definition .................................................150
Table 4.4- Lesson Plan Technology Integration .......................................................161
Table 5.1- Combining Tier One and Tier Two Results on Classroom Influence ........203
Table 5.2- Combining Tier One and Tier Two Results on PD Perceptions ...............205
Table 5.3- Combining Tier One and Tier Two Results on Blogs as a Reflective Source ....207
LIST OF FIGURES

Figure 2.1- Diagramming Sociocultural Perspectives .................................................................33
Figure 3.1- Options Related to the Mixed Methods Data Collection Procedures ....................57
Figure 3.2- Visualizing the NCTE 21st Century Literacies Framework ....................................58
Figure 4.1- Years of Experience Amongst Participants..............................................................81
Figure 4.2- National Representation of Survey Data.................................................................83
Figure 4.3- Blogger Type Categorization ...................................................................................84
Figure 4.4- Blogger Type Aggregation in Data ..........................................................................85
Figure 4.5- Perceived Importance and Effectiveness of Blogging ...........................................87
Figure 4.6- Most Interesting Blog Type Perceptions .................................................................88
Figure 4.7- Perceived Reasons to Blog or Utilize Blogging ...................................................89
Figure 4.8- Perceived Importance of Blogs vs. Years of Experience ......................................91
Figure 4.9- Perceived Importance of Blogs vs. Blogger Type ..................................................92
Figure 4.10- Years of Experience vs. Blogger Type .................................................................93
Figure 4.11- Teacher Choice of Independent PD Materials ...................................................98
Figure 4.12- Devoted Time to Mandated & Independent PD ..................................................99
Figure 4.13- Perceptions of Successful Class Implementation of PD ......................................100
Figure 4.14- Devoted Time to Independent PD vs. PD Success ...........................................101
Figure 4.15- Years of Experience vs. Engagement in Blogs ....................................................104
Figure 4.16- Perceptions of Classroom and Personal Engagement in 21st Century Literacies ....105
Figure 4.17- Engagement in 21st Century Literacies ...............................................................105
Figure 4.18- Final Coding Scheme .........................................................................................121
Figure 5.1- 21st Century Literacy Skill Level ...........................................................................231
ABSTRACT

This sequential mixed methods study investigated how high school English teachers describe using blogs for their own professional development (PD), reflection, and classroom instruction through the application of the National Council of Teacher of English (NCTE) 21st Century Literacies Framework. The NCTE 21st Century Literacies Framework is a synthesis of 21st Century Skills, New Literacies Theory, Multiliteracies Theory, Literacy as a Social Practice Theory, and Critical Literacy Theory. Participants included high school English teachers who were affiliated with the National Writing Project (NWP). A total of 73 participants from the NWP participated in Tier One of this study, a survey of participant perceptions regarding blogs, professional development, and 21st century literacies, and a total of 8 participants were purposefully selected from survey data to participate in Tier Two, interviews and artifact collection. Data collected include a survey, interviews, and artifact collection to explore perceptions of high school English teachers regarding 21st century literacy, professional development, and educational blogging.

Tier One portrayed how the participants described using blogs for professional development and reflective practices, as well as their overall perceptions of 21st century literacies. The results of Tier One suggested that demographically, years of experience did not seem to differentiate whether or not teachers were actively blogging nor did it change the perceived value of blogging. In terms of 21st century literacy perceptions, three findings emerged. The first was it seemed that while the majority of teachers selected learning new concepts as the main purpose to use blogs, the inherent learning experience was that of using a 21st century literacy tool, thus seeming to engage participants in 21st century literacy skills. A second finding that emerged was that by choice, teachers were engaged in more face-to-face PD materials compared to technology-focused, 21st century literacy materials. This may have been
due to how they and their districts traditionally define professional development—getting PD from an online source is still a new concept. A third finding was teachers seemed to be less likely to incorporate 21st century literacy skills into their classroom when they personally did not engage in 21st century literacy skills. In terms of non-blogging practices, one finding emerged; it seemed non-bloggers did see the potential value of blogging. In terms of professional development, two findings emerged. One finding that emerged was that the more participants engaged in their own independent PD, the more confident they were in asserting that that knowledge was and can be integrated into their classroom. A second finding was a high percentage of participants believed that the use of independent PD seemed to be more effective than mandated PD.

Tier Two data were collected using interview and artifact collection tools and analyzed qualitatively. Themes that emerged from the analysis were: 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency and fluency development, 4) Global information sharing, 5) Creation, critique, analysis, and evaluation of multimedia texts, and 6) Challenges. These themes stemmed from the NCTE 21st Century Literacies Framework standards, and added further evidence to the findings from the Tier One data collection.

Both Tier One and Tier Two results revealed that teachers do use educational blogs as a classroom resource, a source of reflection, and a collaborative source, and perceive this use as beneficial. Furthermore, educational blogs can be a potential avenue of choice for mandated, not only self-sponsored, professional development. Implications included the impact of blogging on mandated and independent PD, how mandated PD is arranged for teachers, the importance of informing teachers about blogs and blogging practices, the need to learn from the hidden nature of fluency, and the use of technology as a literacy practice, not a tool.
Keywords: 21st century literacy, blogging, professional development
CHAPTER ONE

INTRODUCTION

To successfully teach students, teachers should engage in professional development, and learn the content and uses of current educational practices (Doering, Beach, & O’Brien, 2007; Swenson et al., 2006; Zawilinski, 2009). For English teachers, the focus on the changing complexity of literacy is essential. The digital age has transformed what it means to be literate in today’s society. As Swenson, Young, McGrail, Rozema, and Whitin (2006) noted, incorporating technology skills in the classroom requires a reexamination of knowledge and literacy since technology has evolved day-to-day writing and reading practices.

This new paradigm of knowledge-making is founded on the idea that knowledge is created dynamically, and often that the student should be the active constructor of knowledge (Folio & Kreinbreg, 2010). For teachers, this means students need to be taught not only how to actively construct their knowledge but also how to communicate this knowledge with others. With the division of out-of-school and in-school literacies that positions practice with 21st century literacies and digital tools outside of the classroom, the incorporation of technology in the classroom seems to be vital. 21st century literacies include cultural and communicative practices that include the skills to communicate using technology (NCTE, 2008). Just because students know how to utilize blogs and various other social media, does not mean that they know how to communicate in the digital environment successfully, or that they are 21st century literate.

What is essential is the need to be able to use and implement what is taught, whether as current teachers in the field of English or as teacher educators (Doering, Beach, & O’Brien, 2007; Swenson et al., 2006; Zawilinski, 2009). The National Council of Teachers of English (NCTE) 21st Century Literacies Framework, a set of standards focused on developing digital
skills for secondary school students, is written in a way to help teachers investigate and implement 21st century literacy skills; additionally, it allows teachers to reflect on their own practices and discuss student literacy needs (Meyer, Wade, & Abrami, 2013).

As a potential source of professional development and as a social media outlet that allows teachers to both reflect on their practices and learn 21st century literacies firsthand, blogging may be a good avenue. While the fields of digital technologies and 21st century literacies have received significant attention in educational research, studies seem to address 21st century literacies in a more holistic manner, or seem to address only a specific digital tool, such as Facebook or Twitter (Mazali, 2011; Pascoe, 2012; Stein & Prewett, 2009; Wilson, 2013). Rarely do studies mention both 21st century literacy skills and a specific tool.

Blogging can be a potential source of professional development for teachers, particularly for learning about 21st century literacies by engaging in a 21st century literacy skill with a social media tool. However, current research is lacking empirical evidence of successful implementation of blogging as a professional development source for high school English teachers. Thus, this research focused on teachers’ perceptions of using blogs as a source of professional development. Furthermore, this research connects 21st century literacy implementation to how teachers perceive using blogs as a professional development source. As teachers use blogs, they may reflect on their own practices, may develop their own technological skill, but most importantly, may develop the language necessary to communicate in the 21st century.
Background of Study

21st Century Literacies

To ground this study the NCTE 21st Century Literacies Framework is used as a theoretical framework to approach how teachers perceive using blogs as professional development. Many theories impact the NCTE 21st Century Literacies Framework, standards for students and teachers, including the theoretical backing of sociocultural perspectives. 21st century literacies are defined by NCTE as:

…A collection of cultural and communicative practices shared among members of particular groups. As society and technology change, so does literacy. Because technology has increased the intensity and complexity of literate environments, the 21st century demands that a literate person possess a wide range of abilities and competencies, many literacies. These literacies are multiple, dynamic, and malleable. As in the past, they are inextricably linked with particular histories, life possibilities, and social trajectories of individuals and groups. (National Council of Teachers of English, 2014)

The NCTE 21st Century Literacies Framework that NCTE adopted in 2008 included the standards that demand students and teachers to:

- Develop proficiency and fluency with the tools of technology;
- Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;
- Design and share information for global communities to meet a variety of purposes;
- Manage, analyze, and synthesize multiple streams of simultaneous information;
- Create, critique, analyze, and evaluate multimedia texts;
- Attend to the ethical responsibilities required by these complex environments.

(NCTE, 2008)

The NCTE 21st Century Literacies Framework is a list of standards for students and teachers to use that is based on Sociocultural Theory. The authors of this framework
incorporated sociocultural theories that consider language and literacy as irrevocably connected to social, cultural, political, economic, and historical practices. These theories, part of the larger Sociocultural Theory umbrella, include Literacy as a Social Practice, Multiliteracies, New Literacies, and Critical Literacies (Friere, 2001; Knobel & Lankshear, 2007; New London Group, 1996; Street, 2003). Literacy as a Social Practice focuses on the power dynamic of literacy and language within communities and how this power dynamic impacts dialogue within these communities (Street, 2003). Multiliteracies Theory focuses on the avenues of literacy, such as visual and spatial literacy, and how communication can happen through other forms other than text (New London Group, 1996). The New Literacies Theory includes both the technology medium as well as the new cultural ethos of communicating through this medium as a focus on how distribution of text has been impacted by the 21st century (Knobel & Lankshear, 2007). Finally, Friere (2001) defined critical literacy as the process of consciousness of connecting words to the world and empowering the individual.

Since 2008, the NCTE framework, amongst mandates and new standards such as the Common Core Standards, became a catalyst for school districts and classrooms to engage in 21st century literacy tasks that incorporated technological skills and digital composition, ranging from electronic portfolios in elementary schools (Meyer, Wade, & Abrami, 2013) to blogging (Witte, 2007) and social media activities (Rheingold, 2010). In 2010 a group of well-known educators and researchers, including Bass, Sibberson, Hayes, McCraw, Witte, Waff, Bartow-Jacobs, and Wilkinson (2010) published a commentary on how to use NCTE’s 21st Century Literacies Framework. This article proposed multiple ways of using NCTE’s 21st Century Literacies Framework, ranging from how to integrate it into the classroom to suggestions that it be used
…As a tool to raise questions and generate conversations that lead to changes in teacher practice and student engagement. Used in this way, the Framework can be a catalyst for these changes. Change might take place at a personal level through the reflective practice or action research of an individual teacher or literacy leader, or it could have a more far-reaching impact by leading to changes in teacher preparation, professional development opportunities, and curriculum development. (Bass et al., 2010, p. 392)

The implementation of this framework does not stop at classroom integration. As proposed by Bass et al. (2010), this study used the framework as a potential catalyst to change how professional development is implemented.

With the focus of current research on how to incorporate 21st century literacies into today’s classroom and how to best teach students to become literate (Beetham & Sharpe, 2013; Tompkins, Campbell, Green, & Smith, 2014), it becomes important to then focus on how teachers are engaging in their own 21st century literacies practices. The International Society for Technology in Education (ISTE) standards (2008) dictate that teachers “exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society” (p.1) and “continuously improve their professional practice, model lifelong learning, and exhibit leadership in their schools and professional community by promoting and demonstrating the effective use of digital tools and resources” (p.2). Essentially, teachers are learners too, and should be considered such, engaging in rich professional development opportunities (Darling-Hammond & McLaughlin, 1995) that allow them to follow the same standards that are set for students in the NCTE 21st Century Literacies Framework.
Professional Development

Professional development is the educational experiences that a variety of professions partake in to learn and apply new knowledge, skills, and literacies to improve their effectiveness (Mizell, 2010). The goal of professional development is to expand learning and knowledge, as well as nurture teachers’ practices (Lieberman & Friedrich, 2010). Seminal researchers in professional development, Darling-Hammond and McLaughlin (1995), found that traditional notions of teacher preparation and professional development should be replaced with knowledge sharing. This knowledge sharing idea should be the basis of professional development. Enabling teachers to share and discuss what they know and what they want to know, in addition to giving them opportunities to work and learn collaboratively and engage in dialogue with principals, coaches, parents, and students, allows them to be a part of collaborative, ongoing, and reflective professional development practice (Darling-Hammond & McLaughlin, 1995).

For the purposes of this research, it was important to focus on the knowledge and philosophies of teachers’ skills, knowledge, philosophies, and attitudes, with the assumption that these improvements might influence classroom practices. For the purposes of this study, professional development included learning and engaging in professional skills, pedagogical practices, and reflective practices, all of which may influence classroom practices.

Professional development research suggests that for teachers to be interested and engaged in professional development activities, the activities should be collaborative, ongoing, reflective, and self-selected (Darling-Hammond & McLaughlin, 1995; Polly & Hannafin, 2010; Villarreal, 2005). Online professional development promotes teacher ownership and allows teachers to go at their own pace and on their own time (Polly & Hannafin, 2010). Traditional formal professional development in secondary schools typically requires teachers to be out of the classroom to attend
seminars and conferences, but technology minimizes the need to pull teachers out of their classrooms (Villarreal, 2005). Furthermore, traditional distribution of knowledge, typically “top-down,” is the opposite of what research suggests is “good” professional development: active collaboration and exchange (Pashnyak & Dennen, 2009). Social media platforms have been positioned not only for the use of social networking but also for educative purposes by many researchers (Elliot & Campbell, 2013; Goodyear, Casey, & Kirk, 2014; Rosen, 2010; Witte, 2009). While there are a variety of online platforms for professional development, social media platforms such as Twitter and Facebook abide by the NCTE 21st Century Literacies Framework elements of building intentional cross-cultural connections and relationships, collaborating on problem solving, and sharing information for global communities (NCTE, 2008).

21st century literacies not only are necessary for students to learn, but permeate the learning environment for teachers as well. The problem is, despite the call for action for teachers to utilize virtual social media platforms for professional learning, “research done to show how it can be used for professional learning purposes specifically for teachers has been limited.” (Goodyear, Casey, & Kirk, 2014, p. 2). The limited research studies that do exist typically focus on Twitter and Facebook (Rodesiler & Tripp, 2012). Furthermore, while justifications to use digital platforms such as social media are not new, there is still little on why teachers choose not to utilize these avenues for professional development, other than limited access to computers and unwillingness to participate in online forums (Cothran et al., 2009).

It was necessary to investigate how teachers were using 21st century literacies elements in the NCTE 21st Century Literacies Framework when engaging in professional development, and why those who do not use blogs chose not to. 21st century literacies are the current movement and future of our education (Bass et al., 2010). According to this study, teachers can and should
utilize virtual platforms to engage in 21st century literacies personally to be able to know how to teach them. Teachers not only can use these platforms as a way to learn about 21st century literacies, but also can engage in successful professional development that influences their classroom. The recent focus in research on social media for teachers is limited and focuses little on another social media avenue that could be utilized for these purposes: blogs. Since blogging software became available, it has been frequently used in the K-12 classroom to support learning, and it has become popular in recent years for supporting professional development (Pashnyak & Dennen, 2009).

**Blogs and Blogging**

Social media enables participants to socialize, organize, and engage in commerce, and includes a variety of virtual platforms, including Twitter, Facebook, Instagram, blogs, and wikis (Rheingold, 2010). Blogs specifically provide an online forum that allows participants to share and exchange information. They are “frequently modified web pages in which dated entries are listed in reverse chronological sequence, and are becoming an increasingly popular form of communication” (Herring, Scheidt, Wright, & Bonus, 2005, p. 142).

There are different types blogs for professional development that teachers can use. Herring, Schiedt, and Wright’s (2005) research described four types of blog genres, including personal blogs, k-logs, filter blogs, and mixed blogs. The personal blogs are considered online diaries where the primary purpose is reflection. K-logs are the blogs in which the blogger provides materials to the audience that do not require hyperlinking to an outside source. Filter blogs are blogs that provide external links or other sources. A mixed blog is a combination of all of these elements into one blog. In Herring, Schiedt, and Wright’s (2005) content analysis, the researchers analyzed 199 blogs to pinpoint the four genres, and used the characteristics of the
blog authors and purpose of the blog to code and select a category for the blogs they analyzed. Online diaries or personal blogs were the most frequent at 70.4% of the blogs they analyzed, and their primary goal was to report events in the bloggers life, including events and reflections. While Herring, Schiedt, and Wright’s (2005) research was focused on creating these blog genres with no particular focus on teachers, Pashnyak and Dennen (2009) and Dennen (2012) wrote about the different purposes for teachers specifically to use blogs. These included providing resources and instructional ideas such as lesson plans, collections of links to tools, and reflective journals called “diaristic blogs” where teachers share their thoughts and experiences (Dennen, 2012; Pashnyak & Dennen, 2009).

Personal blogs are essentially the same as reflective journals or “diaristic blogs” as categorized by Dennen (2012). For the purposes of this research, a personal blog, referred to as an educational blog in the findings, was the type of blog in which a teacher would reflect on his or her life as a teacher, events inside or outside the classroom pertaining to teaching, and any other event that tied to an educational purpose but with the addition of reflection in addition to information.

The scope of this research includes all genres of blogs for teachers, but focused specifically on how teachers used blogs for their professional development and classroom practices. Blogging practices that involve other hobbies or activities outside of teaching or classroom practices were not included. Thus, the term educational blog refers to a blog that is written by a teacher or a stakeholder in the field of education, typically for a teacher audience, and serves as an umbrella term for the four blog genres. Additionally, the scope of this research was constrained to the sampling frame of teachers who were blogging independently, not those
who were mandated to blog; this self-sponsored utilization of blogging as a professional
development avenue provided necessary boundaries for the study.

As with any social media virtual platform, there are various terminologies necessary to
learn regarding blogs and blogging. Utilization of blogs builds a *blogging community*, which is a
group of independent blogs that are linked together, typically through hyperlinking or tagging,
by common interest. This is not to be confused with a *community blog*, which is typically one
blog that many participants contribute to. Blogging communities can be part of one’s *personal
learning networks*, which are formal and informal avenues of learning that an online participant
creates for him/herself. These avenues can include a variety of online platforms, including one’s
own blogs and/or a blogging community (Wilson et al., 2007). Blogging norms and practices
include protecting privacy, expressing oneself, reciprocating comments, citing work, engaging in
dialogue across blogs, and a division of labor, which includes bloggers posting, commenters
giving feedback, and “lurkers” reading the posts (Dennen, 2012).

The types of users in the context of the blogosphere, or the academic community of
bloggers, includes academic bloggers, commenters, lurkers, and in this study, non-bloggers.
Academic bloggers are active members in the blogosphere, who post and comment actively and
often (Dennen, 2012). Commenters are less active compared to academic bloggers; these blog
participants comment and post on blogs but do so less often than academic bloggers (Dennen,
2012). Lurkers are readers of blogs that rarely post personally on their own blog or other blogs
(Dennen, 2012). Non-bloggers are those who do not engage in blogging in any way, although
this does not mean they do not engage in 21st century literacy skills through other forms of social
media.
Statement of the Problem

Educational blogs have potential for educational use (Owen, 2003). While there is much research on how blogs can be incorporated into the classroom (Folio & Kreinberg, 2010; Owen, 2003; Swenson et al., 2006), there is little connecting professional development and the utilization of educational blogs for high school English teachers within the 21st century literacies frame. Using blogs as professional development and as a way to explore 21st century literacies skills may help encourage successful practices of professional development, which, as Bauer (2010) notes, is individualized, mentored, and extended over time. Blogs can provide these factors in a convenient, free, and accessible way. Additionally, this professional development practice could potentially instill 21st century literacy skills teachers would have otherwise not have been aware of, meaning they could potentially utilize the knowledge of these skills in their lessons and classrooms.

The purpose of this research study was two-fold: to use the NCTE 21st Century Literacies Framework as a way to explore 1) the ways high school English teachers use or do not use blogs for professional development and 2) investigate teachers’ perception of the influence of using educational blogs on classroom practices.

The literature on secondary school English teachers using the Internet both inside and outside of the classroom is divided, varying from teachers’ incorporation of blogs and wikis with students, which requires high tech-savvy skills (Luehmann & Frink, 2009), to the statistical evidence of a failure to both educate themselves as teachers and their students on the critical consumerism of the digital age (Bauerlein, 2009). The divided state of the current literature prioritizes the investigation of how high school teachers in particular use the Internet, with a focus on the use of educational blogs. Educational blogs were the focus of this study because of their popularity and use as online teacher communities (Luehmann & Frink, 2009).
Research Questions

The research questions guiding this study were as follows:

Primary Research Questions:

1.) How do 9th-12th grade National Writing Project Teacher Consultant (NWPTC) English teachers perceive the use of blogs as a classroom, professional development, and reflective source?

2.) How do the blogger types differ in the ways they talk about and use 21st literacy in their teaching?

Subsidiary Research Questions:

1.) How does the sample of NWPTC 9-12th grade English teachers describe using blogs?

2.) In what ways does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own classroom practices?

3.) To what extent does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own professional development as a teacher?

4.) In what ways does the sample of NWPTC 9-12th grade English teachers perceive that active, independent, self-sponsored blogging influences their reflective practices?

Significance of the Study

The goal of this research was to investigate the perceptions of practicing high school English teachers using educational blogs independently outside of the classroom to explore and implement 21st century literacy skills and as a source of professional development, as well as why non-bloggers chose not to blog. The researcher chose 9-12th grade teachers because there is an evident gap in the literature that fails to address the way high school (HS) teachers use
technology for their own self-sponsored professional development, and because of the emphasis on technology-orientated instruction that occurs at the HS level (Autrey et al., 2005; Baker & Christie, 2005; Baumer, Sueyoshi, & Tomlinson, 2011; Bauer, 2010; Blanchard, 2004; Common Core State Standards Initiative, 2014; Conthran et al., 2009; Greenhow, Robelia, & Hughes, 2009).

With a variety of information easily accessible to HS English teachers online, the researcher sought to understand how teachers used educational blogs to enhance their teaching practices, and if they did not use these blogs, what reasons stopped them from doing so. This research provided insight into how teachers may use 21st century literacy skills, and how the utilization of these skills on the virtual platform of blogging may encourage implementation of the same literacy practices in their classrooms.

Definition of Terms

Terms here are operationally and conceptually defined for better understanding of their uses in this research study.

21st century literacy: Literacy as described in this study will adopt the definition used by the National Council of Teachers of English, which is:

Literacy has always been a collection of cultural and communicative practices shared among members of particular groups. As society and technology change, so does literacy. Because technology has increased the intensity and complexity of literate environments, the 21st century demands that a literate person possess a wide range of abilities and competencies, many literacies. These literacies are multiple, dynamic, and malleable. As in the past, they are inextricably linked with particular histories, life possibilities, and social trajectories of individuals and groups. (National Council of Teachers of English, 2014, para. 1)

Blogs: Blogs are a web-publishing tool—authors can quickly publish original text, as well as tools, links, and other content (Glencoe, 2006). This text is in the form of blog posts. Blog posts are often short, and authors of blogs are expected to frequently update
with new blog posts. Every blog typically has a section where the readers can comment on that blog. Independent blogs that are linked by a common interest are called blogging communities. Some blogs include posts from different authors (community blog), while some blogs have only one author. The diversity of content of blogs varies vastly, and the focus of this research is educational blogs.

**Critical Literacy Theory:** Critical Literacy Theory is concerned with the relationship between language and power, much like Literacy as a Social Practice theory (Janks, 2010). Friere (2001) focused a lot on critical literacy in his writings, and defines literacy as a process of consciousness that then is used for empowerment.

**Educational blogs:** In this study, the researcher defines educational blogs as blogs that have one or more authors that discuss education-based topics. These blogs can include personal teacher blogs, class blogs, student blogs, and school blogs (Edublogs, 2014). An educational blog must be either written by a teacher or a stakeholder in the field of education, and typically is for a teacher audience.

**Independent, self-sponsored blogging:** The research questions in this study incorporate a specific type of practice called independent and self-sponsored blogging. The researcher was interested in teachers who are visit blogging sites or blog on their own independently without any prompting from their schools or school districts. This self-sponsored use of blogging can be for a variety of reasons, not only professional development, but the focus of this research was how teachers use blogging and blog themselves for professional development on their own time and with their own resources.

**Literacy as a Social Practice Theory:** This theory focuses on multiple literacies that vary according to time and space and how the lack or acquisition of these literacies impact power
relations (Street, 2003). While not necessarily focused on how literacy is acquired, Literacy as a Social Practice focuses on the types of knowledge that are needed in order to effectively engage in literacy practices (Street, 2003).

**Multiliteracies Theory:** Developed and introduced by the New London Group (1996), a research group that includes prominent researchers Gee and Luke, the Multiliteracies Theory focuses on establishing the new modes of literacy and communication and calls for a “much broader view of literacy than portrayed by traditional language-based approaches” (p. 1). Multiliteracies theorists postulate that there are multiple ways of reading and comprehending beyond print literacy, and that there is a broader set of communications in society.

**New Literacies Theory:** New literacies range from the technology that is used to harbor such literacy such as blogging and fan fiction to how this new form of digital literacy is impacting how humans communicate in the 21st century (Lankshear & Knobel, 2006). The new literacies paradigm, however, includes both the technology medium as well as the new cultural ethos of communicating through this medium as a focus on how distribution of text has been impacted by the 21st century.

**Professional development:** The goal of professional development is to expand learning and knowledge, as well as nurture teachers’ practices (Lieberman & Friedrich, 2010). Professional development is the educational experiences that a variety of professions partake in to learn and apply new knowledge, skills, and literacies to improve their effectiveness (Mizell, 2010).

**Sociocultural Perspective/paradigm:** Those who hold this perspective believe that literacies and meaning making can only be understood through the context of social, cultural, political, economic, and historical practices (Vygotsky, 1997).
Limitations & Delimitations

Delimitations

The following delimitations served to narrow the scope of this study and the ability to generalize the results to a larger population.

1.) The study utilized participants who were a part of the NWP. Generalizing outside of this group is not warranted.

2.) The data were collected over a course of a three-month period of time. This may have impacted how many teachers were able to participate, thus impacting the sample size.

3.) The participants were high school English teachers.

4.) The participants were asked to share their experiences with educational blogs only. This provided a necessary boundary for the study by excluding the use of any other blog used for purposes outside of professional development.

5.) Inferential statistics were not used for analyzing data.

Limitations

Because of these delimitations, the major limitations of this study include:

1.) The data were obtained from a small sample; therefore, the researcher was unable to run inferential statistics. It was also not within the scope of the study to do so. Descriptive statistics are not generalizable to the population.

2.) The data collected were biased in terms of participants’ years of experience teaching. Very little data were collected from teachers who had fewer than five years of teaching experience.

3.) The teachers who participated in this study all were a part of the National Writing Project (NWP). This meant that they already were actively participating in professional
development. This may have influenced how the teachers responded to many of the interview and survey questions, and how many 21\textsuperscript{st} century literacy skills they included in their lesson plans.

4.) There was an uneven amount of representation in the blog participant categories. This may have impacted the perception of the participants due to more data from a certain categorization type.

5.) Open-coding data and qualitative data analysis is an inherently biased process. This, too, may have impacted the data and how it was interpreted.

6.) Because the form of the interview varied to include face-to-face, Skype, and phone interviews for participant convenience, the researcher may have had data that were influenced by the form in which the interview was conducted. Each form may have led to unintentional researcher influence on participants’ answers.

Because of these limitations, the findings of this study cannot be generalized to the population nor used to speak to trends outside of this sample.

**Summary**

With the evolving definitions of 21\textsuperscript{st} century literacies, teacher education and professional development should evolve as well. With the inclusion of technology in 21\textsuperscript{st} literacies, students, and therefore teachers, should have exposure to technology. Additionally, with the changing literacy definition, professional development for teachers should be reflective and ongoing.

Educational blogs are potentially an excellent source for professional development, whether it is to explore the technology or simply to engage in professional development as a community of teachers. This research study explored the ways in which educational blogs, in particular, were perceived as a source for teacher professional development.
Overview of the Study

In Chapter Two, a review of the current literature is presented. The theoretical framework, the NCTE 21st Century Literacies Framework, is explored first. This section includes the theoretical grounding of the framework itself in larger sociocultural theories. Following this section the researcher explores professional development and connections to prior research. Blogging practices are also shared, including a review of types of blogs, blog participants, and blog communities. The blogging section includes prior research on teachers using blogs as well as prior research on personal learning networks. The review of literature concludes with a call to close the research gap in the blogging for professional development area.

Chapter Three presents a rationale for using the sequential mixed method research design. An introduction on mixed methods design and the strengths and weakness of this design are shared. The conceptual framework is shared, as well as the data sources and data collection techniques. A discussion of the data analysis procedures, inter and intra coder agreements, and limitations of the study closes the chapter.

Chapter Four includes the findings of Tiers One and Two of this research study. The chapter is organized into two sections, Tier One and Tier Two. The first part of the chapter includes data collected for Tier One organized by four headings, including demographic data, perceptions of blogs, perceptions of professional development, and perceptions of 21st century literacy. Each heading includes two sections—an overview of the findings and a discussion of the findings. Tier One results conclude with a brief discussion of all the trends found in the quantitative data. The second section discusses Tier Two of the study, organized into six headings that represent the themes that emerged from the data: 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency and fluency development, 4)
Global information sharing, 5) Creation, critique, analysis, and evaluation of multimedia texts, and 6) Challenges. Within each heading are multiple subthemes, and the findings are combined with discussion. The Tier Two section concludes with a brief summary of the Tier Two findings.

Chapter Five begins with a review of the study. The conclusions, limitations, and implications are then presented through the combination of both Tier 1 and Tier 2 data. This chapter addresses the following audiences: teachers, teacher educators, educational researchers, and policy makers. Future research is shared, and a final word addresses how teachers must engage in their own learning to foster 21st century literacies in both themselves and their students.
CHAPTER TWO

LITERATURE REVIEW

The purpose of this conceptual literature review was to discuss research outcomes regarding the NCTE 21st Century Literacies Framework and its connections to other larger sociocultural theories, professional development using blogs and blogging, and educational blogs and blogging practices. New standards and calls to action regarding 21st century literacies are also identified. The lack of research in certain areas, such as the lack of research on high school teachers’ blogging, as well as lack of explanation regarding teachers’ non-use of blogs, makes this research endeavor valuable for the educational research community.

NCTE 21st Century Literacies Framework

Bauerlein (2009) may be right in asserting that students nowadays have diminishing attention spans and are reading less than before. He suggests that the 21st century has made people, particularly those under the age of thirty, less literate than in previous decades. What he may forget in his argument, though, is that to be literate in today’s society means more than being able to sign a paper, memorize a play, or cite credible sources in a research paper. 21st century literacies and digital literacies make teachers’ jobs more complex than ever before. In 1999 Rassool defined basic literacy as the acquisition of skills and knowledge of tools that were necessary to function in everyday life. This definition of literacy that has come to be known as functional literacy (Perry, 2012) is outdated; communication occurs in day-to-day life in the 21st century with the use of digital tools. This extends the definition of functional literacy to include digital tools such as podcasting and blogging to communicate. A functionally literate person may know how to use these digital tools.
There are many facets of education in which 21\textsuperscript{st} century literacies is a trending topic, from organizations to government mandates. Ernest Morrell (2012), NCTE’s former president, focused on how literacy is changing by identifying how information is now globalized and digitized. Furthermore, he made a case for teaching students the skills necessary to create information online through a variety of virtual platforms, blogs included (Morrell, 2012). The International Reading Association (2009) suggested that educators teach students how to use new technologies effectively and responsibly. Drew (2013) highlighted how the Common Core State Standards address students’ new literacy needs that come with the 21\textsuperscript{st} century.

Mandates and education initiatives also give clout to technology and 21\textsuperscript{st} century literacy skills. The grant initiative Preparing Tomorrow’s Teachers to Use Technology Program, colloquially known as PT3, awarded over 400 grants between 1999-2003 to address challenges of technology usage, including electronic portfolios and mentoring workshops (Department of Education, 2014). The No Child Left Behind (NCLB) law includes an “Enhancing Education through Technology Recovery Plan” providing grants to schools to help encourage the incorporation of technology into the classroom, with scopes of projects including “Professional development to promote the integration of technology into curricula and instruction…Efforts to use technology to improve communication with parents…The preparation of teachers to serve as technology experts in their schools…Developing and implementing information technology courses” (Department of Education Recovery Plan, 2010, p. 15). Current mandates in Race to the Top pose “providing relevant coaching, induction support, and/or professional development” to teachers and principals as a priority, and technology is seen as an essential element to supporting professional development (US Department of Education, 2009, p. 9).
Several major organizations, such as Conference on English Education (CEE), NCTE, the Society of Information Technology and Teacher Education (SITE), and associations outside the field of English, have jointly undertaken the National Technology Leadership Initiative (NTLI) with Department of Education and PT3 grant monies (Bell, 2001). In this powerful organization, teams of leaders set goals to support and encourage re-development of statues, standards, curricula, and created an infrastructure to accommodate changing technologies and 21st century literacies (Bell, 2001). Leaders from different political groups took into account the importance of a changing dynamic in literacy, focusing on 21st century literacies and digital literacies as the norm and the necessity of the development of a curriculum that focuses on increasing these skills.

With so many mandates that focus on 21st century literacies, it becomes hard to identify a specific definition of what it means to be 21st century literate. While this study uses NCTE’s definition of 21st century literacies, researchers in the field of 21st century literacies use a variety of different definitions. Some researchers suggested that 21st century literacies focus on multiliteracies. Multiliteracies, including visual, critical, media, information, and computer literacies, help to decipher both traditional texts and new types of texts in the age of multimedia (Kordigel Abersek, 2008; Seglem, Witte, & Beemer, 2012). Other researchers defined 21st century literacies as broadly as the integration of technology and digital tools. Moje and Tysvaer (2010) suggest a complicated concept that includes both communication practices and various meaning making skills. Perry (2012) suggested, “literacy is so broadly defined as to be almost meaningless” (p. 64). One thing is for certain; “the norms of information exchange among today’s youth are different from the norms of pedagogy in institutions” (Neubauer, Hug, Hamon, & Stewart, 2011, p. 12). Furthermore, Richardson (2007) suggested that current students are
growing up potentially knowing more than what their teachers know in terms of technological
tools.

It is then important to establish a tangible definition of 21st century literacies and
framework to use as a lens for this research. The NCTE 21st Century Literacies Framework was
used in this study for several reasons. There is overlap in several of the standards and framework
elements compared to other standards such as the informational literacy standards and
International Reading Association standards (Watulak, Laster, Liu, & LERN, 2011).
Furthermore, experts in the field suggested the use of the NCTE framework in research on 21st
century literacy skills. Finally, the framework is current but includes the theoretical underpinning
of various established perspectives, such as Sociocultural Theory. NCTE defined 21st century
literacies as

…A collection of cultural and communicative practices shared among members
of particular groups. As society and technology change, so does literacy. Because
technology has increased the intensity and complexity of literate environments,
the 21st century demands that a literate person possess a wide range of abilities
and competencies, many literacies. These literacies are multiple, dynamic, and
malleable. As in the past, they are inextricably linked with particular histories, life
possibilities, and social trajectories of individuals and groups. (National Council
of Teachers of English, 2014)

The framework also includes a variety of tasks that help teachers improve student 21st
century literacy skills. The NCTE 21st Century Literacies Framework is not an isolated theory. In
fact, the framework implements several theoretical perspectives that fall under the sociocultural
umbrella.

**Sociocultural Perspectives and NCTE 21st Century Literacies**

As a wide umbrella term for many theories, the sociocultural perspective lays the
foundation of social learning. Sociocultural Theory is part of social learning perspectives such as
constructivism, and emphasizes the “roles of social, cultural, and historical factors in the human
experience” (Tracy & Morrow, 2012, p. 122). One of the seminal theorists behind sociocultural perspective, Vygotsky (1997), proposed that social interaction plays an essential role in learning. A fairly broad theory that includes sociolinguistic theory focus on language, Sociocultural Theory focuses on how culture impacts a human’s understanding and interpretations of their world (Davidson, 2010). Tracy and Morrow (2012) traced the roots of sociocultural perspective to Bronfenbrenner’s work, where Bronfenbrenner explained four spheres of influence on human development, including immediate environment such as home and classroom, the interaction between these two environments, the larger societal roles in these environments, such as laws and mandates, and finally, the way culture impacts the way all of these interactions work. Bronfenbrenner (1979) called this the “ecological view of development” (p. 4) and imagined these spheres as “Russian nesting dolls” (p. 3).

Translated into the classroom, sociocultural perspectives focus on how learning is a social behavior, and that this process is inextricably tied to historical circumstances (Au, 1997; Tracy & Morrow, 2012). Perry (2012) emphasized that because Sociocultural Theory is so broad in and of itself, it is important to highlight the term as a paradigm rather than its own unified theory. There are several related theories or branches that emphasize different elements of social and cultural learning: Literacy as a Social Practice, multiliteracies, multiple literacies, and critical literacies.

The sociocultural perspective, or paradigm, at large seems to have impacted the way NCTE established the NCTE 21st Century Literacies Framework. While more specific branches of Sociocultural Theory can be found in different standards of the framework, the general idea of social learning is evident throughout the NCTE framework. The standards emphasize the idea that literacy is a cultural and social activity. “Literacy has always been a collection of cultural
and communicative practices shared among members of particular groups” (NCTE, 2012, para 1.). Furthermore, the definition dictates that as society changes, the meaning of literacy changes, which directly ties with a reflection that Au (1997) made regarding the educative stance of sociocultural perspectives: “Learning…cannot be logically separated from the particular milieu in which it takes place” (p. 184).

**Literacy as a Social Practice Theory and NCTE 21st Century Literacies**

As a focus on social practice and power relations, Literacy as a Social Practice, also known as New Literacies Studies, is a theory under the sociocultural perspective umbrella. Literacy as a Social Practice emphasizes multiple literacies that vary according to time and space and how the lack or acquisition of these literacies impact power relations (Street, 2003). While not necessarily focused on how literacy is acquired, Literacy as a Social Practice focuses on the types of knowledge that are needed in order to engage in literacy practices (Street, 2003).

The Literacy as a Social Practice theory is grounded in Street’s (1985) work where he differentiated between autonomous and ideological systems of literacy. Autonomous was defined as a static skill of literacy—whether someone was literate or illiterate. Ideological literacy defined literacy as a set of practices and linked these to culture and society (Street, 1985). Street (1985) fought against the static definition of autonomous literacy. Common use of Literacy as a Social Practice today includes the acknowledgement of the ideological nature of literacy and focuses on how communicating through a specific social event, such as blogging, places the user in that social group (Kelly, 2012).

This theory is included within the NCTE 21st Century Literacies Framework because the skills outlined include communication between learners as a form of literacy. This is further perpetuated in the framework by the focus on literacy that resembles a practice rather than a skill
that can be learned and then used autonomously, such as the emphasis on *practices* like synthesizing or managing information rather than *skills* such as the proficiency of using a blog or word processing tool. This connects to the idea of the dynamic nature of literacy as perpetrated in the Literacy as a Social Practice theory.

As a distinct part of the NCTE 21st century literacies, the Literacy as a Social Practice theory is identified mostly through the second standard: to “Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought” (NCTE, 2012, para 1). The idea of building cross-cultural connections and relationships is not only inherently social but also speaks to the idea of broadening a student’s cultural awareness, and, in turn, their literacies. Literacies in the theory of social practice are seen as more than the communication through text—the practices of communication are tied to values, attitudes, and social relationships, and these practices are what the standard focuses on for student development, in combination with written genre knowledge and syntactic knowledge (Perry, 2012). The Literacy as a Social Practice element seems to derive from the broader paradigm of the sociocultural perspective. The specific standard in the NCTE framework addresses and emphasizes what the theory of Literacy as a Social Practice emphasizes: the importance of social learning in relation to cross-cultural collaborations and gaining more literacy skill across culture, thus gaining more literacy as a whole.

**Multiliteracies Theory and NCTE 21st Century Literacies**

Developed and introduced by the New London Group (1996), a research group that includes prominent researchers Gee and Luke, the Multiliteracies Theory focuses on establishing the new modes of literacy and communication and calls for a “much broader view of much broader view of literacy than portrayed by traditional language-based approaches” (p. 1). While
Multiliteracies Theory replicates many of the ideas put forth by the theory of Literacy as a Social Practice, multiliteracies focus not only on text production but on the multimodality of literacy practices. As Perry (2012) summarized, multiliteracies scholars “do not reject print literacy, but they view it as only one form of representation and meaning-making among many” (p. 59). The scholars focus on the new literacy mediums and the way society has shifted how language is used, such as texting, social media, and blogging. Because of this focus on societal impacts, multiliteracies is often associated with *New Literacies*, a term that defines the technological literacies necessary to understand and communicate with people in a digital world (Lankshear & Knobel, 2003). Compared to New Literacies Theory, however, Multiliteracies theory focuses on a broader scale of communication, and includes multimodality of language that surpasses digitalization of text and language.

Jewitt and Kress (2003) defined the term multimodality as a variety of representational and communicative modes of learning, including not only text, but also speech, gesture, images, and sounds. Seminal authors in the field of multiliteracies believe in the power relations of literacy and the cultural importance of literacy, as do the theorists who believe that literacy is a social practice. A point of contention lies in the form or mode in which these literacies reside—Literacy as a Social Practice focuses on text literacy rather than incorporating other forms of literacy. Additionally, multiliteracies theorists are much more inclined to incorporate practice in literacy instruction in unpacking the Multiliteracies Theory, while the Literacy as a Social Practice theory focuses on communities of learners rather than specifically on implications for younger learners (Perry, 2012).

While in the NCTE 21st Century Literacies Framework a lot of standards reference multiliteracies and multimodality, no standard other than “Create, critique, analyze, and evaluate
multimedia texts” (NCTE, 2012, para 1) addresses the theory of multiliteracies more specifically. In this standard, it is easy to connect the theory of multiliteracies to the idea of creating multimedia texts, as this would be incorporating skills of multimodality, or the ability to use multiple avenues of literacy instead of just text literacy. This standard clearly addresses the Multiliteracies Theory specifically in the sense of necessitating multiple layers and modes of literacy practices.

New Literacies Theory and NCTE 21st Century Literacies

New Literacies Theory focuses not only on the digital tools that support literacy but also on the procedures of communications required of 21st century literacy (Lankshear & Knobel, 2006). Knobel and Lankshear (2007) used two major categories in their explanation of the New Literacies Theory to separate different forms of communication. The first category, which Knobel and Lankshear (2007) termed the peripheral category of new literacies, was defined as a process in which a new technology or tool is being used to complete a traditional literacy task, such as writing an essay on a blog. The second category, which Knobel and Lankshear (2007) refer to as “new ethos stuff,” (p. 9) dictated the new language and principles that are involved in engaging in new literacies, such as collaboration, distribution, and participation in a dialogue on a global scale with digital tools. With the shift from Web 1.0 to Web 2.0 came a shift into new literacies, where websites and avenues of publication were no longer expert-driven but rather driven by public participation, such as the change from paid personal websites to blogging or Britannica online to Wikipedia (Knobel & Lankshear, 2007). What is most important in this shift is not the technological savvy but rather that this technology has impacted societies communication and language values, priorities, and sensibilities, thus has impacted literacy and ethos of literacy (Knobel & Lankshear, 2014).
The New Literacies Theory differs from Literacy as a Social Practice and Multiliteracies in important ways. New Literacies does not focus on the power dynamics of literacy but rather the changing distribution of text, emphasizing how technology specifically has impacted the way society interacts and how this interaction has changed from expert-driven, individualistic, and author-centric to collaborative and participatory in nature.

While multimodality is an element of the new ethos and new technological skill required of new literacy practices, multimodality is not the focus of New Literacies, nor is the differing ways and mediums in which one processes information. The New Literacies Theory focuses more on the way language has changed and the dynamic of distribution of text through what Knobel and Lankshear (2014) called technical and ethos “stuff” (p. 9).

While different in pivotal ways, Literacy as a Social Practice, Multiliteracies, and New Literacies theories share the tie back to the Sociocultural perspective; the focus that literacy and meaning-making can only be understood through social, cultural, political, economic, and historical perspectives.

New Literacies, with its nuance in distribution of text, seems to be one of the theories that NCTE borrowed from extensively to create their NCTE 21st Century Literacies Framework. “Develop proficiency and fluency with the tools of technology” (NCTE, 2012, para 1) connects to the “new technical stuff” that students will need to know as an element of new literacies. Teachers cannot expect that because students use technology that they understand the nuances of the new ethos and values of technology and how it impacts distribution of text or that they know how to utilize a variety of technical tools and skills.

“Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought” (NCTE, 2012, para 1)
borrows the idea from New Literacies that text written through the medium of technology is meant to not only be communicated by shared to create a dialogue amongst the new 21st century community. This focuses on the participatory, collaborative culture of online communication, and what Knobel and Lankshear (2007) called new ethos stuff of the Web 2.0 world. The standard that emphasizes designing and sharing information for global purposes also borrows the idea of new ethos stuff. The standard focuses on similar ideas that students should write for the purpose of communicating their ideas and participating in a global dialogue through the medium of technology and the Internet.

Finally, the standard “Attend to the ethical responsibilities required by these complex environments” (NCTE, 2012, para 1.) borrows the idea of the changing culture of online communication, because students will be expected to manage and maintain proper Internet etiquette. This borrows the concept of new ethos stuff, where the fracturing of space on the Internet creates a boundary-less publication space in which certain rules of etiquette emerge in a variety of contexts, from fan-fiction to blogging (Knobel & Lankshear, 2014).

New Literacies Theory seems to have an impact on how the NCTE 21st Century Literacies Framework was formed, but all of the elements of the framework seem to speak to minuet influences from the Literacy as a Social Practice, Multiliteracies, and New Literacies theories with the overarching paradigm of the sociocultural perspective. There is a final theory that seems to have impacted NCTE’s 21st Century Literacies Framework. It adds an additional element and factor in identifying social influence on literacy practices—Critical Literacy Theory.

**Critical Literacy Theory and NCTE 21st Century Literacies**

Critical Literacy Theory focuses on the relationship between language and power, much like Literacy as a Social Practice theory (Janks, 2010). Friere (2001) noted that language was not
independent of social interactions, meaning that language is interpreted in a way that dictates or formulates empowerment. Friere (2001) focused on critical literacy in his writings, and defined literacy as a process of consciousness that is used for empowerment. Bourdieu (1991) offers the definition in a different form: that language is a dynamic of power and politics, and that it uses language as signs of status and authority, whether positive or negative. In essence, the difference between Literacy as a Social Practice and Critical Literacy Theory is that while Literacy as a Social Practice focuses on community relations and power dynamics, Critical Literacy Theory focuses on how the individual interprets and then uses language and literacy as a form of power. This is much like how a teacher can use his or her perceived authority in the classroom to then dictate that a student’s voice is in some way lesser or less powerful than his or her own. In other words, Literacy as a Social Practice theory emphasizes that there is a power in literacy and how language is interpreted, while Critical Literacy emphasizes how that interpretation is used to create power dynamics and empowerment of the individual.

Because of the nuances between Literacy as a Social Practice and Critical Literacy Theory, the connection to the NCTE 21st Century Literacies Framework is closely tied to how Literacy as a Social Practice is emphasized in the framework. The distinction is the focus on how the student develops their power through language rather than the fact that their language would develop power as they create cross-cultural connections. Critical Literacy Theory would also be relevant to the standard in the NCTE 21st Century Literacies Framework that specifies that students would learn the ethical responsibilities they have as a member of the 21st century society. Empowerment can be enlightening but can also be abused by those who use language as a form of discrimination, cyber-bullying, or disregard for appropriate etiquette used in different medium.
Summary of NCTE 21st Century Literacies Framework Connections to Theory

Sociocultural perspectives, with elements from sociocultural theories of Literacy as a Social Practice, Multiliteracies, New Literacies, and Critical Literacy theories, seem to impact NCTE’s 21st Century Literacies Framework. Each theory, with the paradigm of Sociocultural Theory in common, links the framework to an extensive backing of literacy research. Shared elements of each theory, such as the focus on power dynamics through the use of language and literacy and impact of culture and society in understanding language and literacy, are the main focus in the standards outlined in the NCTE 21st century literacy framework. Below is a summary in visual representation of the four theories and shared paradigm of the sociocultural perspective and what nuances they tease out and what elements they share with each other.

Figure 2.1 illustrates how Critical Literacies and Literacy as a Social Practice share the emphasis on power but focus on different elements of that power dynamic, with Literacy as a Social Practice theory’s focus on how the power of literacy and language impacts communities and people relations while Critical Literacies focuses on how the individual uses literacy and language for empowerment. It is also clear that New Literacies shares the element of technology with Multiliteracies, but Multiliteracies focuses not only on technology but also other avenues of processing and interpreting language and literacy, such as visual and spatial literacy. New Literacies shares the element of ethos with Literacy as a Social Practice, because both emphasize how culture has impacted language and literacy and how understanding this new “ethos” is important for literacy practices. Multiliteracies shares the individual perspective with critical literacy with its emphasis on how learners, specifically students, learn through different avenues or medium, proving that literacy is multimodal, while critical literacy focuses on the individual’s interpretation of language’s power and how that individual chooses to use it.
All of these theories have one connection in common; their umbrella of the sociocultural perspective, in which understanding literacies and meaning making is irretrievably connected to social, cultural, political, economic, and historical contexts. All of these elements are seen in NCTE’s 21st Century Literacies Framework, making the framework backed by the sociocultural learning theory and all of the theories that make up the nuances of the theory. What the sociocultural theories do not have that the NCTE framework does have is a tangible, measurable set of standards that identify what it means to be 21st century literate.

**Current Research Using NCTE’s 21st Century Literacies Framework**

More recent research has used the NCTE 21st Century Literacies Framework as a theoretical frame (Bass et al., 2010; Meyer, Wade, & Abrami, 2013; Watluk et al., 2011). Furthermore, for
the purposes of this study, it is important to compare skills that students are expected to have against what teachers know and learn through their professional development (PD) practices. These skills include a variety of digital tasks, suggested by the framework as to include the ability to:

- Develop proficiency and fluency with the tools of technology;
- Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;
- Design and share information for global communities to meet a variety of purposes;
- Manage, analyze, and synthesize multiple streams of simultaneous information;
- Create, critique, analyze, and evaluate multimedia texts;
- Attend to the ethical responsibilities required by these complex environments.

(NCTE, 2008, para. 1)

Experts in the field of English education provide an impetus to utilize the framework as an opportunity for dialogue for teachers and their own professional development (Bass et al., 2010.). The NCTE framework can be used as a tool to “raise questions and generate conversation that lead to changes in teacher practice…” (Bass et al., 2010, p. 392). ISTE standards suggested the inclusion of professional development that allows teachers to “participate in local and global learning communities to explore creative applications of technology to improve student learning” (ISTE, 2008, p. 2).

In summary, the conceptualization of 21\textsuperscript{st} century literacies and the uses of 21\textsuperscript{st} century literacies by teachers engaging in professional development will be used as a lens for this research, and the researcher will draw on the NCTE 21\textsuperscript{st} century literacy framework. Teachers need to know how to use 21\textsuperscript{st} century literacy tools and skills to be able to teach students these
tools. Hence the reason for more emphasis on professional development through the context of what should be developed—comfort with and knowledge of technological tools, technology-based cultural and social norms, and focus on the NCTE 21st century literacy skills outlined in the NCTE framework.

**Professional Development**

Professional development is the educational experiences that a variety of professions partake in to learn and apply new knowledge, skills, and literacies to improve their effectiveness (Mizell, 2010). In the field of education, teacher effectiveness in turn heightens student effectiveness. Professional development is required amongst teaching professionals and the form varies from mandated, structured professional development to professional development teachers seek on their own voluntarily (Mizell, 2010).

The goal of professional development (PD) is to expand learning and knowledge, as well as nurture teachers’ practices (Lieberman & Friedrich, 2010). Traditional professional development is typically a top-down, district or principal facilitated encounter between teachers and an expert in a particular trend or field (Barab, 2001). Oftentimes professional development concepts are trending topics: new professional development initiatives that may not even be fully implementable from school to school due to lack of materials or differing school or district climate (Schmoker, 2012). McConnell et al. (2012) found that most PD is administered through short-duration workshops that are not effective in changing practice. This pulls teachers out of their classrooms and goes against research findings that professional development should be extended and collaborative (Pashnyak & Dennen, 2009).

Extended PD means that to be successful, teachers need to engage in long periods of professional development, whether it is weekly or monthly or even daily, over the course of their
professional lives. Collaborative PD means that teachers utilize other teachers, staff, principals, and the surrounding community as a source for their learning. Friend and Cook (2000) suggest that collaborative learning includes the following factors: voluntary participation, parity in decision-making, a shared common goal, active participation, shared resources, and shared accountability.

Researchers such as Housman and Martinez (2001) find that teachers in low-performing schools tend to work in isolation rather than as a team. This is not indicative of a collaborative learning environment. Unfortunately, many schools still function in a culture that is formed on privacy and isolation rather than collaboration (Doolittle & Rattigan, 2007). Furthermore, many school districts lack the number of faculty in the same content area, making a cadre of teachers with common goals that work collaboratively difficult to assemble (McConnell et al., 2012). Teachers too need to be dedicated to the idea of professional development and learning (Lester, 2003). In the current scholarship, there is evidence of extended and collaborative PD that is successful for teachers, both digitally implemented and face-to-face, but these studies do not address high school English teachers who blog.

**Professional Learning Communities**

There are many examples of collaborative and extended professional development techniques. Research identifies successful professional development that is both collaborative and extended focuses on the idea of a professional learning community. A professional learning community is a group of individuals in a school setting including teachers and other staff members that focus on three core principles: ensuring students are learning rather than just being taught, harnessing a culture of collaboration, and focusing on results (Dufour, 2004). In Lortie’s (2012) study, early career teachers observe and model teachers around them, and use feedback as
well as self-assessment to improve their own classroom practices. Watson (2013) found that “the kinds of teachers that persist in innovation demonstrate higher levels of self-efficacy in teaching” (p.3289). Foley (2001) reminds the research community that the integral structure of middle and high school classes involves interdisciplinary teams of educators who collaborate on curriculum decisions and that co-teaching is another form of collaboration that is utilized in the secondary school.

Seminal researchers of the professional learning community include Little (1982) and Wenger (1998). Little (1982) made it clear in her ethnographic study that teachers working in isolation did not perform well enough to impact school improvement. Wenger (1998) found that for a school to be successful, it needed to involve teachers and staff in collaborative efforts with shared goals, values, and support. As Anfara (2012) synthesized, these seminal studies, amongst others, made it clear that a professional learning community means teachers have supportive and shared leadership, values and vision, collective learning and application of learning, shared practice, and supportive conditions (Hord, 1998; Wenger, 1998). Professional learning networks and communities, researchers claim, are leading tools for educators looking to expand their knowledge in a collaborative fashion (Darling-Hammond & Richardson, 2009; Dufour, 2004; McConnell et al., 2012). Darling-Hammond and Richardson (2009) reported that professional learning communities have gained popularity in schools and are considered powerful structures for teacher professional development (Servage, 2008).

Hord’s (1998) research identified a facilitator-guided discussion between staff members, focusing on critical analysis, which he then defined as a successful PD using a professional learning community. Doolittle, Sudeck, and Rattigan (2008) provided further evidence of professional learning communities within schools and school communities that work in three
separate high schools they investigated. These researchers underlined the importance of a shared goal, vision, and procedure for professional learning communities to be successful. Wood (2007) showed a successful professional learning community in three elementary schools, a middle school, and a high school in a local area where teachers met in collaborative groups. These participants found much use in interaction, with discussions ranging from classroom practice struggles to using protocols and raising questions in common interest of the group (Wood, 2007). However, for this to be possible, the area’s superintendent received a 3-year grant to pay for substitutes when teachers working in their collaborative groups (Wood, 2007). What both Doolittle, Sudeck, and Rattigan’s and Wood’s results do not take into account is the fact that the typical US classroom teachers’ workday does not allow for interaction with colleagues, and is too full of administrative duties, teaching, and grading to allow for any form of professional development during school hours (Pashnyak & Dennen, 2009).

Professional learning communities also are defined as collaboration and professional development that occur face-to-face. This makes a professional learning community successful only if a team of teachers and staff are dedicated to the idea. The environment in the school also must be suitable for this form of learning. Because of the accessibility to the Internet, however, the traditional face-to-face professional learning community has given way to communities that occur online. While professional development activities vary from school-mandated professional development workshops to conferences to webinars, teachers not only can look up information for classroom content, but also can, and should, use the Internet for their own development as a teacher to help incorporate technology into the classroom and expose themselves and their students to 21st century literacies.
Professional Development Using Technology: The Personal Learning Environment

While Hord’s (1998) research focused on face-to-face teacher interaction through the form of professional learning communities, virtual environments also harness the ability to have supportive and shared leadership, values and vision, collective learning and application of learning, shared practice, and supportive conditions (Neubauer, Hug, Hamon, & Stewart, 2011). Wilson et al. (2007) discussed personal learning environments, a concept similar to the professional learning community, and an extended version of what is referred to as a virtual learning environment. The concept of a personal learning environment mimics the collaborative professional development uses of the professional learning community, but without the requirement of access.

EDUCAUSE learning initiative (2009) defined the personal learning environment as “tools, communities, and services that constitute the individual educational platforms that learners use to direct their own learning and pursue educational goals” (p. 1). While a virtual learning environment typically suggests that one uses particular software or virtual platforms (i.e., Twitter) as a learning tool, a personal learning environment utilizes several different software and virtual platforms. The use of one’s own blog with a Real Simple Syndication (RSS) feed that aggregates multiple related blogs is also considered a personal learning network, even though it only uses the blogging platform (Nuebauer, Hug, Hamon, & Stewart, 2011). Martindale and Dowdy (2010) suggested that the personal learning environment has been an outcome of social media allowing learners to aggregate and share information with relative ease, and manage their own meaning-making. The difference between a professional learning community and a personal learning environment is typically the format; the former is face-to-face, the latter, digital (Wilson et al., 2007).
Personal learning environments are both technological and pedagogical tools, and require development and application of self-regulated learning (Dabbagh & Kitsantas, 2011). Additionally, personal learning environments are premised on social media, and are effective in helping integrate formal and informal learning (Dabbagh & Kitsantas, 2011). McGloughlin and Lee (2010) suggested that personal learning environments allow learners to take charge of their own learning, and that the process is inherently self-sponsored and independent but in a collaborative environment. While some empirical research studies showed the promise of personal learning environment in changing traditional face-to-face learning to group conversation online through case studies and action research (Liber, 2000; Valtonen, Hacklin, Dillon, Vesisenaho, Kukkonen, & Hietanen, 2012) the relative newness of the concept makes this an area that needs more empirical research attention.

There is evidence that personal learning networks for learning and PD have been successful, but there are still many gaps in research regarding the uses of virtual platforms for teacher PD. Digital portfolios have been a big investment in current teacher preparation programs, and an analysis of data indicated that there was a positive change in the participants’ perceptions of their technology skill level and their use of digital portfolios as a learning/assessment tool in their K-12 classrooms (Baker & Christie, 2005). A national sample of Internet use showed that 68% of teachers found information resources for use in their lessons, and more than one-quarter of all teachers reported doing this on a weekly basis or more often (28%) (Becker, 1999). The diversity of ways that technology can help professional development was one of the major findings of Lawless and Pellegrino’s (2007) review of research on teacher PD on technology and using technology. While reliable, these studies do not address the area of blogging, which is the focus of this study. Additionally, quantitative research does not go in
depth to identify perceptions of particular participants or outliers, while qualitative research does not allow for generalization to this study’s sample population.

**Professional Development through Blogging**

Research on the use of social media such as blogs and wikis also attest to the ease of finding professional development using Web 2.0 technologies (Bauer, 2010; Bauerlein, 2009; Boling, 2008; Flierl & Fowler, 2007; Greenhow, Robelia, & Hughes, 2009). Almost all of the research on blogs attends somehow to the idea of using blogs as a professional development source, whether explicitly or implicitly. Nardi, Schiano, and Gumbrecht (2004) noted that some of the reasons why people blog in the first place include updating others on activities, expressing opinions, seeking others feedback, and release of emotional tension, all of which show that collaborative PD is both a cathartic and reflective practice. Downes (2004) listed several uses of educational blogs in his article, including the use of educational blogs as a dissemination tool for teachers sharing resources on a particular topic. Quinn (2009) suggested a variety of different librarian blogs as tools not only to learn from but also gain cultural awareness. Black (2007) suggested “it’s only a matter of time before educators routinely post grades online or turn to blogs and podcasting as teaching tools” (para 2). Joshi and Chugh (2009) used a case study of accounting students to determine the reflective capabilities of the blog forum, finding that these students did seem to perceive heightened reflective practices when engaging in blogging. While all of these studies and articles imply the effectiveness of using blogs as professional development, there seem to be few, if any, empirical studies that focus on blogs, professional development, and secondary school teachers.

The few empirical studies that do focus on blogs and secondary school teachers focus less on professional development. Lai and Chin-Pin (2010) studied the factors that influence teacher
blog adoption, citing in their quantitative findings that enjoyment of helping others, knowledge self-efficacy, personal innovativeness, perceived usefulness, perceived ease of use, compatibility, and school support were the factors involved in secondary teachers choosing to keep and maintain their own blogs. While informative, this study did not suggest professional development as a choice on their questionnaire. It should also be noted that this study was conducted in Taiwan, where the teaching environment is vastly different from the American school system.

In Top’s (2012) study of pre-service teachers using blogs, he found that the undergraduates use of blogs in their classroom created positive feelings about collaborative learning and perceived learning, and a moderate feeling about the sense of community. While about blog use and teachers who potentially will become secondary school teachers, this research study lacked the breadth necessary because it was restricted to one classroom and did not focus on practicing secondary school teachers or professional development.

With the relative newness of the field of personal learning environments as well as the emerging research on blogging (Dennen, Myers, & Suggs, 2011), there seems to be a lack of empirical evidence in how secondary school teachers use blogging as a form of professional development, whether through a personal learning environment or not.

**Professional Development Summary**

Collectively, these studies indicate that to be successful, professional development should be extended and collaborative. These studies also show that while professional learning communities do provide extended and collaborative PD opportunities, the implementation of these types of communities requires ample time and finances. Digital platforms are identified as areas where professional development can occur without the burden of money. Blogging can act
as a platform for professional development, whether it is within a personal learning environment or a singular virtual learning environment, but little empirical research identifies how blogging can be used as professional development.

**Blogging Practices**

Blogs, amongst wikis and other writing and collaborative tools accessible through the web, have become popular in current research, discussed as “professional development on demand” (Bauer, 2010, p. 37), a “world’s knowledge is a public good” (Smith & Casserly, 2006, p. 9), and a place where global communication and discourse can take place (Flierl & Fowler, 2007). Blogs, being the “weblog” online communication where typically one user or a set standard of users share their comments, have been an emerging topic in educational discourse (Flierl & Fowler, 2007).

The origin of blogs is unknown, but they became formally addressed as blogs around 1999, after being coined weblogs by Barger in 1997 (Downes, 2004). Blogs originally were often in diary form. Second generation blogs were link and tool driven sites, where hyper linking was more predominant than narratives and personal thoughts (Downes, 2004; Kwai & Wagner, 2008). Currently, blogs are a mix of narratives, reflections, and selections of links (Downes, 2004). Even though in existence since the 1990s, blog popularity has grown exponentially only recently. Richardson (n.d.) identifies that over 4 million blogs were created in 2003 alone. There are 42 million blogs in the US alone, with 329 million people viewing blogs monthly (Bullas, 2014). Over 60% of these blogs are in English, and 48% are written by Caucasians (Bullas, 2014). Platforms that allow bloggers to create a blog are typically free, and include Blogger and WordPress (Bullas, 2014). Blogs can be used for a variety of reasons, and can display pictures, videos, and linked objects like PowerPoint slides (Richardson, n.d.). Additionally, bloggers can
include a blogroll on their site, typically linking their blogs to other blogs they enjoy. This kind of inter-linking typically occurs in a particular context, and collectively becomes known as a blogging community. A blogging community has mutually inter-linked blogs, a “joint enterprise,” and “a shared repertoire as both bloggers and academics” (Dennen, 2012, p. 4). A community blog should not be confused with a blogging community, as a community blog is one blog on which several different bloggers post. Blogs can also have a variety of security settings, with the most private blogs password-protected and the most accessible easily found through a search engine (Nardi, Schiano, & Gumbrecht, 2004). Some blogs do not allow comments to be posted, while others rely on comments to posts; some bloggers post many times in one day, and others as seldom as once a month (Nardi, Schiano, & Gumbrecht, 2004).

Despite the growing popularity of blogs, compared to mainstream social media such as Facebook and Twitter, blogs attract far fewer readers and participants (Farrell & Drezner, 2007). However, “blogs still do play an increasingly important role as a public debate forum” (Farrell & Drezner, 2007, p. 16). While blogs are becoming more popular, educators have been slower to incorporate blogs into both their own lives and into their own classrooms, typically for reasons of privacy, security, and access (Richardson, n.d.). However, educational blogs, defined as those in which educational dialogue occurs, typically with stakeholders in an educational community, have a variety of purposes. Educational blogs can be used in the classroom as a dynamic web page, a resource, or to engage in dialogue and conversation (Downes, 2004). They can also be used for instructors to share tools and reflections of classroom practices. There is little focus on educational blogs in current research. Articles that do focus on educational blogs often are not empirical studies, nor do they address the English content area or high school teachers.
Blogging Community Practice

Every virtual platform has a variety of participants: the blogosphere is no different. For the purposes of this research, it is necessary to identify the participants found on the educational blog platform. Amongst researchers, there are several ways to identify participants in the blogging community. Some researchers relied on access to blogs as a definitive factor, such as the “heavy, medium, low” users in Du and Wagner’s (2006) research. Others identify bloggers as habitual, active, personal, and lurker, as Kwai and Wagner (2008) do in their research. Kwai and Wagner’s (2008) categorization defined habitual participants as those who posted several times a day, accessed the blog for an average of a few hours per day, were interested in blogging as a sharing and community device, and influenced peers greatly.

For the purposes of this research, the outlines given in Table 2.1 identify how each participant is categorized and labeled. Because there is an emphasis on teachers’ blogging, no blogs that regard different interests such as hobbies will be utilized in this research, even if it is a teacher that is doing the blogging on this subject. Additionally, the research study focuses on how teachers blog for professional development, so teachers who blog or own a blog for their classroom would not be considered academic bloggers in the sense that they do not blog for the uses of professional development. While the term lurker has negative connotations, it seems to be used fairly often in identifying blogging participants. Jackson, Yates, and Orlikowski (2007) found that bloggers surveyed, whether considered heavy, medium, or low users, all read others’ blogs more often than they updated their own blog, which they then describe as a lurking practice that influences the blogosphere. Lurkers, Dennen (2012) says, do have a responsibility to the blogosphere too, and impact the way bloggers and commenters function in a particular blogging community, as their presence is made known through blog counters and statistics.
Commenters can vary from those who correct minor spelling or grammatical mistakes to those who contribute to the content of the blog and function as community discourse contributors (Baumer, Sueyoshi, & Tomlinson, 2011). Because of her interest in academic bloggers, and the focus of this research on educational blogs, the researcher utilized Dennen’s (2012) categorization of blog participants, adapted from her conference proposal in Table 2.1.

**Table 2.1 Educational Blog Participants, Adapted from Dennen (2012)**

<table>
<thead>
<tr>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Bloggers</td>
<td>These participants actively participate in the blogging community by posting on their own blog or a community blog as often as daily and as seldom as once every two weeks. These bloggers may also be commenters. Note that these are teacher bloggers that are blogging as teachers for professional development or learning, and not posting on hobby blogs, personal non-teaching blogs, or classroom blogs.</td>
</tr>
<tr>
<td>Commenters</td>
<td>Commenters give feedback to posts that bloggers write. Commenters may post on their own educational blog or on a community blog, but post personally on a blog less than every two weeks.</td>
</tr>
<tr>
<td>Lurkers</td>
<td>Lurkers read posts and comments and seldom post or comment personally (No more than twice a year)</td>
</tr>
<tr>
<td>Non-Bloggers</td>
<td>Those who do not engage in the blogging community in any fashion. Note that this does not mean that they are not engaged in other social media practices or 21st century literacy skills</td>
</tr>
</tbody>
</table>

Blogging community norms, defined as the approval of participation in a blog by following specific practices (Hsu & Lin, 2008), include hyperlinking similar blogs that are high-quality; thusly, joining goals of bloggers together to disseminate information and carry on dialogue within this community. In the blogosphere, it is expected that participants protect the privacy of the blogger and commenters, help cultivate a bloggers voice, and reciprocate comments (Dennen, 2012). In the academic/educational blogging community, Dennen (2012) suggested that in addition to these norms, participants are expected to credit authorship and engage in academic discourse.
Hsu and Lin (2008) identified what motivates bloggers; the perceived usefulness, ease of use, enjoyment as well as reputation, trust, and expected relationships all played a part in the attitude towards blogging and the intention to blog. Additionally, Jackson, Yates, and Orlikowski (2007) found that there are anticipated benefits that bloggers suggest, including a variety of factors such as networking and self-expression. These findings are important as they show what can influence teachers to pursue the avenue of educational blogging, whether in the form of blogging, commenting, or lurking. Blogging norms identified in this section address how participation in the blogosphere varies, and how each participant has an important role in the collaborative and extended learning process. In this study, this was addressed in the survey and included teachers perceptions of how certain characters on blogs act and why they choose or do not choose blogging as an avenue of professional development.

**Types of Blogs**

There are several types of blogs. This research focuses on educational blogs in particular. Educational blogs are written for a teacher audience and typically are written by stakeholders in the educational field. Within educational blogs, there are still different types of blogs which all adhere to the norms of the blogging community. These different types of blogs are referenced in research as genres: a type of discourse that acquires a common name within a community (Miller, 1985). Herring, Schiedt, Wright, and Bonus (2005) referenced research on blog bridging genres identifies four distinctive types of blogs: personal (also known as “diaristic”) journals, filter blogs, K-logs, and mixed blogs. The majority of the blogs these researchers found in their content analysis were personal blogs where bloggers revealed their thoughts, feelings, and emotions. Filter blogs are considered to be blogs that disseminate information and provide links to tools and other useful resources. K-logs were blogs that included primary content that was
informational and observational. This research study will include all types of educational blogs as it is important to see what teachers find the most influential for their professional development, as per their description of the types of blogs they use as well as specific questions that request this information through the initial survey data collection.

**Teachers as Bloggers**

Research on blogs often deals with student utilization rather than how teachers use educational blogs (Hidgon & Topaz, 2010; Luehmann & Frink, 2009; Ware & Benschoter, 2011; Witte, 2007). Some empirical studies devote their attention to different aspects of blogging, such as students’ blogging outside of class, content analysis of blogs, or in-class part-time blogging. These studies revealed the motivation that blogging instills in students and how blogging in the classroom could potentially open an avenue for students to share their voice, explicate their writing skills, and build their experience with technology skills (Hidgon & Topaz, 2010; Luehmann & Frink, 2009; Ware & Benschoter, 2011; Witte, 2007). However, these studies do not reveal the way teachers build their own knowledge to create these blogging experiences with students—the start of blogging in the classroom should, hypothetically, start with teachers understanding blogs and how to incorporate them in a class. There are no empirical studies on high school teachers and blogging, especially in the subject area of English.

The research that does exist on teachers’ blogging shows the benefits of doing so. Teachers who blog about their educational practices continuously as a professional and personal outlet seemed to develop teaching identity and engage more in self-reflective practices, based on a case study of a prolific middle school science teacher blogger by Luehmann (2008a). Luehmann (2008b) and Darling-Hammond and Bransford (2005) noted how teacher blogging allows for self direction, provides rich opportunities for reflection and meta-cognition, invites
perspective making and taking through interaction with a global audience, promotes knowledge brokering, and supports identity development (Luehmann, 2008b, p. 289-290). Darling-Hammond and Bransford (2005) compiled a selection of articles and chapters to suggest the importance of a teacher becoming a lifetime learner. In this meta-analysis, Hammond and Bransford (2005) suggested that by becoming members of collaborative communities of practice, teachers could practice lifetime learning and reflect on their teaching philosophies and strategies. Becoming a member of a blog or a blogging community that focuses on education, then, may allow teachers to not only become members of personal learning communities and communities of practice, but also to do so in an informal and easy-to-access way. However, these studies did not include English high school teachers.

In Autrey et al. (2005), teacher-researchers in English Education developed digital portfolios that included blogs and blog posts that they utilized to connect and collaborate with one another. Their experiences with blogging show the potential for outreach and support from colleagues, peers, and even students. While in the content area of English Education, Autrey et al.’s (2005) study focused on the authors’ experimentations with blogging that were only possible through extensive grant funding. Shoffner’s (2009) qualitative study of nine pre-service teachers in a master’s program identified, through content analysis of voluntary blog reflections and interviews, that the majority of these nine pre-service teachers found it easy to integrate blogging as a reflective practice into their lives. Some in this study felt that blogging and technology use in general did not fit their reflective style, while some felt the blog isolated them and preferred online forums and discussion-based technology tools such as social networking sites (Shoffner, 2009). This identified potential issues with blogging as a professional
development or reflective outlet for teachers. However, Shoffner (2009) used her own classroom as a sampling pool, thus may have had biased results.

Rosaen, Hobson, and Khan (2003) used 24 pre-service elementary teacher participants and 15 cooperating elementary teacher participants in a yearlong study of technology integration to suggest, through quantitative and qualitative evidence, that there is “an emerging culture of collaboration and reciprocity” (p. 299) that evolves through the use of technology. Professional learning opportunities become easier, they suggested, when technology is the mediator between mentors and mentees, regardless of technology medium (Rosaen, Hobson, & Khan, 2003). In another pre-service teacher research study, Hernandez-Ramos (2004) used 56 pre-service teacher students in a qualitative study over the course of a semester to study the effects of blogging on technology support, reflective practices, and transfer of pedagogical and teaching knowledge. This research indicated that a majority of remarks regarding blog set up were positive, and that the blog functioned as a reflective and collaborative practice for teachers (Hernandez-Ramos, 2004). However, because of its qualitative nature, this study is hard to generalize outside of the sample Hernandez-Ramos (2004) used.

There was also research outside of teacher education that references teachers using blogs. Denskus and Papan’s (2013) research on bloggers in a communication field recognized the uses of blogs as a reflective practice and is a testament to blogging and its uses as a peer learning avenue across fields. The researchers note, after focuses on case studies of development bloggers, that the blogosphere in which they blogged “served as a reflexive and reflective learning process center, where mentoring, intergenerational exchanges, and multidisciplinary inputs all contributed to the learning process” (Denskus & Papan, 2013, p.465). Regardless of
field, blogging is becoming known for its ease of utilization as well as its capabilities to provide a reliable source of peer mentoring and reflective practices.

Overall the research that incorporated blogging, whether it was practicing teachers’ blogging, pre-service teachers blogging, or different content area or other field experts blogging, showed the potential benefit of blogging as a reflective practice for teachers and experts (Denskus & Papan, 2013; Hernandez-Ramos, 2004; Rosean, Hobson, & Khan, 2003). A reflective practice is a form of professional development where a participant focuses on critical thinking and metacognition of a previous action (Denskus & Papan, 2013; Hernandez-Ramos, 2004; Rosean, Hobson, & Khan, 2003). The negatives that these research studies pinpointed included access to the Internet and the preference of pen and paper reflective practices over reflective practices that used blogs. The majority of research, however, suggested the positives of blogging for teachers outside of the classroom—it is easy to use, helps teachers learn more about the technology it incorporates, is a good tool to collaborate and reflect on practices. It is also seen as an easy outlet and starting point for teachers who want to join the progressively more collaborative and technological teaching field.

There is an evident gap in the current blogging research that is important to explore. While blogging may be connected to higher reflective practices and more collaboration, there is little research on how blogging outside of the classroom influences teacher practice inside the classroom. There is also little on the specific subject area of English and the specific age group of high school students.

**Teachers Lacking Blog Use**

There is little scholarship in educational research that pinpoints teachers’ reasons for not blogging. There were participants who suggested blogging may not be their choice of reflective
outlet (Shoffner, 2009), or those who struggled (three participants out of 56 participants) to set up their own blog (Hernandez-Ramos, 2004). The majority of studies, however, seemed to comment on the positives of blogging. These studies, however, also may have been biased and focused little on high school teachers, the English content area, and how teachers blog for professional development. This suggests a gap in the research. Because the current research included four different types of participants, including those who do not blog, the researcher was able to explore the reasons that may stop teachers from blogging, and what teachers found to be useful about educational blogs as a professional development tool.

Doering, Beach, and O’Brien (2007) suggested that blogs and wikis foster constructivist and inquiry based classrooms, and to understand how to engage in these sorts of media teachers personally should be able to use these tools. Redefining literacy to include online writing and reading as well as digital literacy mandated a shift in how teachers incorporate technology. Students should be able to publish for a larger audience and engage in the “participatory cultures” that exist through Web 2.0 (Doering, Beach, & O’Brien, 2007). Kist (2006) suggested that in order to help teachers use technology like blogging in their classroom, professional development should transform to accommodate such technological skills, and pre-service teacher education programs should continually update their technology classes to support teachers. Swenson et al. (2006) suggested that reading a blog involves different skills compared to reading print, such as manipulating icons and viewing steaming video. This suggests that teachers need to develop reading strategies that include higher order thinking skills and higher focus and fluency, and by engaging in blogging personally, would learn the reading strategies necessary to model to students as they read blogs. By incorporating reading strategies that are necessary for blog reading, teachers focus on higher order thinking skills such as analysis, synthesis, and
evaluation and bridge in-school literacies with out-of-school literacies (Zawilinksi, 2009). The need for teachers to learn about what technology students use is evident; over 12 million adolescents from ages 12 to 17 maintain their own blogs in the US, although some are in need of guidance in how to effectively and efficiently maintain a blog (Lenhart & Madden, 2005; Zawilinksi, 2009). This evidence demonstrates a need for an empirical study that focuses on both how teachers use educational blogs for professional development, and if not, why they do not use blogs, as well as a focus on the understudied group of English high school teachers.

**Summary**

The literature review for this project highlighted the need for scholarship that pertained to how practicing teachers use blogs in their classrooms or as professional development. NCTE 21st Century Literacies Framework was addressed and used to frame this research study. Blogging communities, practices, and participants were identified. Additionally, scholarship that served as a call to action for teachers to utilize blogs was discussed, and educational mandates that implicated technology use and technology professional development were surveyed. The gaps that were uncovered included the lack of research on why teachers choose not to blog, as well as how educational blogs or blogging influence teacher pedagogy and student achievement or classroom utilization of technologies or techniques learned on blogs. Standards and policies provide a more holistic scope of teachers and blogging, and provide an impetus to shift professional development practices to independent, self-sponsored knowledge development and practices.
CHAPTER THREE

METHOD

This study utilized two tiers of data collection, focusing on the survey data (quantitative) to collect a demographic data set that would then be further explained by the in-depth interviews and artifacts (qualitative). Because of the exploratory nature of the research questions, it was essential to utilize qualitative methods in order to explore the utilization of educational blogs for professional development within the context of the NCTE 21st Century Literacies Framework.

The scope of the research also utilized quantitative measures in order to gain, illuminate, and differentiate perceptions of educational blogs amongst the Teacher Consultant population that currently or previously taught English Language Arts at the secondary level (9th-12th grade).

This mixed method study followed a sequential explanatory design and involved three types of data collection. This triangulation of data allowed the researcher to see the trends across the survey data, formulate a narrative using the interview, and then allowed the researcher to understand, using artifact evidence, how the participants used the educational blog information in practice (Creswell, 2013).

The primary research questions investigated in this study were:

*Primary Research Questions:*

1.) How do 9th-12th grade National Writing Project Teacher Consultant (NWPTC) English teachers perceive the use of blogs as a classroom, professional development, and reflective source?

2.) How do the blogger types differ in the ways they talk about and use 21st literacy in their teaching?
Table 3.1- Aggregated Research Questions

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Quantitative or Qualitative</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the sample of National Writing Project Teacher Consultant 9-12th grade English Language Arts teachers describe using blogs?</td>
<td>Quantitative</td>
<td>Survey</td>
</tr>
<tr>
<td>In what ways does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own classroom practices?</td>
<td>Qualitative</td>
<td>Interview, artifacts, open-ended responses on survey</td>
</tr>
<tr>
<td>To what extent does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own professional development as a teacher?</td>
<td>Qualitative</td>
<td>Interview, artifacts, open-ended responses on survey</td>
</tr>
<tr>
<td>In what ways does the sample of NWPTC 9-12th grade English teachers perceive that active, independent, self-sponsored blogging influences their reflective practices?</td>
<td>Qualitative</td>
<td>Interview and artifacts</td>
</tr>
</tbody>
</table>

Mixed Methods Research Background

Mixed methods research is defined as “the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts, or language into a single study” (Johnson & Onwuegbuzie, 2004, p. 17). The use of mixed methods in this study was important to first gain a representation of how teachers were using blogs (Greene, 2006; Green & Caracelli, 1997; Johnson & Onwuegbuzie, 2004; Hanson, Clark, Patska, Creswell, & Creswell, 2005). The representation of a national sample of NWP teachers
demonstrated how they were using blogs as professional development, what forms of professional development they engaged in, and how they implemented and perceived 21st century literacy skills. The NWP is a professional development network that supports teachers of writing in all subjects and all grade levels (National Writing Project, 2014). The NWP’s mission is to provide resources and professional development to a network of sites anchored at colleges and universities regarding writing development and 21st century literacies (National Writing Project, 2014).

Questions regarding blogging, professional development, and 21st century literacy skills were formatted into survey questions, utilizing a larger sample size compared to qualitative research, and the researcher then analyzed the data using descriptive statistics. However, to answer sub questions in this research study, more information and narratives were needed to explicitly tie why these phenomena occurred and what the numbers represent. Ivankova, Creswell, and Stick (2006) suggested that:

The quantitative data and subsequent analysis provide a general understanding of the research problem. The qualitative data and their analysis refine and explain those statistical results by exploring participants’ views more in depth. (p. 5)

This study used mixed method design where the survey (quantitative) data collection occupied a secondary role to the multiple case study methodology, but the two data sets were combined for interpretive results in the Chapter Five discussion (Evans, Coon, & Ume, 2011). This is what Hanson et al. (2005) and Creswell (2013) described as a sequential explanatory design, where quantitative data collection precedes the qualitative data collection, and the priority is given to the qualitative data collection and results, also known as quan→QUAL. Figure 3.1 (Hanson et al., 2005, p. 227) visually represents this form of mixed methods research.
QUAN = quantitative data were prioritized; QUAL = qualitative data were prioritized; qual = lower priority given to the qualitative data; quan = lower priority given to the quantitative data


Figure 3.1 - Options Related to Mixed Methods Data Collection Procedures

**Conceptual Framework**

The NCTE 21st Century Literacies Framework that was used for the theoretical framework of this study can be broken down into segments that are suggested by NCTE (2008):

- Develop proficiency and fluency with the tools of technology;
- Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;
- Design and share information for global communities to meet a variety of purposes;
- Manage, analyze, and synthesize multiple streams of simultaneous information;
- Create, critique, analyze, and evaluate multimedia texts;
- Attend to the ethical responsibilities required by these complex environments.
While these suggestions were focused on student implementation, some researchers, including Bass et al. (2010), have suggested utilizing the elements of this framework to focus on professional development for teachers. For example, do teachers develop proficiency and fluency with the tools of technology in a way that then allows students in their classroom to implement technologies in a way to develop proficiency? By using this framework as a tool, the researcher was able to recognize how teachers were using educational blogs as a method to develop the skills outlined by the framework. Does blogging allow for the development of fluency, the building of cross-cultural connections, designing and sharing information, managing analyzing and synthesizing multiple streams of information, creating and evaluating multimedia texts, and attending to ethical responsibilities? Do varying participation types in blogs impact these elements? Does an academic blogger develop fluency better than a commenter or a lurker? Does the implementation of these elements then influence how these teachers teach? Just because teachers can be active academic bloggers, does that mean that they will then implement certain practices or knowledge they have gained in their classroom? Does not participating in blogging impact how 21st century literacies are developed for teachers?

Figure 3.2 - Visualizing the NCTE 21st Century Literacies Framework
Visualizing the NCTE 21st Century Literacies Framework implementation in Figure 3.2 breaks down the sample that was investigated, which were the high school teachers in the National Writing Project Corpus, and how they were categorized in the blogosphere. After categorization, the researcher investigated how these participants implemented professional development practices through their blogging and how these practices impacted their classroom practices through the lens of the NCTE’s 21st Century Literacies Framework. This allowed the investigator to focus specifically on how teachers develop their own 21st century literacy skills.

Data Sources and Procedures

The data sources for this research study included surveys, interviews, and the collection of classroom artifacts in the form of lesson plans. This mixed methods study followed a sequential explanatory design, where qualitative data were used to explain and interpret quantitative results (Creswell, 2013).

Tier One Phase

The Tier One data collection focused on how selected variables (educational blogging, professional development, 21st century literacies) were used and what preferences participants had in using them in the context of teaching and professional development. The goal of the Tier One section was to identify whether or not teachers were using educational blogs for professional development, as well as why they chose to do so or not to do so. The Tier One data was subservient to the Tier Two data and acted as both a way to explore general perceptions of blogs, professional development, and 21st century literacies and categorize and select Tier Two participants. The survey covered ways in which teachers were using educational blogs, ways in which teachers were practicing their own professional development, and ways in which teachers were utilizing 21st century literacy skills. This described how teachers used blogs within multiple
facets, which addressed the study’s research question, specifically sub question number one. The researcher collected the Tier One data through an online cross-sectional survey using a self-developed (adapted from Witte’s 2013 survey) and pilot-tested instrument. The questions were validated through piloting amongst colleagues and peers for access and readability. The questions were revised based on committee member, colleague, and peer suggestions for readability and access purposes, primarily by rephrasing several questions and including a definition for terms such as independent vs. mandated professional development and 21st century literacies.

The criteria for selecting the participants in this study included a.) participation in a National Writing Project affiliated site, and b.) experience teaching 9-12th grade English Language Arts. The survey, which was administered to 118 participants1 total, was distributed through the NWP network prior to collecting Tier Two results. It informed who was selected to contribute to the Tier Two data collection. After eliminating surveys that were not completed in entirety, the remaining 73 surveys were included in the Tier One data set and were analyzed.

The 40-question survey was online, and took approximately 25 minutes to complete. The researcher used the Qualtrics survey maker and distributor. The survey can be found in Appendix A. The survey included general demographic information questions as well as opinion and experience based questions regarding professional development and educational blogs. The survey used a combination of questions using 4-point Likert scale items, open-ended items, and multiple-choice items.

1 Because of the limited sampling frame, self-selection criteria, and limited response rate, generalizability of survey findings were affected, and it would be hard to generalize outside of the specific sampling frame used in this study. Additionally, survey results limit the ability to draw cause and effect results, as well as follow trends over time. Thusly, this research did not utilize the survey to do so.
**Tier Two Phase**

After purposefully selecting participants from the survey for the Tier Two phase of the research project, the researcher collected interview and artifact data. Artifact data were in the form of lesson plans either incorporating information learned on blogs or a regular lesson plan (without student data), depending on whether or not participants interacted with blogs. The goal of the Tier Two data collection was to gain a more naturalistic perspective of the research question and survey results, and to suit the explorative aims of the study (Ivankova, Creswell, & Stick, 2006).

The researcher added additional interview questions to the bank of questions the researcher asked during the pilot study that was conducted in the fall of 2013. The interview questions can be found in Appendix B. These interviews took between 20 minutes and 40 minutes. The third data source in this study was an artifact collection. The participants who agreed to be part of phase two were asked to bring or email to the researcher a regular lesson plan or a lesson plan using information found on blogs or any lesson plan that they may have had for their convenience (no student data were recorded). Artifact collection helped identify the ways blog use has influenced teachers’ classroom practices.

Tier Two data collection followed a multiple-case sampling procedure. A case study, as Merriam (1998) noted, is an exploration of a bounded system or a case through detailed and in depth data collection that includes multiple sources of information; in this case, interview and artifact data. Miles and Huberman (1994) suggested that the research collection provide more robust results by looking at a range of similar and contrasting individual cases. Merriam (1998) suggested that the inclusion of multiple cases strengthen the precision, validity, and stability of the findings. Interviewees were categorized into four different cases based on survey results.
The four cases that were used in this research study are outlined below in Table 3.2. In the pilot that was conducted in fall of 2013, where five participants were interviewed, the researcher was able to get a robust sample of data, but the answers varied based on their personal preferences to utilize blogs. Because of these results, blogging categories were used in this study to collect data to reflect these blogging characteristics. While not all categories were equally accounted for in this data collection, having participants in each category provided enough data for trends to emerge within and across groups.

Several blogging research studies were used to appropriate posting frequency (Baumer, Sueyoshi, & Tomlinson, 2011; Hsu & Lin, 2007; Kwai & Wagner, 2008; Nardi, Schiano, & Gumbrecht, 2004). Because this research focused on educational blog use, teachers were only labeled as an academic blogger if they blog as a teacher in an academic/education community. An educational blog is a blog written by a stakeholder in education (i.e. principal, teacher, parent) with teachers as the perceived audience. A participant can be identified as both an academic blogger and a commenter. If they were identified as a lurker or a non-blogger, they cannot be identified as an academic blogger or a commenter.

While lurkers are representative of what Miles and Huberman (1994) defined as a typical case, since research shows lurkers are the most prolific participants on the blogosphere (Jackson, Yates, & Orlikowski, 2007), the rest of the blogger cases represented the extreme or deviant cases that are unusual manifestations of teacher bloggers. Because non-bloggers are not evident in current blogging research, this category is a new addition to the stratification of the blogosphere.
### Table 3.2- Case Study Categories

<table>
<thead>
<tr>
<th>Label</th>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Bloggers</td>
<td>Survey Participants: 26</td>
<td>These participants actively participate in the blogging community by posting on their own blog or a community blog as often as daily and as seldom as once every two weeks. These bloggers may also be commenters. Note that these are teacher bloggers that are blogging as teachers for professional development or learning, and not posting on hobby blogs, personal non-teaching blogs, or classroom blogs.</td>
</tr>
<tr>
<td></td>
<td>Interviewees: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artifacts: 3</td>
<td></td>
</tr>
<tr>
<td>Commenters</td>
<td>Survey Participants: 9</td>
<td>Commenters give feedback to posts that bloggers write. Commenters may post on their own educational blog or on a community blog, but post personally on a blog less than every two weeks.</td>
</tr>
<tr>
<td></td>
<td>Interviewees: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artifacts: 7</td>
<td></td>
</tr>
<tr>
<td>Lurkers</td>
<td>Survey Participants: 15</td>
<td>Lurkers read posts and comments and seldom post or comment personally (No more than twice a year)</td>
</tr>
<tr>
<td></td>
<td>Interviewees: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artifacts: 1</td>
<td></td>
</tr>
<tr>
<td>Non-Bloggers</td>
<td>Survey Participants: 23</td>
<td>Those who do not engage in the blogging community in any fashion. Note that this does not mean that they are not engaged in other social media practices or 21st century literacy skills</td>
</tr>
<tr>
<td></td>
<td>Interviewees: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artifacts: 2</td>
<td></td>
</tr>
</tbody>
</table>

After grouping the participants to a category from the survey data using the categorization method outlined in Figure 4.3, potential interview participants were contacted via email, and interviews were arranged, with a total of 8 participants in the Tier Two data collection. These 8 participants were categorized in several different blogger-type categories: three were categorized as academic bloggers, two were categorized as commenters, two were categorized as non-bloggers, and one was categorized as a lurker. A total of 13 lesson plans were collected; several participants sent the researcher more than one lesson plan. One academic blogger participant did not send the researcher any lesson plan data. Lesson plans specifically regarding technology were requested, but the researcher also, for participants’ convenience, asked for any form of lesson plan that teachers had already written.
Sampling Frame

The accessible population for the interviews in this study was a sampling frame of all 181 participating sites of the National Writing Project Institute (NWP) in the US; the survey was distributed nationally through the NWP via email. The NWP is a professional development network that supports teachers of writing in all subjects and all grade levels (National Writing Project, 2014). The NWP’s mission is to provide resources and professional development to a network of sites anchored at colleges and universities regarding writing development and 21st century literacies (National Writing Project, 2014). Furthermore, the focus of this professional development network is on reflective writing.

Table 3.3- Participant List and Attributes

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Blogger Category</th>
<th>Interview Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dani</td>
<td>Academic blogger</td>
<td>Face-to-face, NCTE, Washington, D.C.</td>
</tr>
<tr>
<td>Sam</td>
<td>Academic blogger</td>
<td>Skype</td>
</tr>
<tr>
<td>Debbie</td>
<td>Academic blogger</td>
<td>Phone</td>
</tr>
<tr>
<td>Krista</td>
<td>Commenter</td>
<td>Skype</td>
</tr>
<tr>
<td>Tiffany</td>
<td>Commenter</td>
<td>Phone</td>
</tr>
<tr>
<td>Casey</td>
<td>Lurker</td>
<td>Phone</td>
</tr>
<tr>
<td>Leslie</td>
<td>Non-blogger</td>
<td>Phone</td>
</tr>
<tr>
<td>Bri</td>
<td>Non-blogger</td>
<td>Phone</td>
</tr>
</tbody>
</table>

Using the survey data, the researcher categorized all participants in one of four categories: academic blogger, commenter, lurker, or non-blogger. Table 3.3 illustrates the
pseudonyms of the participants who sent lesson plans and participated in the follow up interview with the researcher.

**Data Collection Techniques**

Data collection was completed in the fall of 2014. The researcher attained all necessary access to the NWP and completed all IRB approval documents by the end of September prior to the fall data collection. The survey was sent out through an online link on the NWP director listserv email as well as sent out to each individual NWP site director. Each site director was asked through this email to send out the survey link to their site’s teacher participants. The online survey was administered through Qualtrics and remained live and available to participants for one month. Participants were asked to consent to the terms listed on the consent form by signing their full name. To ensure survey data collection success, the participants were entered into a lottery for a $50 gift card. Once all survey data were collected and the survey deactivated, potential participants (55 were solicited) were contacted for further interview collection based on whether they fit in the category of academic bloggers, commenters, lurkers, or non-bloggers, with the attempt of getting equal representation of all four categories. Participants were interviewed at several locations, including face-to-face at the National Council of Teachers of English conference in Washington, D.C., via Skype, and via phone. The way the interview was conducted was left up to the teacher-participant to make the process as convenient as possible. Many of the participants did not know whether or not they would be traveling to Washington D.C. for the conference, thus most participants opted to conduct a phone interview.

Participants were asked to sign the interview consent form and send a digital copy to the researcher via email. No participants were interviewed who did not complete the consent form. Participants were also prompted to send a sample lesson plan via email after the interview. All
but one participant sent a sample lesson plan, and several sent multiple lesson plans via email. Prior to interviewing participants via phone or Skype, the researcher introduced herself and spoke briefly about the research study, including all of the basic information listed in the consent form about the project’s purpose. The researcher also notified participants who the conversation would be audiotaped and asked if participants had any questions prior to beginning the interview. To ensure that the interview type (phone/Skype/face-to-face) did not impact the data that were collected, the researcher used a standard set of interview questions and developed an interview protocol that included introduction, consent, and audiotape consent, then followed up with each question. Prompting was used only when participants fell silent.

All interview participants received a $20 gift card in exchange for their time as a participant. This was done to ensure participation in the interview process. All interviewees were asked to either bring or email a sample lesson plan that utilizes information that was learned off of a blog, if possible. All lesson plans were collected via email. All data collection was completed by the end of the fall semester.

**Data Analysis**

Explanatory designs where quantitative data precedes qualitative data include a variety of interpretation procedures (Creswell, 2012). For the purposes of this study, the researcher followed up on outliers and extreme cases as well as explained results, which entails exploring characteristics of specific cases as well as exploring differences amongst cases (Creswell, 2012). Tier One in this study was the quantitative survey data collection. The Tier One results were analyzed using descriptive statistics once the survey was closed, including cross-tabulations and frequency counts to help analyze demographic information and participant answers (Ivankova et al., 2006; Salkind, 2008). Open-ended questions where participants typed in their
free responses were included in qualitative data analysis and coding procedures. The analysis of the survey occurred prior to interview and artifact collection. While inferential statistics could have been employed, there were several reasons why the researcher chose only to employ descriptive statistic measurement. First of all, while 118 surveys were collected, only 73 of those were completed in entirety, thus, valid. With a high attrition rate, a response rate that is not easily calculable (see results), a relatively small $n$ size, and a distinct and specific sample population, inferential statistics would have yielded results that would have potentially high error and bias, making any generalizations or claims for statistical significance unreliable and potentially invalid. Furthermore, because the purpose of the survey was to show the national sample’s description of blogs rather than make any causal claims, inferential statistics were simply not appropriate considering the study’s guiding questions. Out of the 181 sites contacted, 22 sites participated in the survey, for a response rate of 12%. However, this 12% response rate is calculated under the assumption that all 181 site directors that were contacted forwarded the survey link to their teacher consultants, who then completed the survey. The number of teacher consultants contacted to complete the survey is unknown, making the response rate difficult to measure.

Following descriptive analysis of survey data, Tier Two looked within specific cases of teachers blogging as self-sponsored, independent professional development practices. Analysis was performed at two levels after all data were collected: within each case and across cases (Ivankova et al., 2006). Interviews were transcribed and all data were combined into an NVivo file, including interview transcriptions, artifacts, and open-ended questions via the survey results, an initial step that Boyatzis (1998) claims to be a way of “seeing” all of the data. Patton (1990) suggests that the researcher remain neutral to perceptions when reading data. Because the
researcher does not herself engage in educational blogging, and chose blogging as a focus of this study for that primary reason of remaining neutral during the data collection and data analysis process, this is a strength of the study’s data analysis.

The researcher used one of Miles and Huberman’s (1994) data coding techniques called a two-level scheme, where the data were coded “partway between a priori and induction approaches….creating a general accounting scheme for codes that is not content specific, but points to the general domains in which codes can be developed inductively” (p. 61). The researcher began with a set of initial codes that were derived from the theoretical framework, including general themed codes:

- Develop proficiency and fluency with the tools of technology; (code name: Fluency)
- Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought; (code name: Collaboration)
- Design and share information for global communities to meet a variety of purposes; (code name: Collaboration)
- Manage, analyze, and synthesize multiple streams of simultaneous information; (code name: Information)
- Create, critique, analyze, and evaluate multimedia texts; (code name: Use of multimedia)
- Attend to the ethical responsibilities required by these complex environments; (code name: Ethics) (NCTE, 2008)

The data were then coded through a two-level scheme and interpreted using a thematic analysis. A thematic approach “includes extensive discussion about major themes that arise from analyzing a qualitative database…this approach uses extensive quotes and rich details to support
the themes” (Creswell, 2012, p. 274). Thematic analyses are typically used when the qualitative research is exploratory because these analyses identify patterns and themes in the research (Miles & Huberman, 1994). The coding process included a focus on reoccurring themes or concepts within the major themes, such as challenges of using blogs, which included reasons such as access, time, and reliability. The coding process was embedded in the NCTE framework and all six of the NCTE framework standards. The entire coding scheme is outlined in the Tier Two results chapter.

Rigor in qualitative research, according to Merriam (1998), “derives from the researcher’s presence, the nature of the interaction between researcher and participants, the triangulation of data, the interpretation of perceptions, and rich, thick description” (p. 151). Thusly, the researcher wrote analytical memos throughout the data collection process and began open coding for potential themes with a focus on the research questions and the NCTE framework. Analytical memos included notable comments but also included potential themes and relationships between codes, as well as decisions made on coding and codes throughout the open coding process. For example, the researcher linked multiple data sources to an analytical memo that discussed the importance of the difference between what “good” or “successful” collaboration on blogs was versus what “bad” collaboration on blogs was, noting several participants who suggested that some teacher bloggers ranted and used the blog as an avenue to vent, which was not what they were looking for. To ensure confidentiality, pseudonyms were used for all participants. NVivo was used to code and analyze the data, while SPSS was used for descriptive statistics.
Inter-Coder Agreement

As Merriam (2009) notes, qualitative measures for internal validity, external validity, reliability, and objectivity are credibility, transferability, dependability, and confirmability. This research involves many practices that researchers like Merriam (2009) and Creswell (2013) suggest help qualitative research become more reliable and valid, including triangulation of data. Much like inter-rater reliability in quantitative research, this research utilized inter-code agreement, as specified by Creswell (2013), to help confirm reliability and validity of the coding structure. To make sure the codes were accurate and consistent, a group of three raters were used to code a segment of each data source, resulting in an 80.8% agreement. The following sections describe the method and participants used.

Participants

The three participants selected to complete the inter-coder agreement were two Curriculum and Instruction PhD students and one Curriculum and Instruction PhD candidate at a large research university; all three have experience with research endeavors. All three have prior English teaching experience in either a secondary or higher education institution.

Method

These three participants were asked to be a part of this inter-coder agreement session and agreed. The researcher met with these three participants at the same time in a quiet office area and briefly discussed the research and study with the participants. Then, the researcher used the final coding scheme visual and the final coding scheme text found in this section to explain each code and theme specifically, stopping to answer any questions that participants needed answered. The researcher assumed that all three participants had coded previously, but did provide examples. The participants and the researcher completed one page of coding together. The
researcher showed a sample interview transcript where codes were already aligned with certain parts of the text. The researcher went through each passage and explained why the passage was coded the way it was. The researcher then asked participants to code one page of an interview transcript together out loud, noting any discrepancies or suggestions by the participants. Finally, the researcher gave four more pages of interview text for participants to code individually. With five pages total, the raters coded about 10% of the interview data.

When the participants completed their interview data coding, they were then asked to code three pages of survey data. Because there were 215 pages of survey data, and the participants would have had to code about 30 pages of survey data to complete 10% of the data sample, the researcher chose to provide only a small sample of the survey data to make sure that inter-rater coding did occur with each data source. After coding the survey data, the participants were then informed that they would be looking to code only major themes in the artifact data, and proceeded to code about four pages of artifact data. This accounted for 10% of the artifact data.

After the participants completed their coding, the researcher compared the major codes assigned to text that was coded by all four, including the researcher, raters. This is a strategy that is modeled after Creswell’s (2013) suggestions. Creswell (2013) also suggested that a yes or no decision be made whether or not the code word(s) match with each selected passage, and that no attention be paid to where participants bracketed the code word nor whether or not all raters coded the same passages. Differences in sub-codes were not included in the inter-coder equation, because sub-codes required a level of coder interpretation of the data. After completing the tally, there were 47 total codes in the entire data set, where 38 codes were in agreement and 9 were not in agreement, meaning there was an 80.8% inter-coder agreement. This percentage is a good
indication of a reliable coding scheme, according to Miles and Huberman, who suggested that there should be an 80% agreement.

**Discussion**

Based on the inter-coder session and discussions, as well as the relatively high inter-coder agreement percentage of 80.8% agreement, it is fair to assume that the coding scheme was valid. There were discussions and variations of coding, the most major of which had to do with the differences amongst the sub-codes within the Challenges theme. The biggest discrepancy that occurred was between the Challenges→Access, Challenges→Reliability, and Challenges→Usefulness code. While there were instances where two or three of the coders coded for Challenges and one or two did not at all, most of the discrepancies among the data coding occurred when one or two coders used the sub-code Access and others used Reliability or Usefulness. Furthermore, two of the participants were concerned and discussed the differences between what would be coded Access versus what would be coded Reliability. One participant, for example, clarified that Access could include financial access, physical access, and lack of access due to provisions set on teachers, such as not being able to access independent PD because the school mandated that only mandated PD be used. This description was included in the final coding procedure. Furthermore, there were several instances where participants were not sure how to code a passage where a teacher-participant suggested that she did not want to use blogs at all, without specific explanation. One participant asked if this would be an Access code, and the other two agreed that in fact this would be coded under Usefulness despite the lack of explanation. This too was added to the final coding description.

Other than the specific discrepancy between particular sub-codes under the Challenges theme, there were not many instances where coders did not agree with each other. However,
there were instances where one participant coded a passage with a code that the other three did not use at all, or two participants who coded a passage with a code that the other two did not code. This happened most often with the code Information, where some participants interpreted a teacher’s indirect quote as seeking information regarding classroom planning or concept knowledge.

These discrepancies shed light on particular parts of the coding scheme that may not be as clearly justified or explained as other codes. In light of these discussions and coding agreements, the researcher further defined and clarified the discussion regarding coding what was coded as Access, what was coded as Reliability, and what was coded as Usefulness. Additionally, the researcher also specified the necessity of having a direct reference to information for the code Information to be utilized.

This inter-coder agreement session was extremely beneficial to both this study and the researcher. It helped clarify particular codes and helped establish credibility and dependability of the coding scheme used for this particular data set.

**Intra-Coder Agreement**

An intra-coder agreement was also conducted to ensure that coding consistency was accurate. To ensure that the coding scheme was consistent, the researcher re-coded, on paper, 10% of the total data, and then compared the codes listed to the NVivo data coding. The researcher re-coded 10% of each data source as well, with five pages coded from the interview data, four pages coded from the artifact data, and 30 pages coded from the survey data. This ensured that the coding was consistent in each data source as well.

The only variation that occurred in the re-coding was from a short answer in a survey response:
“I think I need to develop fluency in some newer tools and technology and learn about the ethical considerations of those technologies but I don't see the necessity of the other competences.”

Originally, this was coded under Fluency and Ethics, but the second time the researcher coded this segment it was also coded under Use of Multimedia in addition to Fluency and Ethics. This variation is not necessarily abnormal, but it does show that the researcher inferred the use of multimedia as a step to gain fluency while re-coding this data. This happened only once—the researcher checked to see if any other Fluency/Ethics or Fluency/Ethics/Use of Multimedia codes existed and if the same assumption was made but no further differences surfaced.

Considering this is the only disagreement in re-coding the data, the intra-coder agreement measure reinforced the validity of the coding scheme, and although there was one variation, the codes created seem to have been consistently used in both coding sessions.

**Credibility of the Researcher**

To ensure credibility, transferability, dependability, and confirmability of this research, the researcher abided by the recommendations of Anfara, Brown, and Mangione (2002), which includes “peer debriefing, triangulation, member checks, thick description, purposeful sampling, audit trails, code-recode strategies, and reflexivity” (p. 30). The researcher triangulated the research by utilizing three avenues of data collection; survey data, interview data, and artifact collection. As a part of peer debriefing, colleagues were used to code a sample text with the researcher’s coding scheme to provide inter-coder agreement. Intra-coder agreement procedures were also utilized. Finally, during the coding process, the researcher utilized thick description with the use of analytical memos, audit trails with the use of analytical memos while coding, and
reflective notes, again through the use of memos, in NVivo. Code-recode strategies were also used as the researcher open coding and continued to add and reform codes to both differentiate codes and reach data saturation using appropriate codes. There were instances during open coding where the researcher used several different codes for one particular paragraph or quote, and thick description through analytical memos was used to explain the use of several codes for particular quotes.

In addition to what researchers outline to be credible and reliable researcher skills, the researcher also felt it was necessary to study an avenue in which she did not participate herself to eliminate any biases that may have occurred throughout the research process, especially since participants who choose not to blog were studied. This choice adds to the reliability of this research in terms of avoiding potential biases towards using blogs as a source of professional development due to the researcher’s personal preferences. The researcher was an English teacher and taught college content regarding teaching at the secondary level. This prompted her interest in English teachers, specifically, as a sample.

**Limitations**

Because the sampling frame uses teachers who choose to actively participate in professional development through NWP, statistical tests beyond descriptive statistics may yield biased results that should not be used to generalize to the teacher population (Creswell, 2009). Because the sample size of the participating teachers is relatively small compared to national samples, and because the data were self-selected rather than randomized, the data cannot be used to generalize or speak to blogging trends outside the cases studied in this research.

The sampling frame used also means the data is biased towards a particular population, as those teachers who voluntarily participate in the NWP through their local sites were more likely
to be interested in professional development compared to those teachers who do not participate in NWP activities. Because the form of the interview varied to include face-to-face, Skype, and phone interviews for participant convenience, the researcher may have had data that were influenced by the form in which the interview was conducted. Each form may have led to unintentional researcher influence on participants’ answers.

The sample that was collected also was greatly biased in terms of years of experience. Very few participants had less than five years of experience, which may have impacted the results in this study. Further investigations are necessary, and are outlined further in the implications chapter of this dissertation.

Summary

This research study followed a sequential mixed method design, where Tier One (quantitative) survey data were used to inform Tier Two (qualitative) follow-up interview and artifact collection. The analysis included demographic statistics, thematic two-level scheme coding, and rigorous analytical memos throughout the data collection and analysis process. The study corpus was the National Writing Project. There were 118 surveys collected, of which 73 were valid, and 8 participants were interviewed, with at least one participant falling into each blogger type category. 13 artifacts in the form of lesson plans were collected from those interviewed.
CHAPTER FOUR

RESULTS

Tier One Results

The purpose of this study was to examine 1) how and in what ways high school English teachers use blogs for professional development and 2) investigate the influence of using educational blogs on classroom practices, with the guiding questions:

Primary Research Questions:

1.) How do 9\textsuperscript{th}-12\textsuperscript{th} grade National Writing Project Teacher Consultant (NWPTC) English teachers perceive the use of blogs as a classroom, professional development, and reflective source?

2.) How do the blogger types differ in the ways they talk about and use 21\textsuperscript{st} literacy in their teaching?

Subsidiary Research Questions:

1.) How does the sample of NWPTC 9-12\textsuperscript{th} grade English teachers describe using blogs?

2.) In what ways does the sample of NWPTC 9-12\textsuperscript{th} grade English teachers perceive that independent self-sponsored blog use influences their own classroom practices?

3.) To what extent does the sample of NWPTC 9-12\textsuperscript{th} grade English teachers perceive that independent self-sponsored blog use influences their own professional development as a teacher?

4.) In what ways does the sample of NWPTC 9-12\textsuperscript{th} grade English teachers perceive that active, independent, self-sponsored blogging influences their reflective practices?

This mixed methods research study began with Tier One data collection in which survey data were collected. Tier One results yielded 118 surveys, 73 of which were valid, meaning
completed in entirety, collected from a national sample of National Writing Project teachers who
teach or have taught high school English. The survey comprised Likert-scale, multiple choice,
and open-ended questions, and was piloted prior to use. The open-ended responses from the
survey results are part of the Tier Two research results section.

Tier One of this chapter begins with an overview of the analysis of the quantitative data
collected, including the analysis procedures and a description of the sample demographic
characteristics. The demographic characteristics will be followed by descriptive statistics and
frequencies run in SPSS to help answer the first sub question of this research study: How does
the sample of National Writing Project Teacher Consultant 9-12th grade English teachers
describe using blogs? Inferential statistics were not used in the Tier One results because the
small n size, the specificity of the population, the high attrition rate, and the small number of
questions in the survey that would be used for Tier One analysis would make any statistical
significance found extremely biased and unreliable.

The descriptive statistics are based on the four subject categories that were surveyed:
general demographic information such as years of experience, perceptions of blog usage and
blogs, perceptions of professional development, and perceptions of 21st century literacies. The
end of each subsection, as well as the entire Tier One results section, presents a summary of the
findings as they relate to the research questions.

**Response Rate to the Survey**

Out of the 181 sites contacted, 22 sites participated in the survey, for a response rate of
12%. However, this 12% response rate is calculated under the assumption that all 181 site
directors that were contacted forwarded the survey link to their teacher consultants, who then
completed the survey. The number of teacher consultants contacted to complete the survey is unknown, making the response rate difficult to measure.

Data Analysis Procedures

The researcher utilized data collected from one survey, which was administered over the course of a one-month period. The analysis of the survey occurred prior to interview and artifact collection. The analysis and coding of the open-responses in the survey were collected and analyzed with Tier Two data after interviews and artifacts were collected. The instrument was Internet-based, 40 questions long, and each teacher consultant was asked to type in their full name to consent to participation in the survey. Teacher consultants were notified via email by their site directors, whom the researcher contacted directly, to participate in this survey and were provided a link to access the survey. The instrument measured perceptions of four items, which were categorized under four main categories: basic demographic and teaching information (i.e., years of teaching experience, grade level taught, current location), opinions and perceptions on blogs and blog use, opinions and perceptions on professional development, and opinions and perceptions on 21st century literacy skills, all of which were defined explicitly in the survey content (see appendix for complete survey).

The sample was composed of 73 high school teacher consultants who were part of a National Writing Project affiliated writing project site, and who either currently taught high school or had taught high school at some point in their career. All teacher consultants in this survey were part of their area’s NWP affiliate site, meaning they were engaged in some form of professional development as part of their writing project’s initiative. The NWP is a professional development network that supports teachers of writing in all subjects and all grade levels (National Writing Project, 2014). The NWP’s mission is to provide resources and professional
development to a network of sites anchored at colleges and universities regarding writing development and 21st century literacies (National Writing Project, 2014). Each site functions independently from the NWP headquarters but is affiliated with the project’s network of teachers seeking a professional development outlet.

After gaining appropriate approval from the research director at the NWP headquarters, the researcher solicited survey participation through each NWP site’s director, who then forwarded the survey link to the site’s teacher consultants. It is unclear how many directors forwarded the survey link to their teacher consultants, but out of the 181 site directors that were contacted, 22 sites were accounted for in the survey data.

The data collected from the survey was split into two categories, Tier One and Tier Two results, with 9 open-response questions included in the Tier Two results and 28 questions in the Tier One results. The remaining 3 questions that constitute the total 40 questions asked in the survey include the digital signature and the willingness of participants to be contacted to participate in a follow-up interview. The Tier One results were analyzed using SPSS (Statistical Package for Social Sciences) software on a Windows computer at a large southeastern university campus.

The research questions were examined using frequencies and descriptive statistics, including means, which provided a central tendency for each area studied. Frequencies allowed for the data to be aggregated in a visual representation that showed the general measures in perceptions of the studied areas, and histograms were used to chart the distribution of perceptions based on blogger-type categories amongst other variables such as years of experience. Inferential statistics were not employed due to small sample size, high attrition rate, and specificity of the population sample surveyed, which would make generalizations hard to
make without significant bias. Additionally, the use of inferential statistics were outside the scope of the research questions delineating this study. The Tier One data was subservient to the Tier Two data and acted as both a way to explore general perceptions of blogs, professional development, and 21st century literacies and categorize and select Tier Two participants.

Demographic Data

The survey instrument utilized contained several questions that intended to produce specific demographic data, including the sample population’s years of teaching experience, location, and blogger type. Figure 4.1 outlines the distribution of participant teaching experience ranges.

![Years Experience Frequency](image)

**Figure 4.1 - Years of Experience Amongst Participants**
As Figure 4.1 outlines, well over 50% of the participants were highly experienced teachers with 83% of teachers with more than 11 years of teaching experience. Few teachers out of the sample population surveyed were beginning teachers. A total of four teachers had 5 or less years of experience out of the total sample size. Year of experience data were initially collected only to provide demographic information about participants. As the following results show, this particular demographic played a much larger role than initially anticipated, and seemed to play a role in how bloggers perceived blogging, professional development, and 21st century literacies. These numbers represent the years of teaching experience that participants engaged in in total, not differentiating between grade levels taught. All teachers specified that they taught English or Language Arts in some capacity, ranging from Advanced Placement (AP) level classes to remedial and regular high school English. Some teachers were teaching high school when they filled out the survey while others had taught high school English at some point in their career but were teaching a grade level outside of high school at the time the survey was administered.

The physical demographics of the participants were also collected, included the writing project affiliate in which they participated. In order to help keep results anonymous, specific writing project affiliate names will not be used, but general locations in which these affiliate sites are located were included. Figure 4.2 visually represents the national representation of teacher consultants that were part of the survey data.

This national representation accounted for 44% of the nation’s states, with two states represented in the southeast US, eight states represented in the central US, three states represented in the northeast US, two states represented in the mid-Atlantic US, and five states represented in the western US, for an overall well-distributed reflection of NWP teacher consultants in the entire nation’s territory.
The final demographic collected was the categorization of participants into a particular blogger type. This is considered a demographic of the data sample as participants were categorized into one of four blogger-type categories based on their responses. Following guidelines adapted from Jackson, Yates, and Orlikowski (2007) and Dennen’s (2012) research in blogger type categorization, each participant was asked a series of six questions that were used to categorize participants into one of the four blogger types: academic bloggers, commenters, lurkers, or non-bloggers. These questions included whether or not they browse, post, and/or comment on blogs, as well as the frequency with which they do so. The researcher used the processed outlined in Figures 4.3 to categorize participants.

If participants chose “never” or “1-2 times a year” for the frequency of browsing, posting, and commenting, they were classified as a non-blogger\(^2\). If participants chose “never” or “1-2 times a year” for posting and commenting and anything between “2-6 times a year” and “more times a year” for browsing, they were classified as commenters. If participants chose “never” or “1-2 times a year” for browsing and anything between “2-6 times a year” and “more times a year” for posting and commenting, they were classified as lurkers. If participants chose “never” or “1-2 times a year” for posting and commenting and “2-6 times a year” and “more times a year” for browsing, they were classified as academic bloggers.

\(^2\) A non-blogger is a non-participant in the blogging community.
than once a week” for browsing, they were classified as a lurker\(^3\). If participants chose anything between “2-6 times a year” and “more than once a week” for commenting and browsing and “never” or “1-2 times a year” for posting, they were classified as a commenter\(^4\). Finally, if participants chose anything between “2-6 times a year” and “more than once a week” for browsing, posting, and commenting, they were classified as an academic blogger\(^5\).

\(^3\) A lurker is a participant in the blogging community that reads but rarely posts or comments on a blog.
\(^4\) A commenter is a participant in the blogging community that gives feedback to posts but rarely posts personally.
\(^5\) An academic blogger is a participant in the blogging community that actively participates by posting and commenting on various blogs.
After making these categorizations for each participant, the researcher assigned each participant a number pertaining to the category in which they were placed. This allowed for the researcher to utilize SPSS to plot histograms showing if blogger categorization impacted the way participants viewed professional development, blogs, and 21st century literacies.

Figure 4.4 shows the amount of participants distributed into each category. Out of 73 participants, there was fairly even distribution of blogger type, with the least representation in the commenter category and the most representation in the academic blogger category. About 36% of the sample was categorized as academic bloggers while 30% of the sample population were categorized as non-bloggers. Together these groups made up the majority of the sample’s blogger types.

![Figure 4.4 - Blogger Type Aggregation in Data](image-url)
Lurkers made up 21% of the sample and commenters made up about 10% of the sample. This categorization was used in combination with answers to particular questions to show the general perceptions of blogging, professional development, and 21st century literacies and skills throughout the Tier One data analysis section.

**Discussion of Demographic Findings**

The demographics collected in this survey showed that the sample studied has an overwhelming majority of experienced teachers. Over 83% of participants had more than 11 years of experience. This may be due to less experienced teachers having less time to put into professional development, as this sample was taken from NWP affiliate sites. A small $n$ size (4) for teachers with fewer than 5 years of experience made it hard to make justifiable conclusions about less experienced teachers without bias.

The national representation of this survey was well distributed, with roughly 44% of states accounted. The highest region representation was the central US, with eight states represented. This location demographic result shows the stratification of the national representation of the survey, meaning that the sample collected does represent a national unit of NWP teachers.

Finally, the aggregation and collection of data representing the four different types of bloggers showed a 36% makeup of academic bloggers and 28% makeup of non-bloggers. While the academic bloggers making up the highest percentage of the 73 participants was anticipated, the survey produced a high $n$ size for non-bloggers, despite this survey being geared towards blogging and those interested in blogging. The lowest representation in the aggregation of the four blogger types was the commentator group. This may be due to a participant getting involved in blogging by initially beginning to blog personally, meaning a teacher is most likely going to
post and own their own blog and comment, making them an academic blogger, than simply comment on others blogs.

These demographic data provide information that will be used throughout Tier One and Tier Two sections. The blogger categories as well as the years of experience of teachers are used throughout the rest of the Tier One results. These variables are compared based on perceptions of blogging, PD, and 21st century literacies, and perceptions are compared to each other.

**Perceptions of Blogs**

**Figure 4.5- Perceived Importance and Effectiveness of Blogging**
The demographics of the sample were established by asking questions regarding years of experience, location, and blogger type. The perceptions participants had regarding blogging, blogs, and blog practices and usefulness were also collected through a variety of questions that included the perceived importance and usefulness of blogging. In Figure 4.5, the perceived importance of blogging was compared to the perceived effectiveness of blogging in regards to their own professional development.

In these pie charts, the purple area denotes the percentage of participants who felt that the importance and effectiveness of blogging are “highly important/successful.” The beige color denotes the percentage of participants who felt the importance and effectiveness of blogging were “somewhat important/successful,” and the green and blue areas represent the percentage that felt the importance and effectiveness of blogging were “somewhat unimportant/somewhat unsuccessful” and “highly unimportant/highly unsuccessful,” respectively. These pie charts show that the majority of this sample seems to see the value and effectiveness of blogging as a professional development tool. While the overwhelming majority felt blogging was important, a large percentage of the sample seem to see blogging as somewhat unsuccessful in terms of effectiveness, a disparity between these two pie charts and seemingly the only distinct difference.

![Perceptions Regarding Blog Most Interesting Blog Type](image_url)

**Figure 4.6 - Most Interesting Blog Type Perceptions**
Other questions regarding blogging include the most interesting blog type, which are shown in Figure 4.6. Blog type was explained to the participants within the survey structure as personal blogs used primarily for reflection, tool blogs used primarily for dissemination of links and tools, informational blogs used primarily for instructional and informational text, and a mixture of the three. These categorizations represent Herring, Schiedt, Wright, and Bonus’ (2005) definition of four genres of blog type: personal (denoted as personal blog), filter (denoted as tool blog), K-log (denoted as informational blog), and mixed (denoted as a mixture of the three). Since some participants were not interested in blogging, a fifth category of “none” was also included. Participants more often chose a mixture of the three blogs as their first choice of the most interesting blog type.

![Perceived Reasons to Blog or Utilize Blogging](image)

**Figure 4.7 – Perceived Reasons to Blog or Utilize Blogging**
The perceived reasons to blog or utilize blogging (the distinction being made to include both active participants in the blogosphere, academic bloggers and commenters, as well as those who do not post but read blogs, otherwise known as lurkers) included a variety of different choices. These choices included: the use of blogs as a source of independent PD, to learn new concepts, to look something up, to reflect, to network, to communicate with other teachers, to kill time, to engage in 21st century literacy skills, to learn about blogs, and an option for those who do not blog or participate in blogging in any way. As seen in Figure 4.7, while the least common by far was the use of blogs to “kill time,” the most popular reason to blog or utilize blogging was harder to discern. “Learn new concepts” was the overall majority reason chosen by study participants, in close second by a small margin is using blogs as a source of independent PD. The bottom choices, other than “kill time” and “not applicable,” included “learn about blogs” and “engage in 21st century literacies.”

After running frequencies of responses on particular questions, the researcher used the categorization of blogger type as well as years of experience from the demographic data to plot how each category answered particular questions to show cross-tabulations that may illuminate particular trends. One of these plots, Figure 4.8, represents the importance of blogs according to teachers’ years of experience. This finding emerged from the data. In this figure, 1 represents “highly unimportant,” and 4 represents “highly important,” with 5 representing “not applicable.” The few participants who had less than five years of experience felt that blogs were “highly important.” Age and years of experience were not part of the research questions, but the demographic information combined with blog and 21st century literacy perceptions emerged to be quite a notable finding. While it was anticipated from previous research that those teachers who had many years of experience, assumed to be older participants, would be less likely to
choose a high degree of importance of blogs and blogging, almost all participants with over 20 years of experiences ranked the importance of blogs either “somewhat important” or “highly important.” Those with 11 to 20 years of experience had the highest frequency of responses in the “somewhat important” category in terms of importance of blogs.

![Figure 4.8- Perceived Importance of Blogs vs. Years of Experience](image)

No teacher with 6-20 years of experience felt that blogs and blogging were “highly unimportant,” and only four participants felt that blogs and blogging were “somewhat” or “highly unimportant.” Out of those four, none had less than 5 years of experience, and only one had over 20 years of experience. While those with over 20 years of experience can be assumed to be from an older generation of teachers, it cannot be assumed that the teachers who have less than 5 years of experience were younger in age compared to the those teachers who have over 20
years of experience. This study did not account for those teachers who may have begun a teaching career later on in their life.

Figure 4.9- Perceived Importance of Blogs vs. Blogger Type

A similar plot was made for the importance of blogs in regards to the categorization of the type of blogger in the data set. Figure 4.9 shows the frequencies of this particular plot. A few notable trends include the perception of the importance of blogs by those categorized as non-bloggers. While the majority chose “not applicable,” many participants categorized as non-bloggers chose the importance of blogging to be either “somewhat” or “highly” important. This is a notable finding considering they were not involved in reading blogs or blogging personally. Another trend illuminated by this plot described the relationship between blogger categorization and the perceived importance of blogging. No other blogger type other than those categorized as lurkers felt blogs were either highly or somewhat unimportant.
Academic bloggers made up the majority of those who reported that blogs and blogging were either highly or somewhat important to them.

A notable histogram was the plot comparing the type of blogger and the years of experience that participants had. In Figure 4.10, prominent trends included the amount of academic bloggers, those who were most active in posting and commenting on the blogosphere, that were made up of teachers who had a huge array of years of experience. While those who had between 11-20 years of teaching experience were the majority who make up the non-blogger category, this same category had more teachers who actively participated in the blogosphere as active bloggers than any other category. Those with more than 20 years of experience were the least likely, it seemed, to be lurking in the blogosphere but were the second most active category as academic bloggers and the most active commenters compared to those who have taught fewer
than 20 years. Those with less than 5 years of experience, while both expressing the high importance of blogging as seen in Figure 4.10, participated as both active bloggers and lurkers in the blogosphere.

**Discussion of Blog Findings**

The findings from this portion of the survey addressed research question one specifically: how NWP teachers describe using blogs. Most participants felt as if the value of blogging was highly important. Compared to the effectiveness of blogging, the perceived value of blogging was a higher percentage, meaning that a large percentage of teachers saw the value in blogging but did not see the corresponding effectiveness of blogging. This may have been due to several reasons, including the time it takes to find a blog, the relative reliability of blogs, the access to blogs, and the reliability of the blogger to post on a regular basis.

The reasons to blog suggested by the teachers personally include a high percentage of those who want to learn new concepts and engage in independent PD. The lowest percentage of people chose the reason to “kill time.” The notable finding in this section was the amount of teachers who selected the “engage in 21st century literacy skills” (defined for participants in the survey)—about 30 teachers, less than 50%. Engaging in blogging is itself a 21st century literacy skill. Considering so few teachers selected “engaging in 21st century literacy skills” as a reason to blog, this may mean that the concept of 21st century literacy is an inherent learning experience of using a blog, and not a reason that motivates teachers to blog. In other words, many teachers did not choose this reason for engaging in blogging. What this choice among participants seemed to show is that while participants choose to utilize blogs, their reasons in doing so were not explicitly to engage in 21st century literacy skills. Engaging and learning about 21st century literacies while using blogs is something that occurs as a “side effect,” potentially, from other
intentions. In other words, while teachers chose to utilize blogging for explicit reasons such as to gain new information or learn about new concepts, the underlying learning experience was engaging personally in 21st century literacy skills.

Another finding was how teachers with different years of experience viewed the value of blogging. This was not an anticipated finding—in fact, years of experience was a notable finding that seemed to impact who was blogging and who was not that emerged from the data. It was assumed that teachers with over twenty years of experience were at least 40 years old, and that their age meant they would see less value in blogging. The assumption can be made that someone with over twenty years of experience is at least 40 years old, assuming they graduated from college or received their teaching certificate at 20. A finding in this section of the data showed that only one with over twenty years of experience found blogs to be “highly unimportant;” all other participants with over twenty years of experience found blogs to be either “somewhat important” or “highly important.” Again, under the assumption that these participants were 40 years old or over, years of experience did not seem to differentiate the perceived value of blogging.

In addition to running a blogger type and perceived importance histogram plot, the researcher also ran a years of experience and blogger type histogram, revealing data that can be used against the argument of age being one of the deciding factors of what would be considered a digital immigrant. The majority of teachers with over twenty years of experience were academic bloggers. Years of experience did not seem to impact whether or not teachers were actively blogging. Teachers with over twenty years of experience were also the most active commenters compared to all over years of experience categories, making teachers with over twenty years of experience the most active bloggers compared to other participants.
Because the conclusion that those who have over twenty years of experience may be active bloggers and more likely to see the value in blogging can be made, the researcher also ran a histogram that looked at how the four blogger types view the importance of blogging. This part of the data revealed several notable findings. The lurkers seemed to be the most varied response out of all of the four categories, with the only response in “highly unimportant,” several in “somewhat unimportant,” and the most representation in “somewhat important.” A conclusion as to why this occurred cannot be made without inference; the assumption is made that those who felt that blogging was unimportant lurked on the blogosphere over a period of time but did not feel as though the information or reliability of the blogs that they viewed was personally useful or relevant to their teaching. Another finding in this section of the data showed the responses of non-bloggers. Despite being categorized as a non-blogger, and while there was a selection of “not applicable” for this question, which the majority of non-bloggers chose, several participants chose “somewhat important” or “highly important” for the importance of blogging despite identifying as a non-blogger. This implies that just because non-bloggers did not engage with blogs, it does not mean they do not see the potential value of blogging.

The analysis of the blogging perceptions answered, partially, the question of how NWP teachers describe using blogs. While PD and 21st century literacy skills were secondary to the focus of how teachers describe using blogs in the Tier One data, the responses regarding PD and 21st century literacy skills made important connections to the blog findings, making inferences less biased.

**Perceptions of Professional Development**

In addition to the collected data on demographics and perceived usage and uses of blogs and blogging, teachers also answered questions regarding their perceptions of professional
development, both mandated and independent. Mandated PD was defined as any kind of PD required of teachers to complete by the school or district in which they worked and included inservice days and PD that was expected to be completed outside of school hours. Mandated PD that was expected of teachers to complete outside of school hours included learning activities such as coursework from local colleges and universities. Independent PD was defined for participants as PD completed by the teacher on their own time without any prompting or requirements from department chairs, schools, or districts. This could include preparing for lessons and reflective practices. The focus on both mandated and independent PD despite the research questions focusing on independent PD was to help the researcher make a comparison between the two types of PD teachers engaged in and to see if mandated PD potentially takes away time teachers would have to engage in blogging tasks.

The first question to which participants responded was the choice they made in terms of independent PD materials; they were able to choose more than one material (see Figure 4.11). Conferences and books were chosen most often and podcasts least often. Blogs were chosen about 50 times, accounting for 68% of the sample. Using this chart, the researcher also compared the differences between teacher choice for synchronous or asynchronous materials. Synchronous materials meant that teachers had to rely on others to provide this PD for them, and often this PD material required face-to-face contact. These categories included conferences, workshops (even if online, workshops can require web presence in live-time), school-funded PD, district-funded PD, and the library. Asynchronous materials meant that only the teacher needed to be present to engage in these tasks, such as: books, research articles, Google, blogs, Facebook, Twitter, podcasts, YouTube, and TV. Out of these asynchronous materials, five can be considered 21st century literacy tools; Google, blogs, Facebook and Twitter, podcasts, and YouTube. Compared
to all synchronous materials, which were selected a total of 246 times, 21st century literacy tools were selected 210 times. This difference in frequency showed how teachers were engaging in more synchronous PD materials compared to materials through a technology or web medium.

**Figure 4.11 - Teacher Choice of Independent PD Materials**

The researcher was also interested in the amount of time devoted to mandated and independent PD. In Figure 4.12, the pie charts show the amount of time devoted to each type of PD through percentages of total time, meaning teachers chose using a sliding percentage scale how much of their total time devoted to professional development they spent on each type of professional development. Blue represents under 10% of total time, green represents 10-24% of total time, beige represents 25-49% of total time, purple represents 50-74% of total time, and yellow denotes 75-100% of total time. Comparing the mandated PD pie chart to the independent
PD pie chart marks noticeable differences. While over 50% of participants selected less than 10% of total time devoted to mandated PD, about a third of participants felt that they spent over 50% of their PD time on independently driven PD. In fact, fewer than 25% of participants felt that they spent over 50% of their total PD time on mandated PD.

![Devoted Time to Mandated PD](image1)

![Devoted Time to Independent PD](image2)

**Figure 4.12 Devoted Time to Mandated & Independent PD**

To investigate the implementation of PD, whether mandated or independent, in the classroom, the researcher also asked participants whether or not they felt that they successfully implemented knowledge, skills, or tools into their own classroom that they learned through PD. This result, seen in Figure 4.13, shows the perceptions of successful classroom implementation of PD. The majority of participants, at 89%, felt that they integrated their PD knowledge with
high success into their classrooms. Few felt that class implementation of PD was somewhat unsuccessful, and only 17% of participants felt that PD implementation was somewhat successful.

![Perceptions of Successful Class Implementation of PD](image)

**Figure 4.13 - Perceptions of Successful Class Implementation of PD**

The last result in the PD section was a comparison of the time devoted to independent PD and the perception of success in the classroom (Figure 4.14). This result showed that those participants who devoted less than 10% of their time to independent PD were the only participants to feel that their implementation of that PD was somewhat unsuccessful. Most participants who spent less than 50% of their time on independent PD felt like the PD integration into their classroom was highly successful, but several participants felt that the PD
implementation was only somewhat successful. Those who engaged in over 50% of independent PD all felt highly successful when integrating PD into the classroom.

![Figure 4.14 Devoted Time to Independent PD vs. PD Success](image)

**Discussion of PD Findings**

The PD findings in the survey data helped make sense of how teachers described using blogs. The choices that teachers made in their PD materials showed that while blogs were second behind the use of Google, the use of face-to-face and synchronous materials such as conferences and workshops were selected more often compared to 21st century literacy tools, varying from blogs and other social media to podcasting and YouTube. This finding can potentially describe the lack of online tool use amongst participants as a reluctance to utilize a “new” tool versus the trusted and traditional face-to-face alternative. This cannot be tied to age or years of experience.
as seen in the blog summary but could potentially explain the hesitance of non-bloggers to use blogs because traditionally, PD is expected to be in face-to-face form.

Comparing the time devoted to independent versus mandated PD proved to have some noteworthy findings. It seemed that while mandated PD was important to school districts and schools, it was something that teachers were required to do and do not devote a lot of time to. Mandated PD practices go against the idea that professional development should be continuous and extended over time (Pashnyak & Dennen, 2009). The amount of time that participants spent on independent PD seemed to be more indicative of a continuous and extended than the time they spent on mandated PD, assuming that the content remained consistent, making independent PD, according to Pashnyak and Dennen’s research (2009), more successful.

Further investigation into Tier Two data revealed exactly why teachers chose to engage in independent PD more often than mandated PD. Mandated PD lacked the autonomy and choice of material that was of interest to teachers and often was incorporated little into their own classrooms (see Tier Two section).

The majority of participants who chose “highly successful” when asked about their implementation success of PD knowledge, skills, and tools showed that PD impacted classroom practice. While this finding was by no means new, it did show that the connection between independent PD and the classroom is a reliable and valid connection. Further results indicating the percentage of independent PD and success seemed to show that the more participants engage in their own independent PD, the more confident they were in asserting that that knowledge was integrated into their classroom.

This section did not describe how teachers use blogs specifically, but the information and findings from this section of the data helped inform the primary findings revolving around
blogging and blog use and helped connect the use of blogs as a potential source of independent PD that could then be successfully implemented into the classroom.

**Perceptions of 21st Century Literacy Skills**

In addition to PD, participant perceptions of 21st century literacy skills and tools helped explain the description of blogs and blogging. 21st century literacy skills were defined to participants using the NCTE definition, and several questions listed the six NCTE standards regarding implementation of 21st century literacy skills. Figure 4.15 shows whether or not teachers felt that engaging in blogs personally helped develop their own 21st century literacy skills, according to their years of experience. Those with over twenty years of experience felt overwhelmingly positive about this question, although five participants selected “maybe” instead of “yes.” Only a few participants selected “no,” and their years of experience did not seem to impact this choice greatly. The few participants who had fewer than five years of experience all selected “yes.”

In Figure 4.16 are two charts that compare the perceptions of engagement with NCTE 21st century literacies in the classroom to personal engagement. Participants were asked to select what standards they felt they incorporated into their classroom, and then asked what standards they felt they personally utilized or followed. Figure 4.16 shows that most teachers believed that they personally engaged in standard 4, which was to be able to “Manage, analyze, and synthesize multiple streams of simultaneous information.”
Figure 4.15 - Years of Experience vs. Engagement in Blogs

Standard three, “Design and share information for global communities to meet a variety of purposes,” was the least selected out of the six standards. Standard three was the least selected in the personal engagement chart but was selected even less in the classroom incorporation chart. It seems like the two charts mimic each other. 56% of teachers felt that they personally engaged with 21st century literacies according to NCTE standard one, and 50% of teachers felt that they included this standard in their teaching. All of the other standards mimic this percentage difference, with teacher personal engagement always a percentage higher than classroom engagement with the standard.
Figure 4.16 - Perceptions of Classroom and Personal Engagement in 21st Century Literacies

One of the last questions of the survey asked whether or not engaging in 21st century literacies help teachers teach 21st century literacies (Figure 4.17). The overwhelming majority replied “yes,” while about a third responded “maybe.” Fewer than 10% replied “no.”

Figure 4.17 - Engagement in 21st Century Literacies
Discussion of 21st Century Literacies

This section of the data yielded several results that can be connected to the description of blog uses and usage amongst NWP teachers, as identified in the research sub-question number one. Years of experience percentages did not seem to differ based on the belief that engaging in 21st century literacies helps incorporate it into the classroom. This result was consistent with earlier findings that blog usage and blogger type were not tied to years of experience. Those with over twenty years of experience, assumed to be older in age, were not less likely to engage in blogs.

The next result in the 21st century literacy data included two questions that asked participants to select standards listed from NCTE’s definition of 21st century literacies that they personally engaged in and that they taught in their classroom. This data resulted in a finding that teachers, while not very likely to incorporate 21st century literacy skills into their own lives and learning practices, were less likely to then incorporate it into their own classroom. It can be inferred then that teachers who were less comfortable with a standards were not very likely to incorporate it into the classroom compared to those standards that they were comfortable with. This can be seen especially with standard three, which is to “Design and share information for global communities to meet a variety of purposes.” Teachers should be exposed to this idea and concept through their PD as it is an important step into 21st century literacy skills that can be incorporated using blogs—global communication and problem solving.

Finally, the question that ties blogging into 21st century literacies, is asked as a final question on the survey: does engaging in 21st century literacy skills (such as blogging) yourself help teach 21st century literacy skills? The overwhelming majority agreed with this, saying “yes, engaging in 21st century literacies, such as blogs, does help teach these skills in the classroom.”
These findings showed perceptions regarding 21st century literacies, classroom impact and implementation, and blogging, a 21st century literacy skill. It seemed like teachers perceived the importance of needing to engage with 21st century literacies personally in order to be able to engage successfully in 21st century literacies with students in the classroom. The comfort and use of certain 21st century skills, such as blogging, may be a key to help teachers engage students in necessary 21st century literacy skills.

**Tier One Results Summary**

The Tier One data suggested several key phenomena but produced more questions than answers, as much research does. Key findings in this section answer the sub-question in this research study: how do NWP teachers describe using blogs? These results included key findings:

- While teachers chose to utilize blogging for explicit reasons such as to gain new information or learn about new concepts, the underlying learning experience was using a 21st century literacy tool and engaging in 21st century literacy skills.
- Differences among years of experience did not seem to show a change in whether or not teachers were actively blogging, at least descriptively. Teachers with over twenty years of experience were also the most active commenters compared to all over years of experience categories, making teachers with over twenty years of experience seemingly the most active bloggers compared to other participants, at least descriptively.
- Years of experience also did not seem to differentiate the perceived value of blogging.
- Just because non-bloggers do not engage with blogs did not mean they did not see the potential value of blogging.
- The percentages comparing personal engagement with independent PD and engagement with 21st century literacies in the classroom seemed to show that participants who
engaged in their own independent PD may have been more confident they were in asserting that independent PD knowledge was integrated into their classroom, at least descriptively.

• Successful PD, according to scholarship, takes up time because it is extended over time. Independent PD took up more of the teachers’ time compared to the relatively little time teachers seemed to spend on mandated PD.

• By choice, teachers were engaged and chose to engage in more synchronous PD materials compared to PD materials through the use of technology, such as blogs.

• Teachers, when less likely to incorporate their own usage of the 21st century literacy standard, seemed to be, descriptively, not as likely to incorporate it into their own classroom. It can be inferred that teachers who were less comfortable with a standard were not as likely to incorporate it into the classroom compared to those standards that they were comfortable with. This can be seen especially with standard three, which is to “Design and share information for global communities to meet a variety of purposes.”

• The overwhelming majority agreed that engaging in 21st century literacies, such as blogs, did help teach these skills in the classroom.

These results, while they cannot be generalized because inferential statistics were not used and because one group was larger than another (see Tier One analysis and results), add several findings to the scholarship on blogging, professional development, and 21st century literacies. While this data provided descriptive statistics that helped the researcher and the audience at large envision results through visual representation and numerical evidence, questions arose that can only be answered by interview and artifact collection in Tier Two. These data required a deeper study of why participants chose to use or chose not to use blogs, how they
perceived this impacted their classroom practices specifically, and their choices and explanations regarding professional development avenues including reflective practices. Furthermore, the Tier Two data sought to explain how active participation versus inactivity in blogs might impact these perceptions. The first phase of this research study was meant to give representation of the research questions and described how NWP teachers described using blogs. Further explanatory qualitative data sought to delve deeper into the initial patterns identified in the quantitative data to provide rich description and a further investigation into the research questions and sub-questions two, three, and four.

**Tier Two Results**

The qualitative data in this study included 8 purposefully selected interviews, 13 lesson plan artifacts, and 9 open-ended survey responses from each of the 73 survey participants from survey data, resulting in 657 responses. Out of the eight interviewees, who were purposefully selected from survey participants to include representation of all four blogger categories, three were categorized as academic bloggers, two were categorized as commenters, one was categorized as a lurker, and two were categorized as non-bloggers. The researcher sought to maintain an equal representation in each participant category, but due to time constraints of data collection was not able to achieve equal representation in each category.

Data were analyzed and coded using a two-level scheme that resulted in 48 codes, which were reduced to 38 total codes within six major themes based primarily on the NCTE 21st Century Literacies Framework standards. The findings presented in the Tier Two section of the results chapter include an in-depth examination of six predominant themes that emerged both within and across cases as well as from qualitative data from the national survey, including: 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency
and fluency development, 4) Global information sharing, 5) Creation, critique, analysis, and
evaluation of multimedia texts, and 6) Challenges. Within each of these predominant themes
occurred several sub-themes established from the coding of the qualitative data. Unlike the Tier
One section where data were shared and then discussed by the researcher, the Tier Two section
includes inferences and discussion of data within each sub-code. In addition to a data analysis
procedure review and discussion of the results according to theme the inter-coder and intra-
coding agreements were discussed.

**Data Analysis Procedures**

The participants who were involved in the Tier Two data collection included the 8
participants selected for the interview and artifact collection as well as the 73 survey participants.
The 8 participants are listed in Table 4.1.

**Table 4.1 Participant Characteristics**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Blogger Category</th>
<th>Years of Experience</th>
<th>Grades Taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debbie</td>
<td>Academic blogger</td>
<td>9</td>
<td>7th, 8th, 9th</td>
</tr>
<tr>
<td>Sam</td>
<td>Academic blogger</td>
<td>7</td>
<td>10th, 12th</td>
</tr>
<tr>
<td>Dani</td>
<td>Academic blogger</td>
<td>10</td>
<td>9th-12th</td>
</tr>
<tr>
<td>Krista</td>
<td>Commenter</td>
<td>10</td>
<td>12th</td>
</tr>
<tr>
<td>Tiffany</td>
<td>Commenter</td>
<td>20</td>
<td>9th, 12th</td>
</tr>
<tr>
<td>Casey</td>
<td>Lurker</td>
<td>6</td>
<td>HS, unspecified</td>
</tr>
<tr>
<td>Leslie</td>
<td>Non-blogger</td>
<td>20</td>
<td>9th</td>
</tr>
<tr>
<td>Bri</td>
<td>Non-blogger</td>
<td>9</td>
<td>10th-12th</td>
</tr>
</tbody>
</table>
Participant Description

One participant who elected to meet face-to-face at NCTE met with the researcher at an agreed-upon location. The environment in which the researcher met Dani\textsuperscript{6} was relaxed, despite being busy. The researcher introduced herself to the participant, discussed the project’s purpose as outlined in the consent form, and asked for Dani’s permission to audiotape the conversation prior to beginning the interview.

The researcher met with Dani at a local coffee shop, where many teachers were lining up to get coffee prior to visiting a professional development session at the national conference. Dani introduced the researcher to several more teachers, and openly spoke about all of the interview questions without much hesitance. When she did hesitate, she clarified her hesitation, making comments such as “I hesitated answering that question because…”

The researcher interviewed Sam via Skype. This interview was conducted during the school day but Sam was able to speak with the researcher because she had a professional development session that meant all of the students were let out early from school. She spoke with the researcher prior to her professional development session.

Debbie and the researcher discussed the interview questions over the phone. Debbie was forthcoming in her answers and required little prompting. This interview was completed during evening hours due to time zone differences, and Debbie seemed to be completing the interview at her home location.

The researcher interviewed Krista prior to the school day in the early morning via Skype. Both the researcher and Krista had webcam on and discussed at length each interview question. This interview was especially informative because Krista asked questions throughout the

\textsuperscript{6} All names are pseudonyms to ensure participant confidentiality
interview herself that were prompted by the interview questions. Through the dialogue that occurred, much additional data were collected.

Tiffany spoke with the researcher during evening hours at a home location over the phone. Tiffany, too, was informative but did require some prompting in addition to interview questions, such as an additional “why do you think that?” or the repetition of a section of an interview question. Tiffany gave the researcher a lot of information about specific blogs that she frequents, a useful addition to the implications section of this research study.

Casey and the researcher discussed the interview questions via phone. Casey was the only participant categorized as a lurker. The researcher had originally planned to call Casey during a planning period in her school day, but had to reschedule this to a later date due to an unforeseen time conflict that Casey had. The interview was rescheduled to the same time on a later date, and was conducted with useful and informative results.

Bri was the first interviewee that the researcher spoke with over the phone. Bri was energetic and accommodating. The researcher spoke with Bri after school at her school location, and despite being a shorter interview, the data collected was, again, useful and informative.

Leslie was the second interviewee that the researcher spoke with over the phone, and was obliging and helpful throughout the interview process, asking the researcher several times if the information she had given was enough to answer the question. This interview was conducted in the evening, presumably at Leslie’s home location.

All participants were either currently teaching or had taught high school English. Most of the participants had at least six years of teaching experience, with some veteran teachers with over fifteen years of experience. There was only one participant that was categorized as a lurker
who was involved in this study, an interesting phenomena considering their inactivity in the blogging environment.

All Tier Two data were collected and inserted into one NVivo document on the researcher’s personal Macbook computer. The researcher used one of Miles and Huberman’s (1994) data coding techniques, a two-level scheme, where the data were coded “partway between a priori and induction approaches….creating a general accounting scheme for codes that is not content specific, but points to the general domains in which codes can be developed inductively” (p. 61). This meant that the researcher began with a set of initial codes that were derived from the theoretical framework, including general themed codes. These codes were Fluency, Collaboration, Information, Use of Multimedia, and Ethics. The codes were selected according to their relevance to the NCTE 21st Century Literacies Framework (see data analysis in Chapter Three).

Using these set preliminary codes, the researcher initially open-coded several interviews and artifacts from different blogger types, finding reoccurring concepts and marking them as potential codes in a separate Word document. Charmaz (2011) identified the initial coding phase as an opportunity to find any kind of “theoretical possibilities” (p. 57). Miles and Huberman (1994) called this initial stage data reduction, because the researcher edits and summarizes the data through the coding process. The second phase of coding included using initial codes to code large amounts of data. This included several sub codes of each main code, including a reflection or use of the standard in the participant, labeled self, a reflection or use of the standard in students, or a reflection or use of the standard in teachers at large. It was important to embed the NCTE framework into the coding scheme to be able to focus the coding process on the research questions through the lens of the NCTE framework. The NCTE framework allowed the
researcher to focus on the differences between how teachers defined and perceived 21st century literacy skills and the instances in which they either used or suggested use of explicit behaviors listed in the standards of what it means to be 21st century literate. The coding scheme can be seen in Table 4.2. While the NCTE framework codes were used, additional codes were added to the coding scheme based on initial open-coding findings. These additional codes were reoccurring themes and concepts in the data that made an influence on the resulting analysis. The recursive process of coding eventually yielded saturation of codes, meaning there were no longer instances of a particular code or a particular piece of the data that prompted a new or emerging theme or concept (Charmaz, 2011). Codes were mostly made up of what Miles and Huberman (1994) referred to as pattern codes, derived from initial coding where many descriptive codes were embedded into a smaller number of encompassing pattern (or theme) codes. This is a process that Punch (2009) referred to as analytic induction, “where concepts are developed inductively from the data and then, using inferences, are raised into a higher level or theme, deducing interrelationships in the data” (p. 172). The resulting coding scheme contained several indicators of each standard, as well as an additional theme that surfaced from the data.

The next steps in the Tier Two data analysis followed Miles and Huberman’s (1994) qualitative data analysis steps, beginning with data reduction and then continuing to data display where the researcher organized and assembled information. This was then finished with analysis, and drawing and verifying conclusions.

Table 4.2 illustrates each initial code and includes the frequency and location of each code. Creswell (2013) noted that frequency of each code gives a certain amount of quality to each code and illuminates trends at first glance as to what predominant themes occurred in the
Because some codes did not surface in the remainder of the data as expected, they were condensed into other codes or eliminated.

**Table 4.2 Initial Coding Scheme**

<table>
<thead>
<tr>
<th>Anchor Code</th>
<th>Main Codes</th>
<th>Sub codes</th>
<th>Child codes</th>
<th>Sources</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development</td>
<td><strong>Types of PD</strong></td>
<td><strong>Reflection</strong></td>
<td></td>
<td>8</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td><strong>Concept</strong></td>
<td><strong>Knowledge</strong></td>
<td></td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td><strong>Classroom</strong></td>
<td><strong>Planning</strong></td>
<td></td>
<td>10</td>
<td>74</td>
</tr>
<tr>
<td>PD mediums</td>
<td><strong>Traditional</strong></td>
<td>Blogs</td>
<td></td>
<td>6</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td><strong>Technology</strong></td>
<td>Facebook/Twitter</td>
<td></td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td></td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td><strong>Self-sponsored</strong></td>
<td></td>
<td></td>
<td>8</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td><strong>Mandated</strong></td>
<td></td>
<td></td>
<td>9</td>
<td>82</td>
</tr>
<tr>
<td>Classroom influence</td>
<td><strong>On students</strong></td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>On self</strong></td>
<td></td>
<td></td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Blogging</td>
<td><strong>Types of blogs</strong></td>
<td><strong>Negatives</strong></td>
<td>Usefulness</td>
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<td>78</td>
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<td>Time</td>
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<td>48</td>
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<td></td>
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<td>Reliability</td>
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<td>Ethics</td>
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<td>Accountability</td>
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<td>2</td>
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<tr>
<td></td>
<td></td>
<td>Access</td>
<td></td>
<td>8</td>
<td>35</td>
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<td></td>
<td><strong>Positives</strong></td>
<td>Collaboration</td>
<td></td>
<td>7</td>
<td>24*</td>
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<tr>
<td></td>
<td></td>
<td>Reflection</td>
<td></td>
<td>8</td>
<td>55*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge</td>
<td></td>
<td>7</td>
<td>25*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson Planning</td>
<td></td>
<td>10</td>
<td>74*</td>
</tr>
<tr>
<td>NCTE Framework</td>
<td>Use of Multimedia</td>
<td><strong>Teachers</strong></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Students</strong></td>
<td></td>
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<td>54</td>
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<tr>
<td></td>
<td></td>
<td><strong>Self</strong></td>
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<td>12</td>
<td>171</td>
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<tr>
<td></td>
<td>Information</td>
<td><strong>Teachers</strong></td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Students</strong></td>
<td></td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Self</strong></td>
<td></td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Fluency with Tool</td>
<td><strong>Teachers</strong></td>
<td></td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Students</strong></td>
<td></td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Self</strong></td>
<td></td>
<td>9</td>
<td>43</td>
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<tr>
<td></td>
<td>Collaboration</td>
<td><strong>Teachers</strong></td>
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<td>11</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Students</strong></td>
<td></td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Self</strong></td>
<td></td>
<td>7</td>
<td>24</td>
</tr>
</tbody>
</table>

*These were later condensed into the “Types of PD” code and the Collaboration→Self code.
The organization of the codes also required correction and redrafting, resulting in a final coding scheme that included 38 codes, all of which were aggregated into six major themes that were a result of the analysis of the data.

These themes included: 1) Relationships, community, and global collaboration, nicknamed collaboration; 2) Ethical responsibilities, nicknamed ethics; 3) Proficiency and fluency development, nicknamed fluency; 4) Global information sharing, nicknamed information; 5) Creation, critique, analysis, and evaluation of multimedia texts, nicknamed use of multimedia; and 6) Challenges.

In Figure 4.18 the final coding scheme, including all inter-coder and intra-coder agreement edits, begins with the collaboration code. The collaboration code was based on the NCTE 21st century literacy standard “Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought” as well as “Design and share information for global communities to meet a variety of purposes” (NCTE, 2008, para 1). Since these two standards address the focus on collaboration and communication with communities and other people, this code addressed, as a whole, collaborative nature of teachers and of the blog medium, collaborative effort, and evidence of collaborative. The sub codes within collaboration addressed specific areas of collaboration within the data, including professional development mediums that were collaborative in nature. Mandated collaborative PD addressed any reference to collaborative PD that was mandatory for teachers to participate in, while self-sponsored collaborative PD addressed any reference to PD that was completed on the teachers’ own time, independent of any mandatory experiences or professional development. Traditional PD medium was coded when teachers suggested their PD included anything that was face-to-face, such as workshops or
conferences, which did not require the facilitation of technology. When teachers incorporated technology in their PD, whether by online webinar, use of any form of social media, or any other form of technology, the code under Use of Multimedia named technology was used in conjunction with the PD medium. For example, if a teacher said that they often used blogs as a source of independent PD, this reference would be coded using the Self-Sponsored code as well as the Technology→Blog code. The School Support code was included in the final coding scheme because many teachers referenced school support regarding professional development and collaboration. Any references to their school specifically were coded as School Support. The next three codes under the Collaboration code included instances of evidence of collaboration with the teacher personally, coded Self, the students that the teacher instructed, coded Students, or with other teachers, coded Teachers. For example, if the teacher mentioned that she collaborated with a National Writing Project site on her own time despite the lack of school support, this reference would be coded under PD mediums→Self-Sponsored, Collaboration→Self, and PD Mediums→School Support. If the teacher mentioned the necessity of teachers to collaborate, or if she mentioned that all of her teachers in her school collaborate in a book club that reference would be coded Teachers as well as Self. If the teacher mentioned her students collaborating, or if any evidence of student collaboration was present in the artifacts collected, that reference was coded Students.

The Ethics code adheres to the NCTE 21st Century standard “Attend to the ethical responsibilities required by these complex environments” (NCTE, 2008, para 1). Anything that referenced ethics or ethical responsibilities=requirements was coded under Ethics. The Ethics code included two sub codes, Self and Students. These codes depicted instances where teachers personally participated in or noted ethical considerations/behaviors. The Students code
referenced instances where either the students personally participated in ethical behaviors or teachers noted students’ ethical behaviors. For example, if a teacher said that she does not want to post on a blog because she does not want any student work to be online, that would be coded under Ethics→Self and Ethics→Students. If a teacher explained how students in her class did not follow ethical responsibilities while posting on their own blogs, that would be coded Ethics→Students. Any references in the artifacts that suggested that students were abiding by or not abiding by ethical behavior were coded as Ethics→Students.

The Fluency code adheres to the NCTE 21st Century standard “Develop proficiency and fluency with the tools of technology” (NCTE, 2008, para 1). This code was used for references to any fluency or expertise with a particular tool. This does not mean that teachers were simply referencing using a tool, but rather, an instance in which expertise with a tool was a clear inference that could be made. This code also included Self and Student sub codes, where Self showed teacher fluency with a particular tool and Students showed student fluency with a particular tool. For example, if a participant suggested that she owns a blog, won a blogger of the year award, and presented on using blogs, she would be showing expertise and fluency with blogs, which would be coded both under Fluency→Self as well as Use of Multimedia→Technology→Blogs. When a student showed fluency with a tool, or when teachers suggest a student had fluency with a tool, it was coded under Fluency→Students. The difference between the Use of Multimedia and the Fluency code was expertise; while the Use of Multimedia implied a student or teacher used a tool, the Fluency code assumed a particular comfort and expertise with the tool. This was an inference that the researcher made based on context, particularly when participants shared information regarding the tool. Additionally, Fluency was used to code awareness of the use of a tool for the sake of being fluent with that
tool, such as when a teacher said that they engaged in blogging to learn more about blogs, or that they needed to engage with blogs because they teach writing and need to continue to write personally.

The Use of Multimedia code was a code used when a teacher referenced using a form of multimedia. This code associates with the standard “Create, critique, analyze, and evaluate multimedia texts” (NCTE, 2008, para 1). Similar to other codes, this code also had a Self and Students code, used when a participant references the use of multimedia with oneself (Self) or with students (Students). The Technology code referenced several options in terms of what the participant was using. Blogs was a choice, as was Facebook/Twitter as it was referenced many times explicitly within the data, as well as Podcasts and Other, which included tools such as online webinars. If a teacher said that she used blogs, for example, this was coded under Use of Multimedia→Self and Technology→Blogs. If a teacher said that her students use blogs and podcasts, this was coded under Use of Multimedia→Students, Technology→Blogs, and Technology→Podcasts. As mentioned in the previous paragraph, the difference between the Use of Multimedia code and the Fluency code was expertise.

The Information code references the NCTE 21st century literacies standard “Manage, analyze, and synthesize multiple streams of simultaneous information” (NCTE, 2008, para 1). In this code, references to utilizing information from any form of PD were coded. As with other codes, there was a Self and Students sub code. When a teacher referenced using information from a blog or for their own purposes, it was coded as Self. When a teacher referenced using information off of a blog or any other tool for their students, or when reference was made to students utilizing information that was clearly found through the use of a form of PD, it was coded Students. There were three other codes within Information that referenced the type of
information that teachers were referencing. If a teacher referenced using a tool to gain information for classroom planning or lesson planning, it was coded under Classroom Planning. If a teacher referenced using a tool to gain information for content knowledge or to learn about a particular theme, novel, play, or concept, it was coded under Concept Knowledge. If a teacher referenced using a tool to reflect on her classroom practices, it was coded under Reflection. For example, if a teacher said that she used blogs to talk to other teachers about what went wrong with her lesson plans, it would be coded under Use of Multimedia → Self → Blogs, Collaboration → Self, and Information → Reflection.

The final theme that was used was the code Challenges. Challenges was not part of the NCTE framework but was deemed a necessary addition to the final coding scheme because there were several instances where teachers referenced specific challenges, such as challenges with collaborating with teachers, challenges with blogs, and challenges with mandatory PD. The reason for creating a major code rather than adding a challenges sub code under each theme was because the researcher was interested in the specific type of challenge that was occurring, which many teachers referenced. For example, if a teacher said that mandatory PD was useless to her classroom, it was coded as Challenges → Usefulness. If teachers had issues with accessing something, such as lack of finances to attend conferences, it was coded under Access. If teachers suggested that blogs would be great as a PD source but there would be no way of knowing whether or not teachers posted on blogs, it was coded as Accountability. If ethical concerns were referenced, this was coded under Ethics. If teachers said that blogs did not have the expertise level compared to research articles or that blogs were an unreliable source, it was coded as Reliability. Several teachers suggested that completing self-sponsored PD was taxing on their time; this was coded as a Challenge and under Time. Finally, if teachers said that information
found on the Internet was not impacting their students, this would be coded as Influence. Figure 4.18 visually displays this final coding scheme.

**Figure 4.18- Final Coding Scheme**

**Relationships, Community, and Global Collaboration**

Several subthemes surfaced in the Collaboration code after the analysis was conducted. This section includes interview, artifacts, and survey data, and focuses on three sub themes: good versus bad collaboration, recognizing blogs as an avenue for collaboration, and finding/searching for collaboration on blogs due to insufficient school support. Within each theme the differences between the academic bloggers, commenters, lurkers, and non-bloggers are discussed.
**Good vs. bad collaboration**

After coding several excerpts of data under “Collaboration\(\rightarrow\)Teachers and Challenges\(\rightarrow\)Usefulness, it was noted that while collaboration would be assumed to be positive when blogging, in some instances collaboration was seen as a negative. In other words, there were certain reflective blogs that, while collaborative, did not suit participants’ reflective and planning needs. These were defined by participants as “venting” blogs that were not helpful or useful.

Krista, categorized as a commenter, said: “Vent is the right word, venting doesn’t provide constructive change.” Others, like Tiffany, categorized as a commenter as well, described the difference between invested teachers blogging about their practices on a blog, looking to collaborate and share their experiences with other teachers, versus websites or other Internet sources that provided unreliable information from an unreliable source. This depicted the trust that teachers put into other teachers who were blogging, forming a teaching community online.

I think that anyone who is writing a blog about the profession is someone who is really interested and invested in the profession, I’m not going to get some half baked lesson from some dumb website, and usually this is someone who has tried it, who has implemented what she’s talking about, has discussed the details of how it unfolds, so that is somebody that I know is (an) engaged, responsive, instructor.

While Casey, the lurker, and Bri and Leslie, the two non-bloggers, did not mention “bad collaboration” or bad sources because of lack of experience, Debbie, one of the academic bloggers, had several things to say about “venting” blogs:

I usually choose them if there is something on there that I think I could use. I don’t use them when…there are some where people just go to vent, you know, I don’t really read those, I like to read the ones, like the Film English one, she finds stuff, and then says this would be great, to teach this in the class and here is how you can do it, how you can teach this with the film, so it’s really helpful to me, I go there and I see what I can use, oh I can use this as a short film, they all are
really short films, I could use this in my class...so I am looking for things I could use, in my classroom.

Debbie goes on to mention venting further on in the interview:

There were a couple of people that I was following that were doing young adult readings a lot and they started to really kind of vent, and I stopped reading, because I’m not really interested in...I think some people just need a place to vent, it just doesn’t have anything to do with what I am interested in.

This focus on “bad collaboration” shows that there were blogs that were written by teachers, considered “educational blogs,” that cannot be coded as unreliable but are coded under the Challenges ➔ Usefulness code. This meant they were not useful to teachers in a teacher blogging community. Survey participants also mentioned the “venting” blogs:

I find so many blogs are primarily for complaining, negative venting, or wallowing in the woes of teaching without adding anything productive. I know there are good blogs out there, I just don't know how to find them.

This seemed like one of the things that deter teachers from using educational blogs. However, many more teachers referenced “good” collaboration with teachers versus those who mentioned venting blogs. In fact, many participants mentioned how blogging amongst and commenting within the teacher blogging community provided necessary reflection, support, and classroom planning materials when no other avenues for collaboration can be accessed or were useful. One survey participant suggested that educational blogs update them on current educational philosophies:

Unfortunately, schools here simply don't stay up to date on best practices that are adapting and changing. We aren't always surrounded by people who can have conversations about educational theory. So, I use educational blogs to make sure that I can go any where and speak like an educator and be up to date on educational philosophy and theory.

Other survey participants referenced similar reasons: staying up to date.
I think it is important for an English/Language Arts teacher to continue to learn and to remain current with trends in our field. I think that teachers who are willing to share their practices and the results of their practices in social media and blogs are one of the best ways to achieve that.

I use educational blogs to read further on emerging topics in my field, to verify information and/or explore further, to find methods and/or materials relevant to my curriculum that have been successfully implemented, to stay plugged in and learn what's going on in education across the nation, and sometimes just for enjoyment of particular teacher-writers in my field and/or area of interest.

Blogs are a wonderfully democratic way for teachers to share best practices and opinions on policy and such. My blog is followed by several hundred educators and is regularly read by about 150-250 teachers each week I post. It's a great way to network, too.

Krista provided the most explicit evidence of collaboration when she was discussing using a particular blog. She mentioned how on a particular blog she contacted the author of the blog directly about a particular lesson that she was interested in.

I mean, I specifically contacted Alicia⁷—you’re doing exactly what I want to do! So she started writing blog posts specifically to me, and other teachers that were there and asked these questions, which is pretty cool, and then, well, I like having one place for all of my stuff.

This community of learners informing each other, sharing sources, and providing support showed the potential benefits of blogs as a source of collaboration, despite the instances of when blogs become “bad collaboration” sources where teachers go to vent.

*Blogs as a potential collaboration avenue*

Despite the potential of coming across a “venting” blog, educational blogs, primarily written by teachers, seemed to be a good avenue for useful teacher collaboration. Building on blogs as a potential collaboration avenue, this sub theme focuses on how each of the categorized interview participants viewed blog collaboration, and how it seemed to be implemented within the lesson plan artifacts collected.

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⁷ Pseudonym
The academic bloggers had a lot to say about collaborating on blogs. Sam, while answering the question “How would you feel if time spent browsing, commenting, and posting on blogs was counted towards your mandated professional development hours,” eagerly suggested the benefits of collaborating with teachers through blogs:

I would be pretty excited, because I do a lot of that on my own time, and I know some teachers who write blogs, and have a blog, and it’s just nice to be connected to people who are experiencing the same thing you are, and they might offer some innovative solutions, or at least have some empathy when you’re pulling out your hair because a lesson is not going well, or there are kids giving you some trouble.

Sam continued by mentioning how she got involved with blogs, and how traditional, face-to-face teacher collaboration led to her becoming more involved in blogging networking and collaboration.

Most of the ones I have been put in contact with come from those conferences, and the presenters give their blogs, they list, you give them yours, and you sort of create your network, but there are others, like Edutopia, or, trying to think of the other one I like to go to, oh, I like the teacher channel, it’s more of a video blog, yeah, for when you sort of are going oh I need something new, I need something that teaches this skill, or at least gets you started.

Debbie, another academic blogger, described the effectiveness of blogging translating into her classroom by describing blogging as a “giant collaboration:”

It’s like having a giant collaboration where you are seeing different ways that people are doing things, and then you take it and you try it and you tweak it. I mean I get more ideas off of the Internet than I ever get from anything else, and just, there are tons of things I want to try, that’s where I get 99% of my ideas from, is from the Internet.

The commenters were equally as enthusiastic about teacher collaboration through the use of blogging. Krista mentioned the lack of teachers’ voices in traditional professional development and the necessity of bringing teachers’ voices into PD.

We’re trying to get teacher voices in professional development but we can’t get out of classrooms enough, we can only get out four or five times a year, to do (PD with) the district that I am working with, and so, we’ve decided to begin creating
these type of—like I created a video recently, of lessons, and I explained people through the lesson, then I did a little metacognitive—here is what I was doing, here is what I wanted kids to see, on my blog.

Tiffany shared the way in which she collaborated using blogs, which included both information-sharing and content knowledge building through the use of a blog as well as traditional face-to-face PD, where she received a recommendation about a source for vocabulary learning from a teacher friend of hers.

This is an idea that I got from the teaching channel from the video blog that the woman I follow does, and we used graphic novel panels to plot the structure of the introduction of the chapters so not only did I get the idea from the blog but I had to go online and I had to search graphic novel panels, so there was someone who wrote graphic novels, there were all these panels available, so I used that…a friend recommended mbeam, a vocabulary learning program, that I went online and did some research about that, and hooked my kids up with m-beam so that they can use that and engage in differentiated vocabulary practice, I will search for images online, book reviews, so I was setting up lit circles and this morning they were starting out with lit circle exercises and want to give them a sense of what the books are.

This comment showed several things, on top of how Tiffany used blog for a source of collaboration and information sharing. First of all, it showed that while participants can use blogs as a source of collaboration, collaboration does not necessarily have to be exclusive to blogging. Secondly, what Tiffany learned on the blogs is something that she can then teach or show to other teachers, creating a learning community that goes beyond just face-to-face PD or just technology-based PD and creates a hybrid more powerful than one or the other.

What was notable about Tiffany the commenter was that she, unlike Krista, was close to being categorized as a lurker. Lurker tendencies, such as being more comfortable with reading and browsing versus commenting, was something that came up more than once during her interview, despite the fact that she did comment frequently on blogs. In
the following comment, she was asked whether or not she felt being an academic blogger, commenter, lurker, or non-blogger was better or worse in terms of professional development. She responded:

Sometimes I notice the commentary on blogs, and someone will put a question there and then nobody responds to the question, barely, or someone will put a question there and there will be a variety of answers from other bloggers, or from other readers, and sometimes I look at them and I think oh that’s very helpful, the most effective ones are when the blogger herself responds directly to the question posted by the person, and I think that’s the most effective use of the blog commentary, but I don’t think that one is really better than the other, I don’t think that, because I can be really engaged in the blog content and commentary and take from it meaningfully even without commenting myself.

This comment was interesting because she advocated for commentary when useful and when teachers on blogs do collaborate and answer, but she did mention how reading a blog’s content is not necessarily less effective than commenting. However, reading a blog’s content cannot really be called collaboration, as they were not involved in any kind of dialogue other than an internal one. If this claim or inference can be made, then lurkers and non-bloggers both did not engage in collaboration through the avenues of blogs.

However, this did not mean that these participants, particularly lurkers, did not glean less information from blogs compared to more active participants. It only meant that they were not involved in the collaborative part of blogs and the collaborative part of the NCTE 21st Century Literacies definition. Bri, one of the non-bloggers, summarized this point well when she discussed the different “work” that different blog participants do:

I guess that could be like a blog…someone posts, and someone responds. And in that instance I think that you don’t necessarily have to be the one posting the blog, I think sometimes the person who is reading and synthesizing the information and posting something back is maybe more work than the person posting it. Not that,
maybe more work is the wrong word, it’s different work, the person who posts the
information is doing one set of thinking, and the person who is reading,
synthesizing, and responding is doing a different set of thinking. The person who
is just lurking it would be hard to identify exactly what it is that they are doing.
Because we don’t know the level of thinking, how deep they are thinking into it,
now it depends on their actions, are they sharing it with their department, their
colleagues, then they may be doing the same level of thinking they’re just not
publicly showing it on the blog.

Comparing comments from lurkers and non-bloggers regarding blogs and
collaboration showed that while they were not opposed to the idea of using blogs as a
source of collaboration, they were more hesitant to the idea compared to academic
bloggers and commenters. For example, Casey, the lurker, was not confident that the
teacher community would accept her blog’s usefulness.

I think they can be very helpful, I was actually doing, I was reading a professional
development one (blog) and someone said do you post, do you have a blog, that
you put these things on, and I said no, should I? And she said yeah you should
have a blog, where you put all of your ideas so that other teachers can go use
them, and I was like that would be cool but I don’t think people would use my stuff
(Emphasis added).

Leslie, a non-blogger, was open to the idea of teacher sharing, or even teacher-
parent sharing:

I would definitely find teacher to teacher sharing as useful, because, you know,
teaching can be very isolating, as a job, except for when we get time to do PD
together, because you never really get time off to talk to other teachers. So I think
that would be beneficial, I don’t know, are there blogs out there where parent-
teacher communication occurs? I kind of think that would be a neat avenue, to
share with parents where they could voice whatever they needed to voice with me,
that might be cool.

These three comments by lurkers and non-bloggers showed that these participants
were not necessarily against blogging in general, or blogging for collaborative purposes,
but seemed to lack the confidence that academic bloggers and commenters have in doing
so. It is not dislike of a tool or even dislike of 21st century literacies that is the reason for
lack of active involvement amongst lurker and non-blogger participants but rather, it seemed, discomfort and lack of education or information about blogs as a collaborative avenue.

The artifacts coded as Collaboration also revealed information regarding the subtheme of blogs’ potential for collaboration. The only artifacts that included easily identifiable teacher collaboration where teachers reference where they got the lesson, idea, or tool from were from academic bloggers. While some academic blogger artifacts were more traditional lesson plans with less technology implementation than expected, the majority of discussion regarding implementation of collaboration, whether on blogs or not, came from interviews with either academic bloggers or commenters. One of the participants, Sam, discussed using blogs as an avenue for collaboration for her students as a challenge:

I think the one common denominator between all educational blogs is that when you have your kids blogging they don’t get comments and feedback unless it’s from like, us, the students, it would be nice if we could somehow get in contact with some other people who would visit our blogs, or we visit them and start some discussions, we’re always on the look out for those types of opportunities.

This comment also attests to the idea that Sam was having students blog because she wanted them to engage in global conversations, an important 21st century literacy skill that goes beyond traditional teacher-student relationships and audience.

Despite engaging with blogs, most of the academic bloggers and commenters mentioned using blogs in their classrooms only a few times and did not elaborate on the classroom use of blogs. This comment was one of the few regarding students’ use of blogs as a source of collaboration, and it also revealed a challenge for teachers looking to implement student blogs in their own classroom—exposure.
While academic bloggers and commenters addressed using blogs as a source of collaboration, it was unclear how this impacted the use of collaborative techniques within the instruction that these teachers provided. All lesson plans, whether from academic bloggers, commenters, lurkers, or non-bloggers, had students engaging in some form of interaction, thus, collaboration. Some of this collaboration was through the use of technology, seen in the majority of the academic blogger and commenter lesson plans, and some of this collaboration was traditional face-to-face collaboration such as group activities or think-pair-share, primarily tactics seen in lurker and non-blogger lesson plans. Teacher collaboration focused primarily on collecting lesson plans or classroom ideas and reflective practices that were visible in the lesson plans of the active blogging participants (academic bloggers and commenters) through the citation of several blogging sources. The fact that academic bloggers and commenters, the more active participants on the blogosphere, included more technology-based collaboration compared to the lurkers and non-bloggers may show that they were more inclined to use technology in their classroom because they use more technology and were more comfortable with technology. Further analysis on this subject was included in separate subthemes. The inference or assumption cannot be made that because teachers were collaborating on blogs that their students collaborated more or less. The potential for blogs as a source of collaboration is primarily rooted in teachers’ uses of other teachers’ ideas in their classroom and reflective practices.

*Searching for collaboration on blogs due to insufficient school support*

Another sub theme that occurred when coding under the theme of Collaboration was the phenomena that those participants who felt they did not have technological support sought out
their own PD, including the use of educational blogs. One of the questions in the interview was whether or not the participant felt they had technological support at their school. The participants interpreted this question in several ways, including technology staff and mandatory technology implementation. From one participant to another, it became evident that technology support at each school was sub-par, particularly in the schools of the academic bloggers, commenters, and lurkers.

Dani paused before answering, as she has been a part of implementing and educating teachers through many technology initiatives.

I guess I paused because we’ve had a lot of clunky moves as we make the One-to-One move, it’s like a progress, two steps back, one step forward, that’s natural, it’s a lot…We try really hard to help people try and get the support for it. There is always…the time is always a challenge, it’s actually an interesting question and a harder question for me because I’ve been on the other end where I try and lead those initiatives, do I feel like it’s sufficient, probably there is never enough, but it’s the same for all of teaching, like, there are so many things going on how do you make sure you make time for it, that kind of thing. Most people probably feel like it’s not sufficient but that’s because they aren’t trying to do it, or that there they are just overwhelmed and have a lot to do.

Sam suggested that she found her own PD: “Just at school no, I tend to go after the things myself.” Debbie also mentioned the need to look for her own, self-sponsored PD and support:

I don’t really get any technological support from my school. Everything I do is kind of on my own. So if I want to do something, I just of just look for it on my own. I do have, I did get a grant through the school district for Mytech, for my classroom, but if I want to put things on there I am the one who has to be in charge of it.

Krista mentioned several challenges in terms of technology school support, including access and stretched tech staff.

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8 The One-to-One Initiative is a reoccurring concept throughout this data set with several teachers. It refers to an initiative to put a piece of technology in every student’s hands in that particular school or school district. The technology varies from school to school. Some schools focus on providing Macbooks, others tablets, and still others, desktop computers. See Sauers and Mcleod’s (2012) research for more regarding the effectiveness of One-to-One.
No. When you mentioned students using blogs, that would be wonderful, but the infrastructure—although at my school is better than most schools, there is open WiFi, kids all have the Google tools, we’ve got those things, we’ve started in the middle school, they now have the chrome books, every kid has their own chrome book. But, it goes in increments in our district, one of those…well this school can get it right now, you have to wait two years, and that’s the issue…with the new testing…we’re a PARCC state, we’re going to have to have all the infrastructure in place, but that may go away, with elections and new people coming through. They try really hard, they do as much as they can, they do listen, they do as much as they can with the money that they have. And if I asked, because I tend to be one of the tech people in my school, and if I ask, they will give it to me, they’ll try to make something happen so that I can get it, but I try to be reasonable in my requests…I think grad total there is about 10,000 students (in the district), about…So we have four tech people for the entire district. So, that’s…they are stretched.

Tiffany also mentioned the lack of staff and her school through this dialogue with the researcher (researcher in italics):

_So do you feel the technological support that your school gives you right now is sufficient?_

No, it’s horrible.

_In what ways?_

Well, our district has a lot of technologies that they use but we don’t get trained to use, we don’t have a trained technology instructional specialist who can actually help do the things that we want to, there are two women that work in our building that supposed to kind of manage technology and trouble shoot when it comes up and they’re often, they feel like it’s not their responsibility but ours sometimes, which is problematic. The head of instructional technology is spread too thin, because she works across four buildings, and so we have this service, you have to go online, to see what help to get, and they don’t answer your questions or get back to you about something that is not working, so that’s kind of problematic.

_Mhm_

They (the school) want to use technology—the other thing they do too is, and it kind of gets a little curious is, you know one of the features of technology is the free internet, and access to whatever is available, and part of using technology is application, and finding program that you can use that align, and if they are established as legitimate or credible, we should be able to use them pretty easily, but the school district of course says things like privacy and liability so we are very limited in the same kind of freedom. So I might find a program that I think
will be really good and work with my students well but they can’t put in an email address to register, for example, we have to have the privacy policy added, because it doesn’t live up to the vetting for people to use it. So things that, you know, make it really problematic, to use the World Wide Web and 21st century skills.

This problem that Tiffany outlined goes beyond utilizing technology, technology initiatives, and technological support. This problem of access was something that other participants also mentioned and showed that a lack of technological support and environment of distrust does not allow for students to engage in necessary 21st century literacy skills. As conversations with participants continued, it was made clear that without technological support staff and technological support from PD and administration, teachers will have to continue looking elsewhere just to get through utilizing technology mandates, let alone receive technology support. This impacted students also, and what they can or cannot access, thus, can or cannot learn.

This technology support problem did not stop with the active bloggers. Casey, the lurker, also suggested that her school does not provide the support necessary to implement mandatory programs.

They are always are always throwing new programs at us and then giving the training for it later, but then expecting us to use it right away. Like with the achieve 3000 they did that (Training) after we were supposed to have all the students using it, I don’t know how to use it, and it was all these, everyone kept saying, there were all these problems, and we didn’t know how to fix the problem.

Bri, one of the non-bloggers, mentioned similar issues with PD and school support, but on a lesser scale, as her school provided online webinars for tech support. She was one of the participants who explored more traditional self-sponsored PD opportunities and did not utilize blogs. However, she sought her own PD to learn the concepts she did not learn from her mandatory PD or her school. She said:
A lot of it I have to learn on my own. Or, there is stuff available, stuff that would be helpful but about stuff that I already know or use, so it’s not always helpful. It’s always self-taught stuff. So, they’ll say here try this, so I have to go and I have to try it, need to get a lot of help from a lot of additional sources for how to do it. You should do that.

The one participant, Leslie, that did agree that the support she received at her school was sufficient, mentioned funding issues but overall that her staff and school supported technology endeavors:

Yes, I think our school gives us excellent support in what is afforded to the district, in education in general there is not enough money to get our technology where it needs to be to prepare kids, but again it comes down to funding, but I think teachers are learning to be very creative, because our students are very adept at using technology, and we have to keep up with their abilities.

Unfortunately, Leslie’s response was the only positive response out of the 8 participants regarding technological school support, which is indicative of the dire need for schools and school districts to support their teachers through technological initiatives and advances. The most critical and descriptive accounts about technological support were from active-blogger participants. It seemed that these participants were succeeding with technological implementation despite their school’s support, and not because of it, and because they utilize self-sponsored PD avenues, including blogs, for an alternative support system.

**Ethical Responsibilities**

Several subthemes emerged in the Ethics code after the analysis was conducted. This part of the Tier Two data includes interview, artifact, and survey data, and focuses on two subthemes: the lack of ethical responsibilities within the 21st century literacies definition, and ethics practices found in artifacts. Within each theme the differences between the academic bloggers, commenters, lurkers, and non-bloggers are discussed.
Lack of ethical responsibilities within the 21st century literacies definition

A notable finding in the ethical responsibilities theme was the lack of ethical considerations. Considering that ethics is a standard of the NCTE 21st Century Literacies Framework where the importance of ethical responsibilities of being on the Internet are clear, not many teachers specifically addressed ethical considerations. Both interview and survey participants were asked to define what 21st century literacies meant to them—these responses varied vastly, but one concept became clear when the researcher investigated these responses more in depth. The majority of teachers did not include ethics as a part of what it meant to be a 21st century citizen.

However, ethics did come up in conversations with interview participants, and several survey participants noted ethical dilemmas. However, these implicit references to ethics rather than explicitly speaking to the idea of ethics for the most part, suggested that teachers did not consider ethical responsibilities a primary role in the definition of 21st century literacies, and that this responsibility was more implicit.

All of the interview participants spoke to ethics in some way. Sam, an academic blogger, considered several avenues of ethical responsibilities, both from the perspective of students and from teachers. She mentioned the issues of monitoring cheating and how she felt teachers should teach about reliable information:

Obviously it is immensely difficult to monitor cheating, supervision of where their materials are coming from, simply because a kid wanders onto a website for information and it’s not true, it’s not correct, it’s not valid, and we teach that.

She also spoke to the idea of “Internet trolling,” which refers to the practice of posting or responding online with the purpose of angering or upsetting someone. This is a different ethical responsibility that pertained more to how students should be expected to behave when communicating online.
We talk about internet trolls, about trolling, and the kids are like oh yea that always happens, so we talk about how you deal with that, how you would respond in a way that makes you look intelligent and thoughtful and not just a very opinionated lunatic, and also how to present your opinion in a way that is...here, let me share my thoughts, opposed to I’m right, you’re wrong, this is why. So I think there (are) a lot of skills involved.

Krista, one of the commenters, also mentioned the ethical responsibilities of students and teachers to teach these ethical responsibilities to students:

I’m like is it worth it to sign up and have a profile, but then I turn around and I look at some of my colleagues and they are clueless, and this expectation...like we just started letting our kids openly carry their cell phones, and the colleagues were like absolutely not, you have to put it away, all the time, and I’m like okay, let’s be realistic, these kids need to learn technology etiquette, they need to learn when it’s okay to have your phone out, and when you put your phone away, they need to learn how to control the urge to constantly be on that phone! And you just say no...is not teaching them how to control themselves. I’m totally okay with them having it there, on their desk, and I’ll say hey, go look this up, they’ll look it up, and that sort of thing, so I just think the more that we use them and recognize their value we start to use it and teach others how to use it, we’re the ones with experience that can then pass that experience onto our students, and then send them on their way. (Emphasis added)

Leslie, one of the non-bloggers, mentioned the ethical responsibility of students knowing where to go on the Internet for credible and reliable sources:

When they (students) do research in English, Wikipedia, and Google, although they are good starting points they are not exactly what we call credible sources, so you know, students need to learn to be good consumers of the information on the Internet, and be smart about it.

A survey participant also commented on reliability of sources. In this response, the participant showed awareness that teachers should conduct themselves on the Internet as they would expect their students to, meaning if they were not aware of these ethical responsibilities, they cannot instruct or help students to follow these ethical responsibilities:
One must be careful about which blogs one follows. Anybody can post information to a blog. So, just like our students, we must be aware of who is writing and for what purpose.

These comments showed that there is a level of ethics that students should consider when using technology, including phones, but it is ultimately the teacher that is responsible for teaching these responsibilities to students. As Krista mentioned, teachers are the ones who should be experienced enough to where they can pass that experience onto students. For Sam to know what “Internet trolling” meant, she showed that she was fluent and knowledgeable enough about using technology to then be able to share that knowledge and ethical responsibility with students. Leslie, compared to more active blogger participants Krista and Sam, did not include herself or teachers in her comment. In other words, while the other participants suggested that teachers should be responsible for teaching these ethical considerations, Leslie, the non-blogger, did not. While a lot of reference was made to the act of ethical responsibility, few, if any, participants used the word or phrase explicitly. Despite not bringing up the word “ethics,” all of these comments showed the variety of ways ethical behaviors must be considered, from cheating, Internet trolling, and technology etiquette to reliability of sources and becoming a critical consumer.

All interview participants were asked how they would feel if their principal denied them the right to post on a blog. Sam responded that while she may understand the issues with privacy laws, she felt that teachers, like any person, can and should be able to use blogs as a reflective source:

I don’t think that they could tell me that, I would say no that’s my right as a teacher, I’m not releasing student names, grades, if you really want me to remove, you know, the school’s name from it, I suppose I can make it more anonymous, but it’s my opinion, and I’m getting something out of it, and I have the right to
say well today didn’t work out, I felt like a bad teacher, I’m going to try again tomorrow.

Many, when faced with the same question, did not even consider the situation as something plausible or something that would happen to them in particular. This showed that while they did not specifically or explicitly reference ethics, teachers implicitly were aware of the ethical responsibility they had as teachers when posting on a blog about their classroom practices. For example, Debbie, another academic blogger, started with “I’m not that kind (emphasis added) of blogger…”:

I’m not that kind of blogger that puts such inflammatory things on my blog, I actually, to tell you the truth I actually, there were a couple of blogs that I read that did that, and I actually, I respected their need to do that, I don’t do that. I don’t see myself ever doing something like that, I mean I just don’t put that kind of stuff on my blog, I don’t say oh my God this stinks kind of thing on my blog, I mean I say oh this flopped and this was horrible and that I would never do it again but I’m not really putting like critiques of anybody I work with, or where I work, on there, I don’t know, I don’t put student names, or anything like that, and I know that…and the reason I do because I know that people have gotten in trouble and that’s why I don’t do it, because I’ve read and they say oh my principal read this and now I’m in big trouble, I never put anything controversial on there.

There was a form of “watchdog” mentality especially amongst the academic bloggers when asked this question, meaning that almost all of them referenced in some way a higher authority figure that may come in at any point to investigate their blog. This question then prompted the participants to share their awareness of the ethical responsibility they have in protecting their students’ privacy as well as their ethical responsibilities as a teacher “public figure.” Krista, one of the commenters, suggested that because she was aware of “watchdogs” she was careful what she posted, particularly because she had seen the consequences:

That’s probably part of the reason I don’t comment as much, because I am…well one I need to make sure the comments are actually beneficial, if I’m going to put a comment on there, it’s usually a question, like hey what about this, yeah I really
like your ideas, but what about? I would want clarification. But otherwise I wouldn’t comment. The other thing is I try to be very careful, my district is by no means nosy, or concerned about that sort of stuff, although they do watch, they are Twitter, they are on, my administrators, they are on Facebook, but I don’t want to create controversy, like it’s not my style, my priority, I would be worried, I would be concerned.

And I’ve seen it happen to a couple of my friends, I watched one of my friends lose a job over it, it does make me angry, teachers should have that freedom of speech, but I do understand the district’s perspective, as a brand, and you are a public figure, when you teach, to a degree, but I do think you have to have some freedom, but yea, I don’t know, it would be a case by case situation, how I would react, because I have one friend who is very vocal, and very anti a lot of things, and I kind of watch the comments she makes, and I love that she is so passionate, I love how she’s not going to stand for it anymore, to a degree, but then, is this really the best way, to make change? (Emphasis added)

Casey also was aware of the consequences of posting a controversial blog post:

I would be pretty annoyed. I would be worried. Because part of me would say would be wanting to stand up for my rights and leave it up there and part of me would be afraid because it could affect my job, she could try and get me transferred to another school, or give a bad review, or something.

This may be a reason why Casey was a lurker rather than a more active blogger.

Krista did mention that she does not comment as much because she worried about the “watchdogs.” Casey did not explicitly mention her lack of activity on the blogosphere but made it clear that she was aware that the consequences of posting something that can be perceived as controversial could have dire consequences, including the loss of her job.

Regardless of categorization, all the participants were aware of the ethical responsibility of posting on a blog or on the Internet in general when it came to their own Internet practices. Bri, one of the non-bloggers, suggested that “online is forever:”

You know, as an educator, I am very cautious of what I put online, like on Facebook or about my classroom, because I don’t feel that publically saying things about my classroom, because that brings up a can of worms, with that being said, if I am in a class and someone asked me how something worked I am going to be open with them on what I think worked and didn’t work, and puzzling through why it doesn’t work, but the difference between there and being online is
that online is forever and online is for a wider audience, and in my class that I might be taking there would be like 25 or whatever, a smaller avenue, kind of like when a student, I don’t know, texts something or posts online it’s there forever, and I don’t know, I don’t know how I would react, I think my principal is very open about that, so I would want to sit down and talk about that, why it was inappropriate, and he would suggest maybe that I wouldn’t do it, or do it differently next time, why do I feel that way, and we would work through that, so I don’t know, I don’t know how I would react if I was forbid to do that.

(Emphasis original)

In this comment Bri spoke to the idea that teachers need to be careful about what they post but also spoke to the idea of freedom of speech implicitly when she says “I don’t know how I would react if I was forbid to do that.” The researcher italicized this phrase because when Bri was talking, she put a lot of emphasis on the word forbid—the researcher made the inference that this was Bri’s way of emphasizing the lack of freedom of speech if someone were to forbid her from blogging or positing. In fact, almost all interview participants mentioned freedom of speech—some briefly, like Bri, and others, such as Casey, more explicitly, like when she said “I would want to stand up for my rights.”

Bri also mentioned her students briefly in this comment, in much the same way that the other non-blogger referenced students using technology. Both non-bloggers ignore the teacher’s responsibility of student knowledge about ethical responsibility. While other participants suggested that teachers were in some way responsible to know and teach about these ethical considerations, both non-bloggers do not reference this necessity. However, both were aware of ethical responsibilities—whether or not they believed it was the responsibility of the teacher to teach this to students like other participants suggested remains unclear.

Ethics practices found in artifacts
Considering so few participants explicitly mentioned ethical responsibilities, it was a surprise to the researcher how much ethics was a part of many of the lesson plan artifacts collected. Some of these ethical practices were expected, such as participants citing where their sources came from. Interestingly, only academic bloggers and commenters included citations of some sort in their lesson plan artifacts. Most of these citations were links to where they initially found the content or YouTube links for videos that they showed in class. It was unclear why Casey, Bri, and Leslie did not include citations, but perhaps it was because all three submitted a formal lesson plan where the lesson was in a distinctive format that focused a lot on the use of standards, while academic blogger and commenter lesson plans were structured less formally.

Other than citations, some of the ethical references were fairly short, such as when Krista, the commenter, included directions in her lesson plans that forbids the use of blogs: “These reviews can come from any reputable news source: newspapers, magazines, or the Internet. They should NOT come from blogs.” This can also be viewed as a reliability issue rather than an ethical issue.

Considering Krista was a commenter and an active participant in the blogosphere, this comment was unusual. Perhaps while teachers used blogs as a source for their own classroom planning and reflective practices, ethically, they did not trust blogs enough for content knowledge for their students, or they did not trust their students to make responsible choices in terms of the content of certain blogs. Yet another potential reason for this specific rule in a lesson where students were given directions for a journalism assignment may be that blogs were not suitable for the particular assignment. Considering this assignment also included students posting onto a website and using
Twitter to update the school on journalism news using a Twitter handle, it did not seem like it was due Krista’s aversion to the use of technology in her classroom.

Dani, one of the academic bloggers, submitted a lesson that was most clearly tied to ethical responsibilities, because in her lesson she covers Creative Commons copyright rules. For her literature and composition 9th grade class, Dani shared a video (https://www.YouTube.com/watch?v=8tWhKeb-fUQ#t=15), several wiki’s (http://copyrightconfusion.wikispaces.com/Reasoning; http://copyrightfriendly.wikispaces.com/home), and the Creative Commons search engine (http://search.creativecommons.org), amongst other sources, with her students for their digital storytelling project. This was both ethically sound because she cited where she got her sources from and because she discussed Creative Commons, which was a way of sharing knowledge and tools in accordance to copyright laws. By knowing what Creative Commons is, students learn to become more ethically sound Internet citizens as they learned how to download and upload pictures with the correct permissions.

Proficiency and Fluency Development

Several subthemes emerged in the Fluency code after the analysis was conducted. This part of the Tier Two data includes interview, artifact, and survey data, and focuses on two sub themes: awareness of fluency and defining 21st century literacies with the NCTE framework. Within each theme, the differences between the academic bloggers, commenters, lurkers, and non-bloggers are discussed.

Awareness of fluency

For the fluency code, the researcher coded instances where the participants were not only using a technology tool but were using it in a way that demonstrated fluency or expertise with
that tool. Additionally, instances where the participants were aware of the fluency that was expected of them were coded as well. These included instances where the participants discussed that if a teacher wanted to incorporate something into her classroom, she needed to utilize that tool or be knowledgeable about the content in order to do so. There were few instances of awareness of fluency amongst participants. It seemed that categorization in this area in particular did not make a big difference, as academic bloggers, commenters, lurkers, and non-bloggers commented on their awareness that fluency on their end was necessary for students to gain fluency. Survey participants also commented on the idea of keeping up with trends and staying fluent on the part of teachers:

I think it is important for an English/Language Arts teacher to continue to learn and to remain current with trends in our field. I think that teachers who are willing to share their practices and the results of their practices in social media and blogs are one of the best ways to achieve that. In other words, *if I am going to encourage my students to be lifelong learners, I need to be a lifelong learner* and I need to contribute information to help others in my field continue to learn. (Emphasis added)

The idea that teachers need to be learners as well as students represents both the awareness of fluency and its necessity, as well as the need for continuous growth and development. Several other participants confirmed this sentiment, like Dani:

We have to be learners too… I also think they (students) need to explore the different ways they can be involved, to be more visible and transparent, that’s what I’m constantly pushing my kids to be doing.

Debbie spoke to the necessity of being able to relate to her students: “I think that the more you can engage with it the more you’re going to relate to your students.” Sam mentioned how 21st century literacy was something that not only children need to learn but also something that adults need to know as well. While she mentioned the pitfalls of students growing up in a time of technology and information, she also mentioned that the
lack of education adapting to these times makes it difficult for students to understand and use 21st century literacies in a way where they do not “fall short.” The idea that 21st century literacy is more than being able to Google an answer is something that Sam also suggested. To go beyond using technology as a tool, the teacher needed to come to terms with technology and how to use it, and to teach 21st century literacy rather than just using a tool:

I do think it (21st century literacy) something that every child needs, I think every adult needs it at this point, my parents need it, I need it, everyone needs it, but what I have seen actually because of the knowledge needed for some of those skills they aren’t good problem solvers, because they all just think well I’m just going to Google it…they can’t think of a topic for an essay, I’m just going to Google it and see what everyone else has already written, and I’m just going to copy it, so I think if you further define literacy as not just well I’m going to use Google and that’s technology, you really have to think about how it can adapt and change education, and cause creation, but yea absolutely I am on board with it, and I try and teach it, but sometimes I feel like we fall short.

Krista mentioned a similar idea, and said that there were few jobs left that do not require the knowledge of how to use technology, and furthermore, that teachers need to recognize this necessity.

I think you just recognize that, and use it more, and I see people that are completely handicapped, they don’t even know how to turn their computers on, you can’t do this job anymore without the ability to use technology, and there are probably very few jobs that can do without that ability. (Emphasis added)

By saying that teachers need to recognize that teaching requires 21st century literacy, Krista spoke to the necessity of being aware of the fluency requirements that are evolving and need to be addressed by teachers who do not use or know how to use technology. It could be assumed that those who implement 21st century literacy skills, according to the above data, seemed to be more aware of the fluency requirements of the
21st century. However, Bri, the non-blogger, also mentioned the necessity of “trying it ourselves.”

I just picked one and kind of ran with it, to see what happens, kind of what happens when I try to engage in 21st century literacies. But I think that they should try them because I feel like if we don’t try them ourselves then we’re not going to be able to effectively teach them.

Here, Bri was discussing her use of infographics in her classroom. She mentioned that her students had a hard time reading infographics, so she became immersed in infographics and how to use them in the classroom. She even had her students create their own infographics. It seemed by her comment that she was willing to try to immerse herself in a particular 21st century literacy tool, and by doing that, was able to then teach the use of that tool. While Bri was aware of the necessity of her use of a tool before teaching it, she did not discuss the higher-level, more complex needs of a 21st century citizen, such as the ability to collaborate on a global scale, because she did not herself engage in these skills.

Compared to the interview participants, survey participants had similar sentiments, boiling down to the need to continue to be a lifelong learner:

As a teacher, I have committed to being a life-long learner.

I want to write because I teach writing.

If I teach writing, I want to be able to do so myself as well. I also learn a lot of good ideas on these blogs. I have my students’ blog as well.

In other words, if I am going to encourage my students to be lifelong learners, I need to be a lifelong learner and I need to contribute information to help others in my field continue to learn.

These participants were fully aware that they needed to be the experts, or fluent enough to be considered experts, in 21st century skills to then be able to use and teach
them to students. The sentiments varied from needing to write to teach writing to the use
of the phrase “lifelong learner,” which did not necessarily reflect the need to use
technology or focus on 21st century literacy specifically, but did insinuate the need to
continue learning. Of all of the participants, the two that were most “on the fence” about
the idea of fluency movement or influence from teacher to student were the lurker and
one of the commenters, Casey and Tiffany.

I’m on the fence about that, because I went to a workshop at teacher action groups
education, last year, their annual teacher event, and I went to a workshop run by a
student group who were talking about how students need real learning
experiences and that the teachers need to learn from, like learn from the students
about what they should be teaching, which is something that I am very interested
in, but I hadn’t thought about the technology piece, and they said they should be
using technology in the classroom, because that’s what we use in the real world,
and they were saying like Twitter, and things like that, and that made me really
think, these things change constantly, there is no point, but if I am really listening
to my students and want to connect to their world, then I probably should be using
them more instead of just standard things, like iMovie, and Powerpoint, and
things like that.

This statement that Casey makes showed that she was aware of fluency and the
need to learn technology to then be able to teach it, but she was not necessarily “sold” on
the idea that this is in fact the way that it is or should be in the classroom. Her biggest
contention, it seemed, was that technology changes, and so what she, thus her students,
will learn now would not be relevant to students when they graduate or years after they
learn that technology. The case can be made, however, that because they would learn that
technology in her class (after she learns about that technology and that in turn influences
the use of that tool in the classroom), that the students would be more comfortable with
using technological tools. Thus, students would be more comfortable with new and
advanced tools that they surely will encounter further down the road, whether in school
or in their future careers.
Tiffany mentioned a different contention regarding the role of an English teacher—should it be the English teacher that needs to teach about technology in the first place?

I don’t know, I guess what I wonder at this point is, since so many teachers are not well schooled in that, ideally a kid is going to graduate from high school haven taken some sort of technology course, so that they get exposure to those kinds of experiences, I’m not sure as an English teacher…I guess though even though it is my responsibility to give those kinds of experiences and learn things myself so that I can share those experiences with kids even though that’s not my professional focus for this year, like I said it can be really problematic and challenging to do, despite the fact that I think it’s very necessary.

Tiffany questioned whether or not it is the responsibility of the English teacher to provide instruction about technology to students. She also mentioned that if this were the case, the necessity of learning and gaining fluency with a technology tool would be time-consuming and professionally challenging. Tiffany brought up valid contentions, but these contentions were similar to issues that have been a topic of debate in education, such as whether or not literacy in general is the “job” of the English teacher. The job of teaching 21st century literacy is not only the responsibility of English teachers. The teaching of 21st century literacy skills should be the responsibility of all content area teachers. The necessity, as Tiffany stated, is crucial. Students need to learn how to become 21st century literate.

*Defining 21st century literacies with the NCTE framework*

The researcher, while coding data using sub-codes, noticed that particular participants defined 21st century literacy differently from others. Because the major theme codes were created based on the NCTE 21st Century Literacies standards, the researcher coded data that explicitly defined 21st century literacies using these five theme codes to see if any patterns emerged.
The six standards that made up the NCTE 21st Century Literacies Framework were put into five main theme codes: Collaboration, Ethics, Fluency, Information, and Use of Multimedia. Out of these, it was assumed that knowing how to use a tool (Use of Multimedia) and gaining information from a tool (Information) were fairly basic skills that are required of 21st century literate citizens. What makes the definition more complex is the necessity of collaboration through these tools, the ethical responsibilities of using such tools and communicating through such tools, and the fluency and awareness that the use of these tools develops one’s own 21st century literacy skills. The inference that these standards are more complex can be made because the use of a tool and knowing how to find information using a particular tool is something that can be learned using a fairly sequential method and does not require active participation on the Internet. However, collaborating requires not only the knowledge of how to use a tool and how to find it, but also requires knowledge and adherence to ethical responsibilities within an online community setting. Collaboration and communication through the use of tools thus is more complex than the use of a tool. This does not mean that the use of a technology tool or multimedia is in and of itself not complex—those who have used tools like podcasting, iMovie, or html formatting can attest to the complexity of a digital task. To add collaboration and the need to socialize through a new avenue, however, makes the task less introspective and more active, a particular element of 21st century literacies that is different from traditional reading and writing.

The lack of ethical responsibilities in this data set was discussed within the Ethics theme. It may be assumed that ethical responsibilities was in so few 21st century literacy descriptions because it may have been more of an implicit task. Just like someone who is a critical consumer, someone who is ethically responsible does not necessary make it clear that
they are ethically sound, but rather have learned to ask questions, question reliability, and abide by rules like plagiarism and cheating but through a different medium. When interview participant survey data were explored, this explanation became more plausible, because participants did not explicitly suggest the use of ethical skills in their interview data. When asked specifically to define 21st century literacies in the survey, three of the participants suggested ethical responsibilities in some form. Three different categories of bloggers commented on ethical responsibilities, including the academic bloggers, commenters, and the lurker.

For this section of the Tier Two data, the researcher aggregated interview participants’ definition of 21st century literacies from their survey responses. Table 4.3 includes the participant’s name and category, their definition of 21st century literacy, and the standards referenced in the comment.

Table 4.3 shows the variety of responses that included all of the themed standards except for fluency. Fluency did not appear in these definitions because it is more of a metacognitive task. The awareness that one’s exposure to technologies makes one more literate and more comfortable with technology and exploring technology may be implicit. Despite collaboration being a more complex task, it did not seem that the academic bloggers were more or less likely to suggest collaboration within the definition of 21st century literacy compared to other participants. In fact, one of the non-bloggers suggested that a big part of 21st century literacies was collaboration with students, parents, and peers.

This data set showed that fluency was the only themed standard that was not addressed in the definitions of 21st century literacies. Differing levels of complexity in the 21st century definition did not seem to be impacted by categorization. However, evidence of more complex 21st century skills in practice was seen mostly in the most active blogging participant lesson
plans. This seemed to be a problem of fluency rather than non-use of blogs. There was a disconnect between using blogs and the fluency of blog use—meaning, in other words, that participants who did use blog were becoming more fluent in 21st century skills, but their awareness of these developed skills were not necessarily developed. Despite acknowledging that teachers should engage in 21st century literacies to then be able to share this information with students, teachers were only acknowledging this fluency when explicitly asked. Tasks in which fluency was implicit, such as defining 21st century literacies, did not show that the participant was aware of what they were personally engaging with on a blog.

Table 4.3 - Interview Data 21st Century Literacy Definition

<table>
<thead>
<tr>
<th>Participant</th>
<th>Definition</th>
<th>Standard References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dani- AB</td>
<td>“Engaging in a variety of communication practices including communication in digital spaces. Communication for a variety of audiences and purposes and engaging in various opportunities for compositions.”</td>
<td>- Collaboration</td>
</tr>
<tr>
<td>Sam- AB</td>
<td>“Students need to be able to assess what materials are viable sources, have come from respectable sources and can support their own opinions. Searching the internet is a skill, but finding trustworthy sources is a big part of literacy in the 21st century. I also think students should be able to tailor their interests to materials found online or through use of technology like Skype, Google Hangout, etc.”</td>
<td>- Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Information</td>
</tr>
<tr>
<td>Debbie- AB</td>
<td>“That you know about and can access information in many different areas and platforms.”</td>
<td>- Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td>Krista- Comm</td>
<td>“Finding meaning in any text, regardless of medium and delivery.”</td>
<td>- Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td>Participant</td>
<td>Definition</td>
<td>Standard References</td>
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</tr>
<tr>
<td>Tiffany- Comm</td>
<td>“It means an individual has to read and write for a variety of purposes and she has to do so with accuracy and aplomb. It means that an individual does not exist in a cultural vacuum; rather, she participates in a world that is characterized by diversity of experience, thought, and values, and she has to be able to navigate among these three with awareness, respect, and comfort. It means that she doesn't live in a box.”</td>
<td>- Collaboration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ethics</td>
</tr>
<tr>
<td>Casey- Lurker</td>
<td>“To be able to use the web to find information about a topic, evaluate that information for validity and importance, and synthesize that information.”</td>
<td>- Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ethics</td>
</tr>
<tr>
<td>Bri- NB</td>
<td>“It means that students can &quot;read&quot; anything from infographics to blogs to postings on a &quot;Blackboard&quot; site to knowing how to navigate and read websites.”</td>
<td>- Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td>Leslie- NB</td>
<td>“Technology in all the forms it presents itself to learners today. Also as a communication tool to the community, parents, students and peers.”</td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Collaboration</td>
</tr>
<tr>
<td>Other survey participants</td>
<td>“A person who is 21st century literate can communicate effectively using a variety of technologies. It is also essential for such a person to be able to evaluate information from various technologies and sift verifiable facts from unsupported claims.”</td>
<td>- Collaboration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of Multimedia</td>
</tr>
<tr>
<td></td>
<td>“To have a flexibility of mind. To have a way of thinking that allows a person to be open to many different ways to communicate.”</td>
<td>- Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Collaboration</td>
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Despite their seeming unawareness of their own fluency level, as portrayed in the Use of Multimedia section, these active participants were engaging their students in more complex 21st century literacy tasks. In other words, these participants recognized fluency when asked
explicitly about it. However, even though they participate in these tasks, they did not explicitly recognize this, but it did seem to influence their classroom practices.

**Global Information Sharing**

Several subthemes emerged in the Information code after the analysis was conducted. This part of the Tier Two data includes interview and survey data, and focuses on three subthemes: blogs as a source of reflection, blogs as a source of classroom planning, and content knowledge and the use of blogs. Within each theme the differences between the academic bloggers, commenters, lurkers, and non-bloggers are discussed.

From the combination of these three subthemes emerged the finding that blogs were used primarily a source of reflection and classroom planning for teachers, and a place where intelligent conversations can occur on a national and even global scale. Teachers that use blogs were engaged in all of the six NCTE 21st Century Literacy standards that are expected of students. They were searching through different blogs to find the most reliable one (ethics), looking for an avenue to reflect and communicate with other teachers on (collaboration), looking for information for their classroom planning (information), using multimedia through the use of blogs (use of multimedia), and, even though implicitly, gaining fluency to then be able to share this knowledge and information with students (fluency).

However, the use of blogs for valid and reliable information that is factual or is medical or clinical information was one way that blogs should not be used. A blog’s purpose for teacher PD should be focused more on reflection, classroom planning, and information sharing based on classroom experiences, based on participant responses. The interpretation and perception of this information should be the responsibility of the participant, and, as with any source on the
Internet, this participant should be a critical consumer of all educational blogs that they encounter.

**Blogs as a source of reflection**

Blogs were seen as an avenue for reflection by many of the participants in this data. Dani, one of the academic bloggers, when asked if she collaborates on blogs, said:

Yes, because usually it’s about…people reflection on their experiences about how they are integrating, so how my reflection is thinking about their reflections, about learning a new tool, or trying something new, so in that sense, yes.

When asked whether she feels being active on a blog is better than “lurking,” she responded:

I like to have more of a community sense, when there is a learning kind of community, for sharing ideas back and forth, but I don’t want to judge the other people because they get a lot out of it too.

A common response among participants was that different activity and contribution levels were due mostly to personal preference or personality. Participants did not view a different contribution level negatively.

The reflective practices that occurred on blogs, participants suggested, was one of the main reasons that they were on the blogosphere. The idea that reflection was not an individual but rather a collaborative activity on a blog came up often. Sam mentions:

I use (blogs by) teachers for teachers, I am looking for ideas, units, book recommendations, management, technology incorporation all of those things, with my sophomores, we do a little bit more of a community feel, we’re all writers, and we all have our voice and we have to support that, it’s a growth process, you know, I want to be part of a community, so it’s just that my community is teachers.

Survey participants also shared their sentiments about using a blog for reflective purposes:

I subscribe to several blogs, some about reading, some about YA literature, some about writing and some about general classroom practices. I find them a veritable
wealth of information. I also have my own blog where I post about ideas I am trying in my own classroom.

Most of these, like the comment above, mentioned the use of a blog to post ideas or lessons that the teachers have already done, and in the process of writing about these lessons, the teachers both reflected and shared their resources and thoughts with others. Survey participants said:

I like to read what others have to express about their practice. I like to write educational blog posts because it helps me clarify and solidify my thinking about my practice. I also like to "show off" great projects I have made and ideas that I have.

I read various blogs to continue to grow my practice, and I write on my blog to reflect on what I'm doing in the classroom.

I use mine most largely for reflection and engagement of other teachers. Additionally, it is a nice place to ask about a lesson/unit idea and get feedback.

Ultimately, the use of a blog as a reflective source focused on giving teachers a place to feel like they were part of a community. Furthermore, this community included like individuals that shared the same trails and tribulations of the teaching career. Additionally, this practice gave teachers a voice when other professional development avenues may have not. Krista suggested that blogging:

(Blogging) provides teacher VOICE. We need to share with one another and stick together as professionals. I don't want someone else telling me what to do in my classroom, like in-service presenters hired by my administrators. I want to learn from people in the field who are experiencing the same things I am.

Reflection is a professionally necessary task, but by making it interactive, less introspective, and more community based, teachers both find an avenue to express their thoughts and reflect on their practices but also get and provide feedback to others, making the teaching profession feel less lonely. It seemed that blogs used as a reflective
source overlap with blogs being used as a source for inspiration and classroom planning information.

**Blogs as a source of classroom planning**

Many participants mentioned the benefits of reflecting on their blog, but most participants suggested that the value they found in blogging was the resourcefulness of the medium. Krista mentioned the ease of having everything “in one place:”

> When I started my masters, because I was writing so much, it was very writing centric, I wanted somewhere to put my writing, so that’s how my blog started, a place to put all of the stuff that I was writing. And then from there, I was like looking at these others blogs, and it’s really cool to find an idea, to find lesson plans, to find a resource, in one place.

In fact, not only did Krista browse these blogs for planning materials, but she also was expecting to use what she had found on the blog in her own classroom:

> And especially this last summer I started teaching AP language, and I found a teacher in this, X is her name, you might want to go look her up (laughs), Three Teachers Talk is the name of their blog, and she does all sorts of things, regularly putting up pieces, she actually has her kids do weekly blogging, for like, book reports, not reports, reviews, reading, and their independent reading, so that they are constantly talking, about their reading. And I was like, oh, I would love to be able to do that. I’m still early in my process, in this class, so I am not sure if I am ready but probably either by next semester or next year, I would implement that idea with my students.

Tiffany also saw the value of getting lesson plans off of blogs:

> I’ve used a lot of teaching strategies from the teaching channel blog that I would have never though of, never would have come up with on my own, because I would have never considered either of them, and I just used in one of my classrooms, I’m using it this week, she has this thing where she does Socratic seminar, and the fishbowl kind of discussion, there is a group on the inside and a group on the outside, and the outside group is observing, but she has this thing where she stops the discussion and has a member from the outside group coach the inside group, so the inside person sets goals for herself, as a discussant (as a speaker), and then she shares her goals with the coach, and then the coach, and then the coach coaches, so she’ll say look you said this and this, and you haven’t done X, Y, Z, if you can try A, B, or C, whatever, and that really re-shaped the structure of my discussion, and I feel strongly contributed to the heightened
success of my students, because they got a chance to stop and get an observation, so I learned that from a blog. And I think it’s really effective.

In fact, it seemed like most participants found blogs while they are looking for lesson plans or classroom ideas, and they wanted to find something that they can logistically bring back into the classroom easily and get excited about it. Debbie mentioned:

I like to read the ones, like the Film English one, she finds stuff, and then says this would be great, to teach this in the class and here is how you can do it, how you can teach this with the film, so it’s really helpful to me, I go there and I see what I can use, oh I can use this as a short film, they all are really short films, I could use this in my class…so I am looking for things I could use, in my classroom.

A survey participant suggested that subscribing to certain blogs helped her across a variety of topics:

I subscribe to several blogs, some about reading, some about YA literature, some about writing and some about general classroom practices. I find them a veritable wealth of information. I also have my own blog where I post about ideas I am trying in my own classroom.

Other survey participants suggested a variety of different bloggers that they trusted as reliable sources:

(I) read about current instructional practices, and what other teachers are doing successfully in their classrooms. Also, if you follow researchers and leaders such as Grant Wiggins, Chris Lehman, Kylene Beers, Teri Lesesne, Kate and Maggie Roberts, etc… it is like you are getting free professional development from content experts.

On top of simply getting resources for lesson planning, participants shared the value of not only getting a lesson plan but also getting a first-hand experience account of how a particular lesson went. This combined reflective practices with informative reading about classroom practices. One survey participant said:

I do use educational blogs on a somewhat informal basis to see what trends are occurring in my profession. I like to know what other teachers are doing and how
they are doing it. I like to know if teachers have used techniques and the level of success and amount of time/trouble/effort/success they have had using the techniques they have learned. I think I get a more honest picture of how current trends and techniques work by reading the information from "common" teachers rather than reading about the practices of published writers whose primary job is to sell books with their great ideas rather than to teach high school students. I consider "teachers" to be those who are actively engaged in day to day teaching and having daily contact with students, not those who write about it and occasionally drop into their classes.

Tiffany suggested that she vetted the quality of the blog based on the teacher’s background:

I’ll be searching for lesson plans and I get an idea of how to do something, I’ll do a search and come across a blog and then I look to see if the blog is, if it pops up in other searches, that sort of thing, so that I know that this is somebody who is credible, and you know I look at the teacher’s background for example, how long she’s been teaching, the kinds of experiences that she has had.

In addition to a community feel, a safe place for reflection, and a community resource, Dani suggested one more way that blogs were useful to teacher—networking:

I use it (blog) for learning purposes, but also networking and connections, I try to follow people and read their blogs, I contribute to digital IS, which has resources and blogging.

It seemed that blogging was a valuable source for teachers where both reflection and resource sharing can happen in a community of like-minded teachers and individuals. The unique combination of collaboration, lesson plan sharing, and reflection within one avenue may be the answer as to why these particular bloggers, whether they were academic bloggers, commenters, or even lurkers, choose blogs over other avenues. Blogs are a place for personal reflection. Because the avenue is public, this reflection becomes less introspective and more collaborative, where teachers can share their experiences, reflect on their lessons, and share their experiences and provide lesson plans to others looking for that information. While there are sites where
information and lesson plans can be found, the value of blogs seems to be in the community created rather than simply the information shared.

Content knowledge and the use of blogs

One of the three codes under the theme Information was Content Knowledge, which referred to teachers looking for specific, reliable information about specific content. As mentioned in the introduction to this section, it did not seem like blogs were a good avenue to look for quick, valid information. Leslie, one of the non-bloggers, shared her view on blogs:

I have gotten on different blogs personally, like English teacher blogs, my only complaint is, that sometimes people get a little wordy with them, I guess that’s the point of a blog, to share stuff back and forth, but usually I don’t find information, it’s just like a talking kind of thing.

While Leslie seemed to be looking for information or a short and quick answer, she found blogs, which she considered “just like a talking kind of thing.” This showed that for certain purposes, blogs are not the avenue of choice. If a teacher is looking for a short and quick answer, a blog is probably not going to be the medium through which she receives that answer.

Other participants, such as the survey respondent below, shared their views on using blogs as a content knowledge source:

No offense to blogging, but it's not peer-reviewed. Anyone can post anything, so just like getting recipes or DIY projects, you take the risk of getting bad advice. There may be great pockets of information on blogs, but it can't be a primary source of information. I wouldn't get medical advice on a blog, so I'm probably not going to get teaching advice on a blog either.

Any kind of information that revolves around more specific answers, or answers that require no bias and valid responses, should not be sought after in a blog context. A blog seemed to be first and foremost a reflective source for many of these participants. This reflective source allowed teachers to share their experiences in the classroom. This
makes blogs inherently biased. In the sense of learning from a teacher, this bias is a good thing. Teachers sought other teachers in this blogging community that shared the unique experiences that only teachers who have been through the same thing can relate to, and more importantly, help with. To look on a blog for teaching advice that requires little or no bias, such as a question regarding how a child with a certain disability would behave, seems to be a mistake on the end of the critical consumer. This form of information should be found through avenues that are less about reflection and more vetted for scientific or medical purposes. Much like a critical consumer would not self-diagnose an illness using unreliable websites, a critical consumer should recognize the purpose of a teacher-written educational blog.

Unlike the participants that shared their unease with using blogs as a source for content knowledge, there were several participants that suggested they do use blogs for content knowledge. A survey participant suggested that searching for information on concepts like technology integration through blogs was useful, because they were so frequently updated and keep up with the times quicker than a magazine or a research article:

I typically use educational blogs to learn about new concepts, especially technology integration. Because information and tools are changing so quickly, this is the BEST way to learn about tech integration. By the time somebody has published something (even if it's in a magazine), the information may be out of date.

This was a valid point and one that added to the blog avenue’s positives. What is important is that participants are aware of the purposes of the educational blog. Teachers searching for a community need a blog, while other questions or answers that they are seeking may be more easily answered through a different medium.
Creation, Critique, Analysis, and Evaluation of Multimedia Texts

Several subthemes emerged in the Use of Multimedia code after the analysis was conducted. This part of the Tier Two data includes interview, artifact, and survey data, and focuses on two sub themes: translating personal blog use into the classroom and how the non-use of blogs does not equal 21st century illiteracy. Within this theme the differences between the academic bloggers, commenters, lurkers, and non-bloggers are discussed.

*Translating personal blog use into the classroom*

One of the foci of this research was to investigate whether or not teachers were more likely to incorporate technology, specifically blogging, into their classroom if they personally were blogging. This theme addresses how the answer to this question emerged in the data.

Comparing just the artifacts, the data support the assumption that active bloggers incorporate more technology into their classroom. The academic bloggers all had a variety of technological tools that they used in their lessons with students, and as the researcher went through the categories, the technology integration continued to lessen. An important outlier was Tiffany, who was categorized as a commenter but was close to being categorized as a lurker. She provided little technology integration in the lesson plan that she submitted. Table 4.4 shows the technology integration that each participant included in her submitted lesson plan artifact.

Some of the technologies academic bloggers included in their lessons comprised the beginning of a podcasting lesson with an example of a Tony Hawk podcast: http://thisibelieve.org/essay/22870/. Sam included a video that she showed about film adaptions of *Hamlet* (https://www.YouTube.com/watch?v=RCJ4hKJvgJw), and included multiple articles that she shared with her students (http://www.jstor.org/stable/3733994; https://www.westminstercollege.edu/myriad/?parent=2514&detail=2679&content=2680)
Table 4.4- Lesson Plan Technology Integration

<table>
<thead>
<tr>
<th>Academic Bloggers</th>
<th>Commenters</th>
<th>Lurker</th>
<th>Non-bloggers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dani:</td>
<td>Krista:</td>
<td>Casey:</td>
<td>Bri:</td>
</tr>
<tr>
<td>• Digital storytelling</td>
<td>• Post on website</td>
<td>• Interactive whiteboard</td>
<td>• Interactive whiteboard</td>
</tr>
<tr>
<td>• Creative commons instruction</td>
<td>• Post on Twitter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Specific image/video clip specifications</td>
<td>• Respond to classmates on Twitter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• YouTube</td>
<td>• Peer editing through the use of unspecified technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Podcasting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Posting on Dani’s blog to submit podcast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Screencasting example</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sam:</td>
<td>Tiffany:</td>
<td></td>
<td>Leslie:</td>
</tr>
<tr>
<td>• Use of song lyrics to reinvent lines out of Hamlet</td>
<td>• None</td>
<td></td>
<td>• None</td>
</tr>
<tr>
<td>• Film</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• YouTube</td>
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<td></td>
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</tr>
<tr>
<td>• Goodreads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Several research articles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debbie: Did not submit artifact</td>
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</tbody>
</table>

The artifact data revealed an element of collaboration and ethics in the academic bloggers’ lesson plans that the others did not share. Krista, Dani, and Sam included links and citations to all of the sources that they used in the lesson, perhaps with the hope that it could be shared or implemented by another teacher. This resource sharing also showed the ethical responsibility of the teachers as they shared the sources from which they received the information/videos/podcasts.

While it was clear that academic bloggers were adding more technology into the lesson that they submitted to the researcher compared to any of the other participants (without considering Debbie, as she did not submit an artifact), it cannot be assumed that the less active bloggers did not include technology at some point in their curriculum. They were asked to submit a lesson plan to the researcher that included technology if possible, but if they had a lesson plan on hand or something that they could submit right away, they were asked to do so. It
was possible that the other participants simply did not submit a lesson plan that included technology but did integrate technology into their lessons. It is interesting to note that while the academic bloggers were active on the blogosphere, few of them incorporated blogs into their lesson plans that they submitted.

With the addition of interview data, a more holistic portrayal of technology implementation can be addressed. Some participants suggested they utilized technology in their classrooms despite not submitting a lesson plan that included technology. Other participants added information about what else they did in their classrooms. For example, Dani explained how she incorporated blogging into her classroom:

I have people in my department that are doing blogging, where kids have their own separate blog, and I, do it differently, I have chosen to do it differently based on community, so my students do blogging on youth voices, so we’re connected that way, but my profile is sparse because I’m actually trying to get the students to write more, and I have a lot of students (work), I just haven’t published theirs yet, it’s been more about getting them out there.

Debbie did not include an artifact, but mentioned that she included blogging into her own classroom:

I have used student blogs in my own classroom, and the students loved them, I think they actually serve a purpose, I don’t necessarily use other people’s student blogs though.

Sam added to her long list of technologies she incorporated in her lesson, and mentioned how she got information for students off of Ning sites, Twitter, and Edutopia:\n
There is a Ning called the ECning that I use quite a bit, and I’ve used a lot…and I’ve posted a lot on there…I read a lot on there. Let me see…ELA…Not sure if you’ve heard of that site. There are a lot of newspaper articles and you can choose the one you want to use in your classroom. So you can differentiate what you are using in class, what kids are reading what. So I am using that to differentiate my articles, I go a lot on the Edutopia site, I get a lot of stuff off of the Edutopia site, I am a heavy troller on the tech site, I use everything, I use Twitter, I use YouTube.

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9 A popular educational blog search engine for teachers
Furthermore, Sam noted the implications of using technology in the classroom, and her philosophies on doing so:

What I like about it (technology) is that it made me question what was I doing…like if I was giving out a worksheet, can they look this up on Google and not have to do any thinking for themselves? So it changed my assignments, we do a lot more writing, or they do Voiceclips, or a podcast, an iMovie, more with creation, more than just oh I’m going to write down the answer, quick question answer question answer, type of assignment.

This comment was important not only because it showed Sam’s use of technology in the classroom, but it also showed the purpose of technology in the classroom and her philosophies on the matter. Sam was aware that her philosophy involved using technology to practice a literacy skill rather than for the sake of using a digital tool.

Krista added how she incorporated blogging in her journalism classroom as well as when they posted on the website, and discussed the relevance of the school work and how it opened up communication to a wider audience:

But with my kids, what I see it as is an awesome way, what I see with my newspaper kids the most, is that they are out in the world, they have an authentic audience, and they are very aware of that. When they are writing their articles. Because they are sitting there going ‘what do people actually want to read.’ And then, how do I approach my audience. Which I love, because that is real. That is authentic writing. And then the next step is getting them to read each other. So it’s more of that hearing writer’s voices, and being able to get feedback, more often than I can give it. 150, 120 plus students, it’s impossible, you just can’t give them the feedback that they need fast enough.

Tiffany, the outlier in the artifact collection, suggested that she did use technology. She discussed a variety of different things she used in her classroom:

This is an idea that I got from the teaching channel from the video blog that the woman I follow does, and we used graphic novel panels to plot the structure of the introduction of the chapters so not only did a get the idea from the blog but I had to go online and I had to search graphic novel panels, so there was someone who wrote graphic novels, there were all these panels available, so I used that…a friend recommended that mbeam, a vocabulary learning program, that I went online and did some research about that, and hooked my kids up with m-beam so
that they can use that and engage in differentiated vocabulary practice, I will search for images online, book reviews, so I was setting up lit circles and this morning they were starting out with lit circle exercises and want to give them a sense of what the books are, you know I’ll put the picture of the cover and then a rave from amazon, what the books are about, kind of. I look for essays in literature online for my creative writing class and my X class, I will send kids to certain websites, for example there is a six word memoir website, so the kids looked at that today, and then they had to generate their own 6 word memoir… so I use it as a point of reference, here is what I am talking about, here are a few examples, here’s the literary magazine, sometimes I’ll use blog sites for that. Before I use them I’ll search what other people think of them, teaching a certain book, look at some of the videos they use in association with the book, they might have a video that I am not aware of, I’ll download those and use those, so I use it an a lot of different kinds of ways, I just taught a new book with my 9th graders and I had never taught it before so I googled it and I looked at several different lesson plans that had been published by different school districts and I read probably 5 or 6 of them over to get a sense of, you know, what exercises are they doing to prep kids for the book, how are they getting kids to respond, interact with the book, and how did they assign, ultimately, and I would take little bits of information and I kind of aligned them with, and oh I have a Common Core standards app that I use, I pull that up periodically, to align my standards to my instruction. (Emphasis added)

Her students used mbeam, videos, and 6 word memoir website posts. This, in comparison with her artifact, was more technology integration, and was consistent with the trend that more active bloggers incorporated more technology in their classrooms compared to those who used blogs less actively or less frequently.

Casey also used blogs in her classroom, an addition of technology compared to the lack of technology used in her lesson plan:

Well actually my students are now sort of participating in a blog because they are doing this program with the national liberty museum of X, and so we’ve been doing a series of lessons the outreach of education created a blog and passports where they can go and post, and I actually posted an extra credit assignment on there and they had to respond on there, I see a lot of value in the students for that.

The non-bloggers also explained using more technology compared to what their artifacts showed, including Bri’s focus on teaching infographics and Leslie’s use of
Remind101 and videos such as TED talks and interactive lessons using her Smartboard.

Bri said:

I think it depends on the student, I think that if it has to do something with a phone, they, students are totally excited to use them, we use X to play, I have a student observer right now, we use it to ask a question, and then they answer the question, on the Smartboard, using their phone, they answer the question. And they love it, it’s so excited for them, I’m not sure if they are learning anything from that, but if it’s something like learning from a new piece of software, like in my English class they make infographics, they are not, they get really frustrated learning how to use the software, it’s kind of a difficult software to use. We use pictochart.com, and it’s not hard, but they get really frustrated and they just want to throw it down instead of going through it, which I find really interesting because they’ve grown up with technology their whole lives, and I, who haven’t had technology my whole life can push through it, so that’s kind of interesting, but it also depends on what class it is, if it’s a class where I know they don’t have computers at home and they might not have phones, those kids struggle, compared to the classes where my kids have computers at home.

Leslie said:

I do TED talks, I do video clips, oftentimes, we use, I have a Smartboard in my room and we do interactive stuff with that, I guess that a sort of technology, and I am looking forward to using the Google pads, students can have research at their fingertips, so that’s probably about the extent that I use technology.

I know just as an English teacher research is frustrating for kids because they have to search and they have to research their answer that I think, I notice more than anything, in terms of technology, but I also found they are much more responsive to me using technology to communicate with them, so you know, we have remind101, it’s an app you use on your phone, it’s an app that I use, and I send them text messages to remind them of…you know…this is coming up, don’t forget this, and they use that better than the old fashioning writing in their agenda and keeping track that way, so I’ve had to learn to communicate the way they communicate with each other, it helps me better. Remind101, and it’s a free app, and what’s great about it is you can text but it’s not from you, and it’s not a personal number, so yeah, I don’t have their personal numbers, they don’t have mine, they just get reminders from their teacher. And it’s kind of a fun thing to do.

These comments show that while Bri and Leslie did incorporate more technology compared to their artifact data in their classroom, they were both more skeptical towards using technology in the classroom compared to the participants who did use blogs in
some way. Leslie mentioned the necessity of having to “adjust,” and said that students were “much more responsive to me using technology to communicate.” It seemed that despite using technology, these two participants were more hesitant in including these technologies in their own classrooms compared to the other interview participants. Their rhetoric, including Bri’s comment “I’m not sure if they are learning anything from it” and Leslie’s comment “I’ve had to learn to communicate the way they communicate” (emphasis added) made it seem that they were using technology with their students despite their lack of motivation to do so.

This was a notable finding that could be linked to the fact that these two participants did not interact with the blogosphere. Not interacting with the blogosphere may have impacted the way that these teachers perceived using technology personally and with students in the classroom. In fact, Leslie mentioned her reticence when faced with using technologies such as blogs. Her comment was one of the few references to age in the Tier Two data. Leslie said: “I think blogs are a young generation communication, so that’s why people might be more reticent to incorporate them.” Considering so few participants suggested age as an issue regarding technology integration, it is clear that age was less of an issue than some research suggested in terms of using blogs and being 21st century literate.

With the addition of the interview data, it seemed that all of the teacher participants used technology in some way in their classroom, in addition to what they included on their lesson plans. Compared to academic bloggers and commenters, other participants included technology in their classroom but with less complexity. Rather than incorporating other elements of the NCTE 21st century literacies definition such as
collaboration, most of the less active bloggers focused technology integration on the knowledge of a tool. For example, while Krista and Dani’s students interacted with a global audience with their website and blog postings, Bri and Leslie used more knowledge-sharing and researching activities. These knowledge-sharing and research activities focused on developing fluency with a tool and enabling students to look for information using technology. A more active approach may have encouraged students to collaborate and share information beyond the teacher-student relationship. This active approach would have also addressed more complex standards in the NCTE 21st Century Literacy definition that require higher-order thinking skills beyond the knowledge of a tool.

It did not seem that using blogs directly influenced how teachers incorporated technology into their classroom. This inference cannot be made because so many of the active bloggers were active on other sites and with other technologies. However, all of the participants other than the non-bloggers mentioned using blogs in their classrooms. Their fluency with the tool gave them more confidence to then utilize blogs in their own classroom. Some of the influence of blogs on teacher practices in this data may have been latent, because, as Tiffany suggested, she used a lesson on a blog that was more traditional. The implementation of technology because teachers are more comfortable using technology personally seemed to be true, but more importantly, it seemed that those who collaborated on blogs were inspired by new ideas that they were passionate about teaching to students, whether traditional or not.

Non-use of blogs does not equal 21st century illiteracy

Compared to the above subtheme where the researcher looked at the influence of using technology on classroom planning and lessons, this subtheme explores how the use or non-use of
technology impacts the views participants had on 21st century literacy. This subtheme developed when the researcher looked into the uses of types of technology other than blogs. The sub codes Podcasting, Twitter/Facebook, and Other showed that while some participants chose not to use blogs as a source of professional development, they may have used other technology avenues. There were no participants who suggested that they did not use technology at all for professional development. This may have been due to the fact that NWP teacher-participants were engaging with professional development already, and seemed to be aware of technological advances and reasons to incorporate technology into their classrooms because of their involvement with this professional organization. The non-blogger Bri mentioned her uses of other forms of technology for PD:

I Google stuff all the time, I sometimes, I haven’t done this lately, with the XWP, my chapter we will like, someone can email out a question, and, on that listserv, and lots of people respond to these questions, you can pose the question what piece of literature are you using when teaching seventh grade, and different people will respond and tell you what they are teaching, and what good stuff is out there, sometimes teachers will post if they are having difficulty teaching specific topics like 21st century literacies, what are you doing with that, then people respond back to that…I think during the summer I spend a lot of time, during the school year I spend more time like looking up resources for my lessons, that aren’t necessarily, like I spent an hour today looking for TED talks that I could use with my students throughout the week because we are getting into, we’re going to start talking about public speaking. So, that stuff I am doing, it’s not necessarily for PD, but it definitely does help influence my lessons, and I have no idea how much time I spend, I don’t want to know.

Leslie mentioned how she looks up TED talks and uses Google like Bri. Survey participants also mentioned their uses of other technology, including Twitter #APlitchat.

One particular survey participant mentioned how her preference for a type of technology and type of reading impacted her use of blogs:

Blogs are clutter. I prefer to read research and ideas from established sources. Our curriculum director had an educational blog and emails the staff weekly links to her blog. The emails clutter my inbox and are deleted immediately. Quantity is
valued over quality in blogging. The online reading I do is through Twitter. I choose who I follow and what articles to read.

Another participant mentioned her lack of blog use was based on preference of other forms of technology:

I suppose I would engage more if the blog posts came to me in some way that I already use the Internet, like across Facebook or Twitter. And short and sweet is better than long and complex.

Just because participants did not use blogs, it did not mean that they did not use any other form of technology. While the use of blogs did seem to impact their knowledge and comfort of the tool itself, participants’ overall knowledge of technology was not impacted by the lack of knowledge about blogs since they used other tools.

Compared to some of the survey participants and the active bloggers in the interview data, the level of interaction the non-bloggers Bri and Leslie had with the Internet was more passive. This did not seem to impact how these participants view 21st century literacy. Leslie had a more traditional view of literacy, and when asked to comment on 21st century literacy, responded:

I, being an English teacher, I think I’ll always remain old-school when teaching classics, and, students learning to research, but I think I’ve had to switch how they do the research, just because, you know, the world is at their fingertips now, so I think I do that that way, but I still think its important that they learn the written, old-fashion way, that’s what I kind of tell myself, that they still need to see full literature, not just snipbits that you can find with quick research, so yea I try to incorporate some of it the old way, in teaching them to read effectively.

Bri, on the other hand, suggested the importance of being fluent with technological tools in this new era:

I think that it is very important for our students to be literate especially when it comes to technology, and maybe (use of) different types of software.
Casey, the lurker, had a more traditional view of 21st century literacies too. Casey suggested that 21st century literacy was “a really annoying buzzword”:

I feel like that is a really annoying buzzword. Like we had this book group a few years ago, and we were talking about that...because they constantly change, the most important thing to teach students is how to basically teach yourself new technologies, problem solve new technologies, because there is no use, I feel like there is no need, and yeah to do that you should have them using technologies, but I don’t know if you teach them to use new technologies it’ll be useful because it will change.

When a teacher used technology they were more comfortable using a higher amount and level of technology in their own classrooms. However, the claim that those who engage in technology defined 21st century literacy in a more complex/involved way cannot be made.

Krista, one of the most technologically savvy and experienced participants in the interview data set, had a fairly traditional view of 21st century literacy:

I think my biggest opinion is that reading is reading is reading, and literacy is literacy, and it doesn’t matter what form it comes in, so you have to be constantly aware what are the things that our kids are going to be expected to know, ten years from now. And what can I do to make sure that they learn it, where, and how they approach it, problem solving, and that sort of thing, use those tools, but I think the most important thing is just getting them to be aware that they are constantly being asked to be literate, and then, the skills that it takes to be literate. It’s funny because people are like what tools do you use, and I go I use what works, or you know, what approach do you use, the one that works for that kid. That’s why I feel like I am constantly researching, and using all of this technology, and everything, it’s because I’m constantly looking for things that work. (Emphasis added)

Instead of citing technology savvy as an expectation for students, Krista viewed 21st century literacy as the ability to problem solve rather than focusing on fluency or knowledge of particular types of technology, despite her savvy in using a variety of technological tools.

Debbie, one of the academic bloggers, has a more technologically focused view of what 21st century literate meant for students:
We use digital things, we do digital things, but we shouldn’t just use it to use it, you need to know what to do with it, sometimes students when they create in a multimodal way, so they are using video and audio, that kind of thing, they are actually being more creative than they are when they are writing on paper, because they are engaging in things that are different…it’s a more creative process, actually, than just writing a paper. So I think it’s better…I think it’s a better medium to use.

While a “better medium to use” in Debbie’s opinion, she cautioned against the use of technology for the sake of using technology. Rather, she was a proponent of using technology with a particular purpose. This comment can be compared to Krista’s comment, where Krista mentioned the need for students to know the skills it takes to be literate and to be aware that they are being asked to become more literate when it comes to technology. The three comments that these participants make, whether negatively focused on 21st century literacy skills, like Casey, or more positively, like Debbie, all implicitly focused on problem solving as a necessary skill for the 21st century, especially when it comes to the use of technology. While Bri did mention the necessity of using technology and the importance of teaching how to use technology, the focus of her comment was on the more passive knowledge and fluency of a tool. Debbie, Casey, and Krista focused on the active participation and play with different mediums, with an awareness that technology shifts and changes so much that the knowledge of technology seems to be less important than knowing how to problem solve through these technology changes.

While this is a noteworthy finding, impacted by the use of blogs and the use of a combination of other technologies, overall participants who did not use blogs did not view some elements of 21st century literacy as unnecessary and were not entirely lacking in 21st century skills. It seems few, if any, participants were fully 21st century illiterate,
meaning they did not use technology or did not know how to use technology at all.
Perhaps 21st century literacy knowledge and awareness should be viewed less as a
dichotomy and more as a scale, with those that have little experience with technology
focused more on knowing how to use technology, and those who have more experience
with technology focused more on how to problem solve and communicate through the
use of technology, a complex use of critical thinking and 21st century literacy skills.

Challenges

Several subthemes emerged in the Challenges code after the analysis was conducted. This
part of the Tier Two data includes interview and survey data, and focuses on three sub themes:
self-sponsored vs. mandated PD, self-sponsored traditional vs. self-sponsored technology PD,
and contentions against blogs and blogging. Within each theme the differences between the
academic bloggers, commenters, lurkers, and non-bloggers are discussed.

Self-sponsored vs. mandated PD

References to alternative support systems beyond the school seemed to be the most
prevalent in the data set. Teachers both in interviews and in the survey data said that they
succeeded in bringing in new and creative ways to teach English despite the time they put into
mandated PD. Many teachers discussed how they viewed mandated PD negatively. Most of the
negative outlook seemed to stem from the lack of differentiated instruction and lack of effective
presentation of PD. Many teachers referenced how mandated PD did not fit into their personal
preferences as a teacher and focused on trends and what administration found to be “good
teaching” rather than relying on teachers to focus the PD. Tiffany said:

Generally speaking I feel like the professional development which I am provided
by my administrators, by my district, is reprehensible…It’s typically grounded in
their own agendas, it’s not teacher orientated, so for example to attend a response
to intervention presentation that was 8 hours long and I was a literacy coach at my
old school, and of course helped set up the RTI, so I had to structure this presentation, I really needed the next level for that kind of instruction, so it’s something that I was opposed to looking, I just didn’t need the basic introduction. And it was. It’s woefully presented because they talk at you, and not teacher orientated at all, it doesn’t incorporate your interests or skills, level, whatever. (Emphasis added)

Krista added to the idea of professional development that was focused on wrong concepts:

Our school is on this big kick to improve literacy, specifically writing, and they’ve kind of done this weird, let’s do professional development one hour early release each week, specifically for PD, and they were like let’s make it our writing initiative, and it turned into let’s find all of these different ways to assign writing in all of the subject areas, but not how to actually teach writing in the subject area, so that’s the problem, when it comes from above, now working with the writing project and seeing that it takes 50 hours before change happens, like 50 hours of very focused PD, and that PD needs to be on here is what good teaching looks like, rather than the passive, talking at you, PD that administrators tend to do. They haven’t been in the classroom for a long time, and that’s the way they think we receive information, and then, the authenticity, having people sit down and say…what do I need, why do I need it, and how, how am I going to do it. That’s really where it has to start. That’s how it needs to be, or else it’ll never make change.

It seemed from these two interview participants, both commenters, that teachers were not opposed to the idea of having to attend professional development, but rather, find fault in the way that the PD was presented. Mandated PD’s usefulness was called into question more than once. Casey, categorized as a lurker, also called into question the usefulness of mandated PD.

So professional development in general, I have mandated that I do, this year they are mandating up the wazoo, pointless professional development that we have to do, like we have one this afternoon, that’s why I can talk to you, because we have a longer break. So once a month we have half day, professional development we have several day long ones throughout the year and then we had a couple of days before school, and a couple of days after school, and I think they are pointless.

Many teachers shared harsh words about mandated PD, from “reprehensible” to “pointless.” Much of this apparent anger seemed to stem from the lack of real-world application
of the information provided during these PD sessions. Survey participants added to the lack of value of mandated PD:

Mandated PD is typically canned and one size fits all.

Professional development is despised by teachers when it is district-wide PD.

If it was not for the professional development groups I choose to attend, I would not be a teacher. They help me be the best teacher I can be. *Most importantly, they help me sort through all the bull sh!t of the mandated professional development and decide what is really important based on the needs of my students.* They help me feel like a good teacher (Emphasis added).

The amount of time that teachers must dedicate to mandated PD also may have impacted the negative outlook that many teachers had towards mandated PD. One survey participant respondent said: “We have 60 hours of state-mandated PD we must complete each year, and it is provided onsite at school, mostly during the week before the students come back from summer break.”

Teachers from other districts suggested a number of hours that they needed to complete, ranging from 10 hours to 82 hours, with an average of about 60 per year. Compared to mandated PD, much of the discussion regarding independent PD was positive. When independent PD was coded as a challenge, it *always* had to do with access and restrictions to engage in independent, self-sponsored PD. The two survey participant responses below serve as an example of how independent PD was a challenge, and, unfortunately, it was not because participants did not want to engage in independent PD, but rather, because they were forced, either financially or by their district, to use only what was prescribed to them.

I don't engage in much of my own PD anymore because there is no funding available and most PD opportunities are not approved because they aren't aligned with the district plan.

I like GOOD professional development where the instructor is knowledgeable and provides me with real resources and ideas I can take back to my classroom the
next day. I love independent PD. Unfortunately, our school district only recognizes pre-approved, district-organized PD.

The biggest difference between what participants said about mandated PD compared to what they said about independent, self-sponsored PD was the usefulness of the content. This seemed to be an important dilemma. What teachers were learning through mandated PD, PD that districts were paying for, did not seem to be individualized for the teachers nor something that teachers found useful. The perception of usefulness of a PD session impacted the use of PD information in lesson planning for their classrooms. It seemed that self-sponsored PD helped teachers individualize their own knowledge building and, thus, their own instruction. Survey participants mentioned how enjoyable independent PD was for them, and even compared independent PD to mandated PD:

I enjoy independent professional development. I like being able to choose topics that are of interest/value to me and my classroom. I have found that the professional development I engage in outside of my district requirement is of much greater value and quality than those generically required.

Other survey participants voiced similar thoughts:

Independent professional development is one of my favorite parts of teaching. As opposed to mandated district professional development, independent professional development is probably the most effective use of my time in continuing to grow in my practice as an educator. This includes both informal practices, like reading books and using Twitter, and more formal practices, like reading journals and attending for workshops and conferences.

Because I get to pick what I want to study or learn about, independent professional development is very important for me. I’m not spending any time on things that aren’t really useful or applicable to me, and I can go at my own pace.

Several interview participants spoke about independent PD as well, and mentioned the necessity of hands-on PD. Tiffany said:

I think that I am a big fan of hands-on professional development where I can go and have the experience and try the strategy with feedback from an instructor, so I do like that, so in this day and age where there is a lot of funding being cut for
that kind of travel for professional development, sometimes there is a lack of professional development in your area, and you are not allowed to travel because of funding, I think that that is scarce, I think that if you have a good reliable source with forward thinking open minded educated teacher who is up on the research and who has really, who is working to reflect on her instruction, I think that could be a great option.

Tiffany suggested that “all independent PD is not created equal,” and that there were some instances where independent PD was not helpful at all:

When I seek professional development opportunities off campus I feel like they are generally good, sometimes you get a real doozy, and it’s horrible (laughs), but generally the ones that I seek off campus are really instructive, and really affects my practice.

This comment regarding independent PD made it clear that what worked for some teachers may not have worked for others, but by seeking out their own independent PD, teachers were then responsible for their own learning and their own decisions regarding what sessions, conferences, and tools to utilize for their knowledge-development. This may make teachers feel more autonomous compared to when they were forced to listen to a prescribed, mandated session. Casey spoke to the idea that teachers need to have enough autonomy and trust from administration to seek out their own professional development needs:

They (administration) should trust teachers to say, like report what they did and how it helped them and how many hours they did. And I know that that can lead to like people like you were saying I went and did this research on my own, I think that would lead to some people cheating, but it would give teachers a lot more time, because I think most teachers really do want to do the best job that they can, so it would give teachers, if I could have the time back that I was in professional developments to actually do some professional development, I have so many books that I would love to read and a lot about education, that I don’t have time to read. So if you actually gave me that hour, like, do what you want, I might actually go sit there and read it.

Other interview participants also suggested the necessity of independent PD. Casey said that her mandated PD requirements did not meet her classroom needs while
her self-sponsored PD suited her classroom, because “I seek out what I think my class needs.” This comment was important because it suggested that mandated PD did not suit Casey’s classroom needs, and Casey’s self-sponsored investigation of what her class needed lead to self-sponsored PD engagement that also influenced her classroom practices. It seemed that using self-sponsored PD for “what her class needs” influenced her classroom.

Many participants seemed to be unhappy with the way that mandated PD was offered at their school, but two outliers seemed to address how their school successfully helped teachers receive mandated PD credits. One of these participants was Bri, the non-blogger, who also was the only interview participant to say that her school support was sufficient. Bri discussed how her school provided PD credit:

   Our X department, which is our professional development thing, we can apply, we can request what we want to do, and then the team gets back to us if it’s an appropriate thing…like if I am reading a book, an educational book, or a textbook, and doing something with it, and talking about it with another person, but I can’t do a personal book study, I have to do it with someone else. If I’m browsing the Internet and reading blogs, and posting on it, I’m not sure how they would feel about that, I’ve never tried it.

   Bri, when asked how she would feel if browsing and posting on blogs was counted as PD credit, provided evidence that a.) teachers can be happy with mandated PD and school support and b.) the way to do so is to allow teachers the independence and autonomy to choose what they wish to pursue.

   Leslie, the other non-blogger, offered a similar sentiment regarding the way that her school district completed professional development requirements. The autonomy to choice professional development avenues worked not only for Bri, but for Leslie and her school district as well. While Leslie did not say that she felt her school support was
sufficient, specifically in terms of technology support, she did suggest that because her school district gave teachers a choice of what to do for professional development, it “makes all the difference in the world”:

I do in the district I am in now, because we have a choice in it, I think that makes a huge difference, I think any teacher has experienced professional development that is a waste of time, but I think giving teachers a voice is great, they want to do those days and they want to give teachers a choice makes all the difference in the world. Because sometimes district offices differ, they kind of have lost touch with what is going on in the classroom, I am very fortunate that my district allows teachers to be heard in that regard. I’ve worked in other districts and it’s hard to do, because then you think about the 100 other things you would rather be doing, and that’s not good!

This result highlighted two outliers that were both categorized as non-bloggers. While Leslie did not feel the school support as positively as Bri did, both had some choice in PD, which impacted why they were not participating in the blogging community. It seemed that the blogging community was an outlet where other participants went for the support that their school lacked.

This section of the Collaboration theme revealed multiple trends in the data regarding self-sponsored versus mandated PD. Based on the data from both interview and survey respondents, it seemed like there was a lot of negative perception of mandated PD, especially focused on the usefulness and presentation of mandated PD. Independent PD had a positive response, and teachers referenced how their independent PD impacted their classroom because they were able to build their knowledge on relevant topics. Bri and Leslie’s situations in terms of PD were different. These two non-bloggers both mentioned how they were happy with their PD. Both of their mandated PD structures focused on giving teachers autonomy and choice when they chose their PD avenues, compared to those mandated PD sessions that were not individualized, thus, it seemed, hated among
participants. This result showed the potential for happy and productive teachers if districts allowed for more autonomy in terms of choosing professional development credits. However, does this lead to more teachers using blogs as a source of professional development, since both the participants who did have this structure did not participate in the blogging community?

*Self-sponsored traditional PD vs. self-sponsored technology PD*

If blogs were counted as professional development credits, the expectation was that many teachers would be thrilled. However, when the researcher investigated the difference between the codes Self-sponsored Traditional PD versus Self-sponsored Technology PD, it seemed that some teachers still preferred their professional development to be traditional and face-to-face, while others preferred a hybrid of traditional and technology PD. This was not a trend that was due to lack of fluency or comfort with technology, but rather, simply the preference of being able to have a face-to-face conversation. Sam, one of the academic bloggers, in response to how she would suggest PD allocation work, said:

>I would say probably a very even balance of Internet and face-to-face, basically it’s always nice to be able to see somebody, but there are things like Skype and Facetime, and YouTube, that we use in the classroom and that I think we should be using in professional development. It’s just as good, and it’s nice to hear an outside perspective, for sure.

Sam, one of the most prolific bloggers in this data set, mentioned how she would like to have a mix of both traditional and technology-based PD. This comment showed that even the most technologically fluent participants may not want to eliminate traditional PD, but rather, utilize blogging as another avenue or tool to receive PD. Other academic bloggers, such as Dani, agreed with this sentiment, and suggested that while
blogging was her main avenue for daily PD, conferences such as NCTE provide necessary energy and traditional face-to-face networking.

Those who were already using blogs seemed to believe that allotting PD credits for blogging was a good idea, and some said this would help encourage others to blog, like these survey participants:

Woot. I would love that. Sign me up.

Would happily comply; perhaps, by hosting a blog rather than a website and Padlets.

They should. It's a way of building community around professional interests and goals. That would be amazing!

WHOOT!! X (teacher friend) would say, "Are you freaking kidding me? You are a genius, school! You are letting a smart, motivated teacher customize her PD to fit her needs and to discover new ideas from educational blogs and/or to reflect on the successes or failures in her classroom on her educational blog? What a genius idea.

My gosh! I would love this. I think this would help provide PD opportunities to so many teachers that are reluctant to give up instructional time. It would also honor the independent PD that many teachers are already doing.

These survey participants did not say that this would help them continue to blog in any way, other than to provide professional development credits. One survey participant mentioned that regardless what her school decided to do in terms of PD credit, she would continue to blog because she saw the benefits in doing so.

We have discussed this (Blogs as PD credit) as a school. Our school gets hung up on accountability unfortunately. Either people will read blogs and engage in other forms of independent professional development or they won't. Because I love to find new ideas and connect with educators, I will read blogs either way, so I don't care about getting "credit" for that. (Emphasis added)
Others suggested that mandating blogging specifically rather than the choice of using it as an avenue may even hurt perceptions and blogging, like Krista, one of the commenters:

I don’t know if it is like one of those being told to do something instead of doing it on your own…because of intrinsic (motivation), intrinsic, extrinsic, so I don’t know.

A survey participant shared this sentiment:

I only want high-quality blogs out there. If people are blogging only because it's required, the practice loses its efficacy.

Both of these participants revealed a dynamic between mandated PD and self-sponsored PD. Because self-sponsored PD required teachers to search for their own materials through their own avenues, it gave teachers a sense of autonomy and choice to engage in such PD. If mandated PD required blogging, this would be similar to regular mandated PD, just using a different medium. The motivation could change and blogging quality may drop. It is essential then to encourage mandated PD programs that allows blogging as an avenue that teachers may chose personally to utilize for their PD practices.

Some participants mentioned how blogging for PD credit would not impact them because they were not interested in PD through the use of technology, like this survey participant:

Not interested. I prefer to receive credits from a traditional classroom setting. Too many of my colleagues view online professional development as non-learning. They take what they feel will be easiest and least restrictive. Aka, I pay money for credits and I don't need to learn anything.

These data showed that using blogs as a source of professional development credit was an avenue that would help encourage teachers who did not blog to participate and would be perceived positively by most teachers who already did blog. If blogging was mandated as the only source or one of the few sources that a teacher could utilize, it may
create a backlash similar to typical mandated PD credit because there is no sense of autonomy and choice.

These responses, however, did not explain why Leslie and Bri did not blog despite their school being open to that avenue for professional development credit. When asked if she would like blogs to be considered as professional development credits, Leslie responded:

I think I would enjoy doing that. I know that when I took a graduate course a few summers ago we created a Wikispace which is kind of like a blog, I think? And so we communicated that way, with other graduate students, as well as ourselves, I like that idea. I’m trying to incorporate that more, I think it’s just the matter of finding time, and in finding how to implement it on top of everything in the curriculum already.

This suggested that it was not disinterest but rather time and lack of knowledge about blogs that stopped Leslie from participating in the blogging community. This was similar in comparison to Bri, whose only real experience with blogs was negative. Because Bri did not find a good blog and source, she did not continue further into blogging because of that negative experience. When asked if she used blogs, she replied:

Well, I don’t use them…EVER. But I have been, like I know the system, on X’s state look up, I don’t know if other states do that, there’s a fifth year school and there is a blog on there, but for a woman who is blogging, I went to their website to find the blog, and I found it difficult to find. Once I did find it, the stuff that was on it wasn’t really that useful, about how these people are using formative assessments, formative instructional practices, but I didn’t find the blog terribly useful. But that’s my only real experience, I don’t use them beyond that.

With the right guidance and direction to good blog sources, both Leslie and Bri may have found blogs more valuable. It is important to note that neither non-blogger was against blogging because they were against 21st century literacies, but rather a combination of negative experiences, lack of knowledge, and lack of time that stopped them from blogging.
Contentions against blogs and blogging

One of the most important reasons for including non-bloggers in the data set was to determine why non-bloggers chose not to blog or use blogging as a source of reflection and/or professional development. While most of the contentions against blogs and blogging came from those who did not blog personally, some of the contentions against blogs and blogging came from some of the most active bloggers.

For example, Dani, one of the academic bloggers, did not feel like the practice was time-efficient, but she blamed herself rather than the blogosphere in terms of time management and becoming a more effective blogging consumer:

I know that I need to learn more and be more effective with it, you know I have a feedly, and I follow people, but I haven’t made it a habit and I need to make it more of a habit.

Sam, another academic blogger, mentioned the reliability and the usefulness of particular blogs. She contended that despite days where she felt that she did not find anything, the practice was still inspiring to her:

You know, there is a lot of hit and miss. Where you think oh that’s really cool, but I just don’t need it, right this second. But I always try to find something, to you know get me started, a cool thing, an introductory activity, so I think that they are very important, and certainly I have a lot of them bookmarked for future use, or days where I am lacking inspiration, so I never really feel like it’s a wash, or I didn’t find anything.

Compared to these comments, the other comments from non-bloggers and survey participants suggested a variety of contentions with blogs and blogging. These participants placed the blame on the blogging community or a particular blog rather than on their use of the blog. Bri, one of the non-bloggers, shared her disappointment in terms of the ease of finding a blog and the usefulness of that blog she found:
Once I did find it, the stuff that was on it wasn’t really that useful, about how these people are using formative assessments, formative instructional practices, but I didn’t find the blog terribly useful. But that’s my only real experience, I don’t use them beyond that.

Several survey participants shared her sentiment on the usefulness of blogs:

I have not really been shown any that are useful.

It's hard to find blogs that are philosophically/ideologically similar to my own ideas. Also, I find so many blogs are primarily for complaining, negative venting, or wallowing in the woes of teaching without adding anything productive. I know there are good blogs out there, I just don't know how to find them.

Both of these survey participant comments placed the responsibility of the lack of usefulness on others in some way. The first response suggested that the participant has not been shown any blogs that were useful, while the second survey participant suggested that while they were knowledgeable that there were good sources, they were just unclear as to how to find them. These responses showed that if teachers were directed to good blogging sources or more knowledgeable about search engines such as Edublogs that point to reliable teacher-resource blogs, they would be more interested or more involved in the blogging practice.

Much like Dani’s sentiment about time, many survey participants mentioned the lack of time in their schedules to put aside for blogs and blogging:

There are simply not enough hours in the day as it is, and I fear blogging would take up that much more time I am already short on. Also, I do not consider myself a "blogger" in that I am not sure what I would post of importance.

I just don't have time. I feel it is difficult to find blogs to use. It is also difficult to find specific information regarding the questions I'm addressing.

I just find blogs too cumbersome. There is so much information, and I'm overwhelmed by the idea of "where do I start?" Blogs hold too much information.
These sentiments suggested that time would be an issue for many teachers to become involved in blogging. These responses also addressed usefulness of blogging in some way. Participants seemed to need direction to reliable and useful sources that may have changed their thinking and perceptions of blogging as a necessary avenue for professional development despite the additional time it takes.

Another comment that was brought up in both the interviews and survey was the reliability of the information on blogs. One survey participant said:

> No offense to blogging, but it's not peer-reviewed. Anyone can post anything, so just like getting recipes or DIY projects, you take the risk of getting bad advice. There may be great pockets of information on blogs, but it can't be a primary source of information. I wouldn't get medical advice on a blog, so I'm probably not going to get teaching advice on a blog either.

This sentiment referred to the idea of getting content knowledge from blogs, versus using blogs as a communication source, a reflective source, and a classroom-planning source. In terms of the practical use of blogs to gain information that would need to be reliable and accurate, such as specific information about learning disabilities, this was a valid point. No teacher should rely on a blog for medical or clinical information, or any kind of information that could potentially cause harm if incorrect.

The blogosphere was a place for communication to occur between teachers on educational blogs. There are unreliable blogs on the Internet, just like there are unreliable sources, Tweets, Facebook statuses, and websites on the Internet. As one survey participant suggested: “Some blogs can be skeptical. They might lack professionalism or lack details.”
It is the responsibility of the blog participant to be 21st century literacy conscious and be a critical consumer of information. Tiffany, one of the commenters, mentioned this practice:

Sometimes you might run a Google search for something and you go on the site and there is advertising on it, and you can’t really tell if it is quality or not, it kind of takes a long time to sift through and then go ugh this is not for high school, or you know, this doesn’t have the rigor that I’m looking for.

Reliability, time, and usefulness were big contentions with the blogging practice, but they were all contentions can be addressed by becoming knowledgeable consumers of reliable and educational blogs. Some participants, however, shared their preference for using another source or avenue over blogs. This was not necessarily a negative about blogs but more so a personal choice that a participant chose to make regarding the use or non-use of a blog. Leslie, one of the non-bloggers, felt that blogs were too informal for her and her students:

I guess I just don’t feel comfortable with that kind of set up, I kind of what to be careful that I know what I am doing because I don’t want to use it incorrectly. I think that’s something that you need, especially with high school kids, to know where the boundaries are, social media is a gray line for a lot of them, you know, and I like to maintain more of a professional atmosphere and I see blogs as being really informal.

Both of the following survey participants felt that traditional face-to-face professional development worked better for them personally:

I would need to feel like it is a support to my teaching, and I currently prefer to get that from more interpersonal sources. Also, I don't like to sift through the venting/personal feelings stuff. I like to talk about that with my friends, and go to PD to understand how I can engage in better teaching as a professional.

I don't really see myself engaging in a blog conversation. The human is removed from the conversation in a blog. I cannot engage a person in a digital conversation the same way as I can in a face-to-face conversation. I prefer to participate in in-person professional development because I can network and make lasting personal connections.
Using blogs was a personal preference on the part of the teachers participating on the blogosphere. However, it is important to note that as technology continues to evolve, the importance of getting online and following the same standards that teachers set for students in the NCTE 21st Century Literacies Framework will continue to grow. Professional development should become more accessible through the use of technology.

There were several other contentions in addition to reliability, time, and usefulness of blogs that survey participants suggested. These included the lack of access to blogs because their schools blocked all blogs, the lack of interest in collaborating on venting blogs as discussed in the Collaboration theme, and the lack of knowledge as to where to find out more about blogs and blogging sources.

There was little said about age in regards to blogging, other than the comment that Leslie said: “I think blogs are a young generation communication, so that’s why people might be more reticent to incorporate them.” No other participant mentioned age as a factor. Several interview participants mentioned their colleagues’ lack of knowledge about technology, but other than Leslie, no one mentioned the “youth” of blogs or that blogs were a communicative source for “younger” people. There are many speculations that can be made about this phenomenon. It could be that despite having an older group of participants, most of these participants were technologically literate on some level, and immersed personally in technology. Perhaps many of these teachers were working to close the divide between their students and themselves in terms of technology use, and while they may see technology as a “newer” concept, they may not make the assumption that it was only for younger generations of learners. More research should be done in this
area to address why so few participants mentioned the age divide between themselves and their students, and how this impacts their views or uses of technology.

**Tier Two Results Summary**

Extending the demographics of the sample population and the results based on frequencies, the Tier Two results included six major themes: 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency and fluency development, 4) Global information sharing, 5) Creation, critique, analysis, and evaluation of multimedia texts, and 6) Challenges. In this summary the results of each theme, including subthemes that were distinguished after the analysis of the data, are discussed.

**Relationships, Community, and Global Collaboration**

The first subtheme in the Collaboration theme was good vs. bad collaboration. In this subtheme, there were several findings. Amongst “good” sources of teacher blogging, there were several instances of “venting blogs” that participants discussed, which were blogs where teachers went to vent and complain about the teaching profession. These venting blogs were seen as “bad” blog sources and bad instances of collaboration. Non-bloggers did not comment on venting blogs—it is safe to assume that their non-participation in blogs was the main reason for not suggesting anything about venting blogs. Venting blogs seemed to be one of the things that deter potential bloggers from the blogosphere. Despite the negative venting blogs, there was evidence of good collaboration, where participants suggested that participating in blogs helped keep them up to date and many had conversations on these blogs with like-minded teacher professionals.

The second subtheme in the Collaboration theme was recognizing blogs as an avenue for collaboration. This subtheme highlighted several more findings regarding collaboration on blogs.
The participants commented on the need for a community of teachers outside of their school district as a reason for needing blogs. Furthermore, collaboration on blogs seemed to extend collaboration past the blogosphere and into traditional professional development. This meant that teachers were sharing blogs outside of the blogosphere, going onto the blogosphere to learn information, and then sharing this learned information with others in a traditional manner, extending the dialogue across multiple mediums, both traditional and asynchronous.

In terms of the different participants on the blogosphere, it seemed that non-bloggers and lurkers were potentially missing out on useful collaboration on blogs, but this did not mean that lurkers were not getting information off of the blogosphere. Confidence and lack of knowledge about blogs and blog etiquette may have deterred non-bloggers and lurkers from actively collaborating on blogs. Specific and explicit references to teacher collaboration were only found in artifacts submitted by academic bloggers. However, all artifacts included some sort of collaboration—academic bloggers and commenters included more technology-based collaboration in their lesson plans compared to the more traditional think-pair-share and group work in lurker and non-blogger artifacts. This may have been due to their heightened sense of ethical considerations by participating in the blogosphere and following ethical responsibilities on the web. Few participants, even academic bloggers, spoke to using blogs with students, which is interesting considering almost all participants suggest the effectiveness of blogs. Some suggested that access was a challenge when allowing students to participate in blogging. It seems that the potential for blogs as a source of collaboration seemed to be rooted in teacher collaboration rather than influence on the classroom.

The third subtheme in the major theme Collaboration was finding/searching for collaboration on blogs due to insufficient school support. This subtheme revealed that those that
felt lack of technology support at their school sought their own PD. Furthermore, technology support in academic blogger, commenter, and lurker schools, primarily, seemed to be sub par. Schools’ lack of trust in teachers did not allow their students to engage in 21st century literacy skills due to lack of access to technology. Participants were succeeding with technology integration despite school support, not because of it. The outlier, Leslie the non-blogger, suggested that her school support was sufficient. She was the only participant to have a true lack of experience with blogs as well. Whether or not these elements are related is subject to more discussion.

**Ethical Responsibilities**

The first subtheme in the ethical responsibilities category was the lack of ethical responsibility in the 21st century definition. First and foremost, it became clear that ethics was a less explicit behavior and responsibility as there was a lack of dialogue regarding ethics in the data. The first subtheme revealed further that teachers seemed to not consider ethical responsibility a primary role in the definition of 21st century literacies; the majority of teachers did not include ethics as part of what it means to be 21st century literate. Furthermore, the responsible use of the Internet seemed to be more implicit rather than explicit. When prompted, teachers included a variety of references to ethical behaviors, including cheating, Internet trolling, technology etiquette, and critical consumerism.

While never explicitly stated, teachers seemed to be aware of their ethical responsibilities as a teacher when blogging; many were aware of their role as a teacher on the blog, being a “public figure,” and understand the importance of acting in a way that does not impact their job when on blogs. Many voiced concerns about a “watchdog” mentality, meaning that they felt when they were on a blog they had to be careful about what they post because they were afraid
of those who have authority over them seeing an inappropriate post. Some expressed concerns about their freedom of speech. Particularly those who were not on the blogs as actively but were prompted with a question as to their reaction if their principal were to forbid them from blogging due to inappropriate posts suggested that their freedom of speech was violated.

In terms of participants, both non-bloggers did not suggest that teachers had a responsibility of teaching ethical behavior to students, while all other participant did. This showed the lack of experience impacting the way the non-bloggers perceive a teacher’s role in the responsibility of students becoming 21st century literate. However, regardless of categorization, academic bloggers, commenters, lurkers, and non-bloggers all seemed to be aware of ethics.

The second subtheme in the ethical responsibilities theme was ethics practices found in the artifacts. In this subtheme, the researcher looked at how ethical behaviors surfaced in participant lesson plans. Academic bloggers and commenters were the only participants to include citations in their lesson plans. However, it must be stated that this may have been due to the fact that while these active bloggers submitted less formal lesson plans, the lurker and non-bloggers submitted formal lesson plans that may have not required citations. One of the academic bloggers included a reference that forbid students from using blogs as a source for a project—this may have been due to several factors, including the inappropriateness of blogs for the particular assignment or a distrust of students finding an appropriate blog source. This was not due to lack of technology integration in the lesson as several other social media sites were utilized. One artifact from an academic blogger taught ethical responsibilities specifically by providing materials and instruction about the Creative Commons copyright. Lurkers and non-
bloggers did not utilize any ethical behaviors that were explicitly mentioned in the lesson plan or have students utilize or learn about any ethical responsibilities in their lesson plans.

**Proficiency and Fluency Development**

In the fluency theme, two subthemes, awareness of fluency and defining 21st century literacies with the NCTE framework, developed. The subtheme awareness of fluency developed when the researcher noticed that participants were making comments that to learn and teach about 21st century literacies the teacher herself had to be involved in such skills. This prompted the researcher to explore these statements further, and several other findings surfaced, including that all of the categorized interview participants commented on their awareness that fluency on their end was necessary for students to gain fluency when prompted. A few participants, primarily academic bloggers, suggested that using technology as a literacy practice rather than a tool was an important difference between learning about technology and becoming 21st century literate.

Two contentions to the idea of teacher fluency arose: whether or not it was the responsibility of the English teacher to teach 21st century literacies, and whether or not it was useful to teach technological tools considering the rapid changes in technology. The contention of responsibility is similar to the debate on whether or not reading and writing should have been the responsibility of only the English teacher—the responsibility of teaching 21st century literacy skills should not fall onto just the shoulders of the English teachers, but other content area teachers as well. The contention regarding usefulness of technology speaks to the idea that learning how to use technological tools means students also learn about the fluidity of technology, and learn about how to adapt to changes in technology.
The second subtheme in this category was defining 21st century literacies with the NCTE framework. The researcher was interested in how fluency played out in the interview participants’ 21st century literacies definitions and how it continued to be played out in their use of 21st century literacy tasks in their artifacts. Several assumptions about 21st century literacies were made, including the assumption that collaboration and fluency, out of the six standards, were more complex than ethics, using a technology tool (use of multimedia), and gaining/searching for information (information). Secondly, the assumption was made that 21st century literacies required more active participation compared to traditional literacy. Based on these assumptions, this subtheme’s results included that fluency did not appear in any interview participant’s 21st century definition, because it is a more metacognitive and internal task. More academic bloggers and commenters use more complex 21st century literacy skills in their classrooms. However, there was a disconnect between using blogs and fluency of blog use. In other words, participants who were using blogs become more fluent in 21st century literacy skills inherently because they are learning about these skills as they used the technology. Their awareness of these developed skills did not seem to be explicit and participants did not seem to be aware of this fluency. Tasks in which fluency is implicit, such as when participants were asked to define 21st century literacies, did not show that the participant was aware of what they are personally engaging with through blogging.

Global Information Sharing

The global information sharing theme produced three sub themes that the researcher investigated. Amongst general findings were ways in which teacher-participants used blogs. Blogs were used by this sample as primarily a reflective, collaborative, and classroom-planning tool. Using blogs seemed to engage participants in all six of the 21st century literacy skills. The
first subtheme, blogs as a source of reflection, provided insight as to how participants used blogs to reflect on their teaching practices, among other findings. Many participants suggested the use of the blog as a primarily reflective tool, specifically in the sense that blogs gave them a voice and a community to share their teaching practices with. This active reflection differs from the traditional reflection—reflection on a blog occurs actively and often with others, while traditional reflection is more introspective and individual. In terms of different forms of participation on the blogosphere, none of the participants viewed lurking negatively. Many participants suggested that the difference between lurkers and more active participants like academic bloggers and commenters was personality and personal preferences.

The second subtheme of classroom planning added on to findings from the blogs as a reflective source. Teachers needed a place vetted by other professional teachers for ideas that they can try in their classrooms the next day—many participants said they looked for blogs that had lesson plans readily available to them. Teachers suggested that they preferred browsing through blogs for their lesson plans rather than on sites that carried lesson plans because of the reflective and community aspect of a blog, where teachers combined reflective practices and planning resources.

The third subtheme included the content knowledge code, which was less common than the reflective and classroom planning codes. While analyzing these codes it became clear that finding content knowledge that was valid and quick through a blog was not effective. Blogs did not seem like a good source of quick, valid information. Participants that suggested they used blogs for content knowledge suggested that they did so because the blogs were updated quicker than research articles or magazine information. Blogs are first and foremost a source of reflection, thus are inherently biased. They are not an appropriate source for medical or clinical
information. Contentions against the reliability of the information on blogs are reasonable, but
the participants who contest this must be aware that being a critical consumer on the web
requires that they vet their informational sources. Much like other sources on the web, especially
social media sources, blogs should not be relied on for medical or clinical information.

Creation, Critique, Analysis, and Evaluation of Multimedia Texts

Within the multimedia theme emerged two subthemes, translating personal blog use into
the classroom, where the researcher studied the interview participants exclusively on artifact and
interview data, and the non-use of blogs does not equal 21st century illiteracy theme. Within the
translating personal blog use into the classroom theme, it seemed that more academic bloggers
and commenters (active bloggers) use more technology incorporation in their lessons, and as the
researcher viewed other lessons from the lurker and non-bloggers, the technology incorporation
continued to lessen. When added with interview data, this still continued to be the case, although
according to interview data the lurker and non-bloggers did include some kind of technology in
their lesson plans. The outlier was Tiffany, the commenter, who did not have any technology
integration in the lesson plan she submitted, but did suggest she included technology based on
her comments during the interview. Few participants, even out of the academic bloggers,
incorporated blogs with students. Non-bloggers seemed more skeptical about adding technology
into the classroom, using phrases like “I’ve had to adjust.” It seems like students have forced the
use of technology as a means of communication rather than these teachers being motivated to
include technology on their own terms into their curriculum. One of the non-bloggers included
one of the only few references to age in this data set, saying that blogs are a “younger generation
communication.” The fact that so few participants referenced age may show that age is less of a
factor than previously thought in terms of technology integration and 21st century literacy.
Compared to non-bloggers, academic bloggers included more complex tasks when having students engage with technology.

The inference cannot be made that by using blogs, teachers incorporate more technology into their classrooms, since teachers use so many different types and forms of technology. Blogging, however, can be a factor in technology integration. The implementation of technology because teachers are more comfortable using technology personally seems to be true on some level, but most importantly, it seems that those who collaborate on blogs bring in new ideas that they are passionate about teaching to students, whether traditional or not.

The second subtheme, non-use of blogs does not equal 21st century illiteracy, included several findings. The use or non-use of blogs did not seem to impact the perceptions participants had on literacy. There were no participants in this sample did not use technology to some extent. By not using blogs it did not seem that participant knowledge of technology was diminished, only with the blogging tool itself, and comfort in using it in the classroom to some extent. Several participants suggested that problem solving seemed to be a necessary skill for the 21st century in regards to technology. In terms of 21st century literacy knowledge, it seems that a dichotomy of illiterate or literate is inappropriate—rather, 21st century literacy knowledge and awareness needs to be more of a scale, with less complex and more complex levels.

Challenges

Within the challenges theme, the researcher focused on challenges with PD and challenges with blogs, with a focus on three subthemes: self-sponsored vs. mandated PD, self-sponsored traditional vs. self-sponsored technology PD, and contentions against blogs and blogging. The self-sponsored vs. mandated PD findings revealed that participants felt as if mandated PD lacked differentiated instruction and effective presentation. Additionally, teachers
succeeded in bringing in new and creative ways to teach English despite the time they put into mandated PD. Teachers were not opposed to the idea of mandated PD, but rather found fault in the way it was presented to them. Mandated PD, according to participants, lacked real-world application. The biggest and most frequent difference between what participants said about mandated PD and self-sponsored PD was usefulness—they consider mandated PD to be useless and self-sponsored PD to be useful, both personally and in their classrooms. Teachers wanted more autonomy and trust from administration in terms of mandated PD. Self-sponsored PD begets classroom influence because participants were looking for what their class needed. The non-bloggers were the only two participants in this entire data set that were happy with their PD, because both PD programs were based on choice. This proves that teachers can be happy with mandated PD, and the way to accomplish this is to allow autonomy and freedom of choice when it comes to choosing PD avenues.

The second subtheme, self-sponsored traditional vs. self-sponsored technology PD, revealed that some teachers still preferred traditional PD or a mixture of both traditional and technology PD to technology PD. This was not due to lack of fluency or comfort with technology but simply a preference for face-to-face interaction. Furthermore, allotting PD points for blogging specifically did not seem to impact whether or not participants would start or continue blogging—some see the benefit of blogging regardless of PD points, and others were against the idea because it a.) Would make the practice lose its efficacy, and b.) The motivations for blogging would become extrinsic rather than intrinsic. If mandated PD required blogging, this would be similar to regular mandated PD, just using a different medium. This highlights the necessity of choice. In terms of participants in the blogosphere and this theme, non-bloggers did
not blog seemingly because of time issues and usefulness issues, not disinterest in blogging. With the right guidance to good blog sources, this could change.

The third and final subtheme in the challenges theme continued the focus on why non-bloggers chose not to blog, and well as contentions that others bring up against blogging. Some contentions against blogging come from academic bloggers, including time and usefulness. However, these participants put the responsibility of this challenge on themselves, while non-bloggers put the responsibility of the same challenges on the blog and blogosphere. All contentions that arose, including time, usefulness, and reliability, were all contentions that could be “fixed” by participants becoming more knowledgeable consumers of educational blogs. There were some participants who suggested that personality and preferences played a role in choosing traditional PD over using blogs for PD. Lack of access, lack of interest in venting blogs, and lack of knowledge were less frequent contentions against blogs but did occur. Several assumptions or inferences can be made about the lack of reference to age, including how participants in this data set may feel more technology and 21st century literate since so many were involved in blogging in some way.

This summary depicted the multitude of findings in each theme and subthemes that help expand the findings of the Tier One results. A discussion of these results ensues in chapter five.

**Summary**

This chapter presented a multitude of findings from Tier One and Tier Two of the data analysis. The beginning of the chapter began with the Tier One section, where the researcher shared the way the Tier One research was collected and how the data were analyzed. The researcher used descriptive statistics and ran frequencies and histograms to explore the 73 survey responses. Demographic information included years of experience,
location, and categorization of academic bloggers, comments, lurkers, and non-bloggers. The Tier One results showed multiple trends, including: while teachers choose to utilize blogging for explicit reasons, the learning experience is that of a 21st century literacy tool; Years of experience did not seem to impact whether or not teachers were actively blogging or the perceived value of blogging; Non-bloggers do not necessarily feel like blogging is not useful; The more participants engaged in their own independent PD, the more confident they were in asserting that the knowledge was and can be integrated into their classroom; There was a higher use of independent PD versus mandated PD among participants; By choice, teachers were engaging and choosing to engage in more synchronous rather than asynchronous materials for PD; Teachers who were less likely to incorporate their own usage of 21st century literacy skills seems to be less likely to incorporate it into their own classroom; The overwhelming majority agrees that engaging in 21st century literacies such as blogs does help teach these skills in the classroom.

The Tier Two results section began with an explanation of how the data (interviews and artifact collection) were collected and analyzed. Demographic information of the interview participants was included, and the coding scheme was discussed. Six major themes evolved from the data analysis, including: 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency and fluency development, 4) Global information sharing, 5) Creation, critique, analysis, and evaluation of multimedia texts, and 6) Challenges. Each of these themes included several subthemes that emerged from data analysis and were discussed using lesson plan artifact references, interviewee comments, and open-ended survey responses.
CHAPTER FIVE

CONCLUSIONS

Summary of the Study

This study aimed to contribute to a gap in the research by investigating how teachers personally use blogs. The main questions that shaped this study were:

Primary Research Questions:

1.) How do 9th-12th grade National Writing Project Teacher Consultant (NWPTC) English teachers perceive the use of blogs as a classroom, professional development, and reflective source?

2.) How do the blogger types differ in the ways they talk about and use 21st literacy in their teaching?

Subsidiary Research Questions:

1.) How does the sample of NWPTC 9-12th grade English teachers describe using blogs?

2.) In what ways does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own classroom practices?

3.) To what extent does the sample of NWPTC 9-12th grade English teachers perceive that independent self-sponsored blog use influences their own professional development as a teacher?

4.) In what ways does the sample of NWPTC 9-12th grade English teachers perceive that active, independent, self-sponsored blogging influences their reflective practices?

With the goals of exploring the ways high school English teachers use or do not use blogs for professional development and the influence of the use of educational blogs on classroom practices using the NCTE 21st Literacy Century Framework, the researcher conducted a mixed
method study using a sequential explanatory design. The purpose of this design was to first gain
a representation of how teachers perceive blogs, professional development, and 21st century
literacies by collecting data through a national survey distributed to the National Writing Project
Teacher Consultant. After exploring trends using Tier One data, the researcher collected Tier
Two data through interviews and artifact collection, which explained the Tier One data further.
The Tier One data was subservient to the Tier Two data and acted as both a way to explore
general perceptions of blogs, professional development, and 21st century literacies and categorize
and select Tier Two participants.

The sample population used in this study included 73 NWP teacher-participants. Out of
the 73 survey responses, 8 were purposefully selected to conduct interviews and contribute to
artifact collection. These 8 participants were purposefully selected based on what categorization
they fit into based on survey responses: academic bloggers, commenters, lurkers, and non-
bloggers. These categorizations were calculated using survey responses and helped the
researcher identify who was active on the educational blogosphere and who was not. Academic
bloggers and commenters were considered the more active bloggers compared to lurkers and
non-bloggers because they commented and posted often. The lurkers were participants who did
not comment or post but did read and gain information from blogs. Non-bloggers were
participants who did not participate in the blogosphere at all. The sample was made up of 36%
academic bloggers, 10% commenters, 21% lurkers, and 30% non-bloggers. With an attempt to
collect data from all categories, the researcher purposefully selected 8 participants for Tier Two
of this study from all four blogger categories; three were categorized as academic bloggers, two
were categorized as commenters, one was categorized as a lurker, and two were categorized as
non-bloggers.
The data were collected over the course of three months. The Tier One data were collected through the use of an online survey that was live for one month. NWP site directors were contacted through a listserv email and directly through email with a link to the survey, which they were asked to distribute to their site’s teacher consultant. The response rate for the survey was calculated based on how many sites were contacted and how many sites were present in the survey data, amounting to a 12% response rate. SPSS was used to run descriptive statistics on the Tier One data. Inferential statistics were not used because the sample size was too small, the sample population too specific, and the attrition rate too high for inferential statistics to be generalizable or reliable. Additionally, running inferential statistics did not fit the purpose of this study.

After the survey data were collected, the researcher categorized the participants into four categories using the responses to 6 of the questions from the 40-question survey, based on how participants responded to how often they browse, post and/or comment on blogs. The participants willing to complete an interview, and who were categorized into a particular category, were emailed by the researcher. Once the participants consented to the follow-up interview and artifact collection and sent their signed consent forms to the researcher, a time for the interview was set up, and the researcher contacted each participant individually. The average length of the interviews was about twenty minutes long, and the most common method was a phone interview. The artifacts collected, which were lesson plans, were emailed to the researcher after the interview was completed. The researcher transcribed the interviews and then used NVivo to code the interview data, the survey open-response data, and the artifact data. The qualitative analysis resulted in six major themes that were further investigated, including 1) Relationships, community, and global collaboration, 2) Ethical responsibilities, 3) Proficiency
and fluency development, 4) Global information sharing, 5) Creation, critique, analysis, and evaluation of multimedia texts, and 6) Challenges.

Conclusions

How the Tier Two Data Informed the Tier One Data

The goal of conducting a sequential explanatory design was to allow qualitative data to further inform quantitative data. The purpose of doing so allowed the researcher to both address how a larger corpus of participants perceived blogs, professional development, and 21st century literacies and investigate through Tier Two data how to explain the numbers of the Tier One data. The Tier One results informed the first sub question of this research study—the combination of Tier One and Tier Two data informed the remaining three sub questions. The following tables combine Tier One and Tier Two findings.

Table 5.1 - Combining Tier One and Tier Two Results on Classroom Influence

<table>
<thead>
<tr>
<th>Tier One Result</th>
<th>Questions that Arose</th>
<th>Informed by Tier Two Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>While teachers choose to utilize blogging for explicit reasons such as to gain</td>
<td>How does this impact the use of 21st century literacy skills in practice?</td>
<td>Ethical</td>
</tr>
<tr>
<td>new information or learn new concepts, the implicit learning experience is that</td>
<td></td>
<td>Responsibilities\sub theme ethics practices in artifacts</td>
</tr>
<tr>
<td>of using a 21st century literacy tool, thus engaging personally in 21st century</td>
<td></td>
<td>Proficiency &amp; Fluency\sub themes awareness of fluency, defining 21st century literacies</td>
</tr>
<tr>
<td>literacy skills.</td>
<td></td>
<td>with the NCTE framework</td>
</tr>
<tr>
<td>Teachers, when less likely to incorporate their own usage of the 21st century</td>
<td></td>
<td>Use of Multimedia\sub themes translating personal blog use into the classroom and non-use</td>
</tr>
<tr>
<td>standards, seem to be less likely to then incorporate it into their own classroom.</td>
<td></td>
<td>of blogs does not equal illiteracy</td>
</tr>
<tr>
<td>The overwhelming majority of participants agree that engaging in 21st century</td>
<td></td>
<td></td>
</tr>
<tr>
<td>literacies, such as blogs, does help teach these skills in the classroom.</td>
<td></td>
<td></td>
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</tbody>
</table>
Tables 5.1, 5.2, and 5.3 represent a collection of findings that illustrate Tier One findings, what questions arose from the Tier One analysis and what questions the Tier Two data helped inform, and which themes and subthemes in the Tier Two analysis added to the Tier One findings and helped answer the questions.

The first sub question in this research study was addressed through the descriptive statistics. The second sub question regarding how teachers perceived the influence of independent PD through blogs on their classroom practices was addressed in Table 5.1. The Tier One results suggested several phenomena, including that participants did not seem to be aware that blogging would heighten their own 21st century literacy skills. The Tier One results also showed that confidence was a large factor in whether or not teachers used 21st century literacy skills in their classrooms, and almost all participants believed that teachers should engage in 21st century literacy skills because these skills helped them teach 21st century literacy skills to students in their own classrooms. These findings honed the investigation of the second sub research question in the Tier Two data, because the question that arose from the investigation of the Tier One findings was how these phenomena played out in teachers’ practices. This was investigated through numerous themes, including the Ethical Responsibilities theme, the Proficiency and Fluency Development theme, and the Use of Multimedia theme. These Tier Two findings paralleled the Tier One findings and showed that teachers did not seem to be aware of many 21st century literacy skills that they possessed. Furthermore, the Tier Two data showed that while teachers may not have been fully aware of the 21st century literacy skills they possessed, those who interacted more with blogs, particularly academic bloggers and commenters, seemed to have more complex technologies and 21st century literacy activities in their lesson plans. By connecting these two data sources, the Tier Two data informed how the findings from the Tier
One data were relevant in practice through the analysis of the lesson plans. Furthermore, because the findings paralleled each other, the researcher was confident in making the claim that many of the NCTE 21st century literacy skills outlined by the framework seem to be an underlying action rather than something that participants speak explicitly. The Tier One and Tier Two data informed each other in this particular sub question successfully.

Table 5.2 - Combining Tier One and Tier Two Results on PD Perceptions

<table>
<thead>
<tr>
<th>Tier One Result</th>
<th>Questions that Arose</th>
<th>Informed by Tier Two Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>The more participants engaged in their own independent PD, the more confident they seemed to be in asserting that the knowledge was and can be integrated into their classroom.</td>
<td>Why do participants choose to use blogs for PD, and why do they not?</td>
<td>Collaboration→subthemes blogs as an avenue for collaboration and finding/searching for collaboration due to lack of school support</td>
</tr>
<tr>
<td>Participants seemed to engage more with independent PD than with mandated PD.</td>
<td>What are participants’ perceptions of independent vs. mandated PD?</td>
<td>Challenges→subthemes self-sponsored PD vs. mandated PD, self-sponsored traditional vs. self-sponsored technology PD, and contentions with blogs</td>
</tr>
<tr>
<td>By choice, teachers were engaging and choosing to engage in more synchronous PD materials compared to technology tools.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Just because non-bloggers do not engage in blogs does not necessarily mean they do not see the potential value in blogs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 5.2, the Tier Two data seems to inform the Tier One data in terms of the study’s sub question number three, which addressed how teachers perceived the influence of blogs on their own professional development. The Tier One findings showed that participants were engaging more with independent PD compared to mandated PD, were more confident bringing independent learning into the classroom, and were engaging in more synchronous PD materials compared to asynchronous materials. In terms of non-bloggers, the Tier One findings showed
that just because non-bloggers did not engage with blogs, it did not mean they did not see the potential value in blogs and blogging. The Tier Two data informed the Tier One data by filling in the gaps, particularly in terms of the perceptions of independent and mandated PD and the explanation of the choice of blogging. The Tier Two portions that informed the Tier One findings included themes Collaboration and Challenges. The Tier Two findings paralleled what the Tier One findings illustrated—that teachers resented mandated PD. However, because of the detail of the Tier Two data, the Tier Two data informed this Tier One finding by providing information as to why there was resentment towards mandated PD. While the Tier Two data paralleled the Tier One findings in terms of choosing synchronous and asynchronous PD material, the Tier One result regarding confidence in teaching from independent PD remained uninformed by the Tier Two data.

It cannot be claimed with certainty, then, that teachers were more confident engaging in independent PD, since there was not triangulated or parallel data in this area to make that case. However, for the majority of this sub question, the Tier One results were informed by the Tier Two findings, and many of the results paralleled each other. In Table 5.3, sub question number four was addressed, regarding how teachers perceived the influence of independent use of blogs as a reflective source. There were not many Tier One findings regarding reflection, but some of the findings showed how blogs were considered a reflective source.

The first finding in the Tier One data showed that reflection was a reason why participants chose to blog. Years of experience did not seem to differentiate whether or not teachers were actively blogging or not, and many suggested the reflective opportunities on blogs in their open-responses. Those who were non-bloggers who saw the value in blogging explained their choice by suggesting that blogs could be an avenue for reflection. Despite the lack of
explicit data from the Tier One findings regarding reflection, the Tier Two findings showed how participants used blogs as a reflective source. The questions that helped guide the way the Tier Two data informed the Tier One data focused on how different participants explained using blogs as well as why participants felt they chose to use blogs in the first place. These questions were answered by the themes Use of Multimedia and Global Information Sharing. The Tier Two portions of this part of the data filled in the gaps of the less explicit findings on reflection in the Tier One data.

Table 5.3 – Combining Tier One and Tier Two Results on Blogs as a Reflective Source

<table>
<thead>
<tr>
<th>Tier One Result</th>
<th>Questions that Arose</th>
<th>Informed by Tier Two Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>While teachers choose to utilize blogging for explicit reasons such as to gain new information or learn new concepts, the implicit learning experience is that of using a 21st century literacy tool, thus engaging personally in 21st century literacy skills.</td>
<td>How do participants use blogs? How does categorization impact the perception of blog use?</td>
<td>Use of Multimedia$$\Rightarrow$$subtheme non-use of blogs does not equal illiteracy</td>
</tr>
<tr>
<td>Years of experience did not seem to impact whether or not teachers are actively blogging, or their perceptions on the perceived value of blogging.</td>
<td></td>
<td>Global Information Sharing$$\Rightarrow$$subthemes blogs as a source of reflection, blogs as a source a reflective source, and content knowledge</td>
</tr>
<tr>
<td>Just because non-bloggers do not engage in blogs does not necessarily mean they do not see the potential value in blogs.</td>
<td></td>
<td></td>
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</table>

In summary, the first sub question in this study was answered by the Tier One findings. The first sub question addressed how the NWPTC described using blogs, and the survey findings served as a representation of how participants used blogs. The three remaining questions, concerning participant uses of blogs and their perceptions of blogs and classroom practices, professional development, and reflective practices are reflected in the three tables, Table 5.1,
Table 5.2, and Table 5.3. Table 5.1 represents findings that help answer the second sub question about how participants perceive the use of blogs influences classroom practices, Table 5.2 represents findings that help answer the third sub question about how participants perceive the use of blogs as a professional development source, and Table 5.3 represents how participants perceive the use of blogs as a reflective source.

The way that the Tier One data paralleled the Tier Two data, and the way that Tier Two data informed Tier One data, allowed the researcher to be more confident in making claims regarding research findings. Furthermore, this serves as evidence of a successful mixed method design. The design of sequential mixed methods such as the one used in this study can be replicated for quant→QUAL (see methods) research design, and integrate Tier One survey data to explore the sample and use Tier Two data to inform the numerical data from the survey. The following conclusions address the areas of the sub questions individually, including blog use and classroom practices, blog use and professional development, and blog use and reflective practices, using the study’s findings to connect to prior research.

**Blog Use and Classroom Practices**

Bass et al. (2010) proposed that researchers “raise questions and generate conversations that lead to changes in teacher practice” by using the NCTE 21st Century Literacies Framework (p. 392). This study attempted to answer that call. Using the NCTE 21st Century Literacies Framework for analysis and coding, the researcher was able to distinguish how teachers defined 21st century literacies and how they then implemented these 21st century literacies in the classroom. Much like current research on 21st century literacies (Kordigel & Abersek, 2008; Moje & Tysvaer, 2010; Perry, 2012; Seglem, Witte, & Beemer, 2012) participants in this study described what it meant to be 21st century literate in different ways; there was no definitive
definition of 21st century literacies. The definition itself, according to the NCTE 21st Century Literacies Framework, seems to attest to the fluid and malleable nature of literacy based on societal changes. Many participants suggested this as well—that 21st century literacy changed the way that we see traditional literacy, and in and of itself, is a change in how society functions and how students should be educated.

While all participants defined 21st century literacies using a variety of the NCTE 21st Century Framework standards, from ethical responsibilities to the collaborative nature of literacy, those who were more active on the blogosphere, academic bloggers and commenters, seemed to be more likely to integrate more complex 21st century literacy skills into their classrooms. While the claim cannot be made that blogging impacted how much participants engaged with technology in their lessons, it seemed to be one of the influential factors in how the participants incorporated technology into their classrooms. While non-bloggers did incorporate some technology usage and instruction, academic bloggers and commenters incorporated into their lesson plans a variety of technology tools that focused not on the tool itself but rather, the literacy practices necessary to engage with these tools in a “21st century literacy” way, or what Knobel and Lankshear (2007) call “new ethos stuff” (p. 9). Not only did academic bloggers and commenters involve their students in learning about new technology, but they also taught students how to engage in new literacies required of the 21st century, such as collaboration, distribution, and participation (Knobel & Lankshear, 2007). The 21st century skills outlined by Knobel & Lankshear (2007) parallel the NCTE standards of collaboration, ethics, and fluency according to the NCTE 21st Century Literacies Framework. These standards could be seen as more complex than simply knowing how to use a technology tool. It seems that by blogging,
participants were engaging in these literacy practices personally, thus were able to incorporate these skills into their own classrooms.

Regardless of how researchers and frameworks address and name these complex literacy skills, it seems that the “new ethos stuff” and the new requirement of literacy includes not only the value of rich dialogue and the ability to communicate with others through new mediums but also the value of creating new texts together through joint participation and collaboration. This is a distinctive change compared to past meanings of what it meant to be literate (Beers, Probst, & Rief, 2007). The focus is no longer on the expert individual author but rather on collaboration. One of the components of blogging is the medium’s facilitation of collaborative practices. Academic bloggers and commenters focused less on what they posted on their blogs personally and focused more on the conversation and dialogues that occurred with other teachers through blogging. This study shows that teachers engaged in 21st century literacy practices and collaboration with other teachers through blogging. Furthermore, participants perceived the need for student engagement with this type of collaboration to reach literacy potential, and that teachers needed to engage in the same form of collaboration to appreciate the benefit of it, as well as be able to teach it to students, building on prior research viewing literacy as a practice.

This shows that the calls for teachers to engage students with technology effectively (International Reading Association, 2009) require that teachers personally develop higher 21st century literacy fluency levels. While fluency is typically a term used in association with reading, it is an appropriate indicator of what teachers need to become with 21st century literacy skills. Much like reading fluency, which requires accuracy, efficiency, and expression, 21st century literacy fluency requires teachers to be able to find, evaluate, and use online sources and digital avenues effectively and efficiently. These higher fluency levels can be achieved by
engaging in technology that requires 21st century skills, such as blogs, as suggested by other research (Kist, 2006; Swenson et al., 2006). In fact, this study showed that teachers personally believed that for the most part, they have to “practice what they preach” and incorporate 21st century literacies into their lives personally before they can teach it effectively. This is representative of what many researchers suggested, such as when Neubauer, Hug, Hamon, and Stewart (2011) implied the concept when they stated the “norms of information exchange among today’s youth are different from the norms of pedagogy in institutions” (p. 12). Others suggested that the “screen is the language of the vernacular” (Daley, 2003, p. 33). In other words, “screen language” such as “email” and “blog” are now part of everyday language and conversation.

This study also suggested that before teachers can include technology instruction confidently into their classrooms, they need to engage in this technology personally, meaning that before teachers answer the calls from Race to the Top, CEE, NCTE, CITE, NTLI, IRA, and other government, union, and council entities to engage students in technology (Bell, 2001) they need to use technology effectively. Interestingly, the concept that teachers personally should engage in these literacies to then bring it back into the classroom is absent from these policies, and notable researchers have mentioned this absence. Yancey (2004) mentioned that professors (and students) learned about 21st century literacies and engage with digital tools outside of school, “on our own,” (p. 302) and this teacher-practice seemed to be “anachronistic” (p. 302). In other words, 21st century literacy practices are displaced outside of the classroom, when teachers should be taking what they learn and bringing these elements and technologies and “new ethos stuff” into the classroom. This also means that the “literacy of the screen,” in other words 21st century literacies or digital literacies, seemed to parallel oral and print literacy as a new element of education (Daley, 2003, p. 33). Much like teachers are expected to be knowledgeable about
their content area and effective writers and readers, the shift in focus in the field of education to 21st century literacy skills means that teachers should now be expected to be 21st century literate.

What this study adds to the current research is the intricacy of how it seems teachers learn about 21st century literacies. The findings regarding fluency in 21st century literacy skills showed being 21st century literate and comfortable with 21st century literacy practices was more so unconscious rather than something participants were aware of—the knowledge of their own literacy was implicit rather than explicitly known. This was seen in more than one data set—initially, this was seen in the Tier One data set where teachers chose the reason to blog to “learn 21st century literacy skills” less often than other options like “learn about concepts” or “lesson planning ideas,” even though by using blogs is in and of itself means that a teacher would be inherently using 21st century literacy skills. This seemed to show that while the teachers reasoned that using blogs helped them gain information and network, they were practicing 21st century literacy skills beyond just using a blog as a tool, but just not labeling it 21st century literacy skill. This was further evidenced in artifact and interview data, where academic bloggers and commenters showed that they included more complex 21st century literacy skills in their lesson plans, and yet did not include these complex skills in their own 21st century literacy definition. Only when prompted did they become aware of their fluency in 21st century literacies compared to lurkers and non-bloggers. The idea that fluency in 21st century literacy skills is implicit may explain why a.) 21st century literacies are so hard to define and b.) why teachers may not necessarily connect their own fluency level with the practices of 21st century literacies in their own classrooms. This in turn adds to the benefits of using blogs as a professional development source—to learn and use 21st century literacy skills beyond using a tool, such as collaboration, ethical responsibilities, and fluency awareness.
A noteworthy finding in this study was that there seemed to be no connection to use of blogs with students even with teachers who were active bloggers, a noteworthy concept considering that comfort level with technology seemed to influence how complex the technology-related tasks in the classroom were. Some participants alluded to the use of blogs in the classroom; these participants also commented that they did not pursue this use or discontinued the use of blogs primarily because of insufficient materials or lack of school support. Many commented on the irony that while government and union mandates required the use of technology in the classroom, classrooms were void of technology support and/or materials. While initiatives that participants mentioned such as the One-to-One Initiative have been research-proven to be successful academic achievement boosters (Sauers & Mcleod, 2012), without proper technology support and professional development to use these tools, technology in the classroom will continue to be limited, and, according to Sauers and Mcleod’s (2012) review of research on One-to-One technology initiatives, academic achievement will not be bolstered.

Evidence of how teacher use of technology may influence technology integration into the classroom despite roadblocks and challenges prompted non-bloggers to utilize blogs as well as other technology tools on the web not only to learn about the tool but also to practice engaging in 21st century literacy skills. The inherent assumption about non-bloggers, it seems, is that because they are non-bloggers, they are also not comfortable with technology, even so traditional that they do not use technology at all (Bauerlein, 2009; Kist, 2009). This study exposed the research community to the perceptions of non-bloggers and showed that just because participants did not blog, it did not mean that a.) they were not using technology at all and b.) were not aware of 21st century literacy needs. In fact, oftentimes non-bloggers seemed to use other forms of technology
instead of blogs simply as a preference. Those non-bloggers that were interviewed mentioned the use of other technologies both in their own professional development and their own classrooms, although the integration of this technology was on a less complex level compared to academic bloggers and commenters, and focused primarily on the knowledge about a tool and how to use that particular tool rather than a focus on many of the “new ethos stuff” that are required of 21st century citizens. Many non-bloggers in this study alluded to their lack of knowledge about blogs or a blog’s perceived usefulness based on one negative experience. Considering the professional development practices of non-bloggers and how they compare to academic bloggers, commenters, and lurkers helps expose further details about their choices.

**Blog Use and Professional Development**

Considering how participants who engaged in blogging employed 21st century literacy skills and integrated more complex 21st century literacy skills into the classroom, as well as the importance of 21st century literacy fluency for a classroom English teacher, professional development practices that encourage practice with these skills are essential. Furthermore, it is necessary to focus on the behaviors that can elicit knowledge and practice with 21st century literacies. Seeing as professional development focuses on the necessity of teachers to learn skills to bolster student achievement, professional development offered to teachers should, in theory, focus on 21st century literacy skill and fluency building. However, it seemed through the participant reflections in both Tier One and Tier Two that there was a major distinction between independent PD and mandated PD. This was also the portion of the data where the categories of bloggers had the most distinctions.

The biggest distinction between the professional development practices of non-bloggers compared with academic bloggers, commenters, and lurkers was their perceptions of the school-
provided PD’s usefulness. Although current scholarship alludes to the idea that teachers and others perceive mandated PD negatively (Barab, 2001; McConnell et al., 2012), few discuss how the use of independent PD is influenced by the perception of mandated PD. In this study, all teachers who participated in the blogosphere did so seemingly because they perceived their school support to be insufficient—they sought out their own self-sponsored PD because the PD that was mandated to them did not seem to impact their classroom practices. The two non-bloggers were the two that had different systems of mandated PD allocation in place at their schools, where they had a choice in what PD practices they participated with. This autonomy seemed to be successful, as they both perceived their PD systems to be sufficient. The idea of insufficient school support is not unique to this study, as is the idea that PD needs to be individualized to be successful (Lai & Chin-Pin, 2010; Lieberman & Friedrich, 2010). These informed sub question number three because it seemed that teachers look for self-sponsored sources such as blogs for independent PD when they felt their mandated PD was insufficient.

The negative perceptions of mandated PD in this study suggested that teachers felt mandated PD was not individualized to their needs nor was effectively presented. Considering that professional development impacts student achievement, the fact that the majority of the participants felt that mandated PD was insufficient is troublesome. Furthermore, the time, effort, and financial support that are being invested in mandated PD programs that require a particular program or session are not helping teachers nor are impacting their classroom practices. Additionally, these mandated PD sessions are also leading to disgruntled and frustrated English teachers. An example of successful mandated PD in this study was centered on the factor of choice as a discerning element. Furthermore, this study provided evidence that beyond mandated
PD, teachers were practicing self-efficacious professional development through their own independent PD.

Those who continued their learning independently through self-sponsored PD sought collaborative avenues that they could access on a fairly consistent basis that had a direct impact on their classroom needs, such as blogs. This is representative of the idea that successful PD needs to be individualized, collaborative, and extended (Doolittle & Rattigan, 2007; Friend & Cook, 2000; Houseman & Martinez, 2001; Pashnyak & Dennen, 2009; Schmoker, 2012). The overwhelming majority of the participants in this study felt like their independent, self-sponsored use of blogs for PD was worth their time, influenced their classroom practices and planning directly, and created a network of support of like-minded teachers.

Furthermore, it seemed that the use of blogs fit with the research on personal learning environments through the use of the blogosphere. Valtonen et al. (2012) suggested that the personal learning environment would change traditional PD to online PD, and this research adds to the gap in the research on how high school teachers in particular utilize blogs for their own self-sponsored PD. Through the use of the blogosphere, these participants developed their own personal learning environment, although the focus of this research did not include the specific blogging practices that teachers engaged in.

While Valtonen et al. (2012) suggested that the movement from traditional face-to-face PD to online PD was a change that was anticipated and celebrated, it seemed that teachers in this study perceived the use of traditional versus online PD materials to be a personal choice, first and foremost, and even the most active bloggers did not want to eliminate face-to-face traditional PD altogether. Furthermore, this study showed that the utilization of technology PD versus face-
to-face PD cannot be seen as an either-or but rather a continuum or cycle, because communication about materials found online occurs face-to-face as teachers collaborate.

This study also added to the research gap as to how high school teachers, specifically, use blogs as a source of professional development, as research on educators’ use of blogs included pre-service teachers or teachers from different countries (Lai & Chin-Pin, 2010; Top, 2012). Findings in this study that blogs were primarily a collaborative and reflective source for teachers parallel many other research studies that found blogs to be a collaborative and reflective source (Luehmann, 2008a; Luehmann, 2008b; Darling-Hammong & Brausford, 2005; Denskus & Papan, 2013; Hernandez- Ramos, 2004; Nardi, Schiano, & Gubrecht, 2004; Top, 2012).

**Blog Use and Reflective Practices**

The use of blogs as a reflective and collaborative source was a common thread among participants in this study. The NWP is focused on reflective writing, so for participants to share that blogs are a good source for reflective writing practice and dialogue means more coming from participants who were already actively engaging in such a process. NWP members are a subset of the population of teachers that are aware of what reflective practices are, and how writing and reading may help in that process. By commenting on the usefulness of writing and reading through the blogging forum, these participants give more clout to the use of blogging for reflective practice.

Those who cited contentions with blogs seemed to go against particular types of blogs, discussed as “venting blogs” in the results. Venting blogs are also a disruption of the expected educational blogosphere etiquette of academic discourse (Dennen, 2012). Dennen (2012) described that while the general blogosphere has unwritten etiquette rules that bloggers abide by, such as reciprocating comments or sharing each other’s blog posts, educational blogs, in addition
to these unwritten rules, include the expectation that those who are blogging on educational blogs are posting and discussing for academic purposes. Those who “vent” on blogs disrupt this expectation and seemed to be critiqued for this non-academic discourse.

Other contentions against blogs suggested that time, usefulness of content, and reliability were issues, which paralleled Lai and Chin-Pin’s (2012) research that teachers’ adopted blogs based on their perceived usefulness of that blog. What this study added to the research on blog contentions was that some of the participants who seemed to have contentions against blogs also seemed to be looking on blogs for the wrong reasons, such as for valid and reliable medical or clinical information, rather than for a source of reflective and collaborative practice. Additionally, confidence and lack of knowledge about blogs and blog etiquette may deter non-bloggers and lurkers from becoming active blogging participants. Perhaps this was due to the fact that despite being a mainstream technology medium, blogs are not as popular as social media outlets such as Twitter and Facebook (Farrell & Drezner, 2007), which may impact the comfort level and knowledge of blogs for those who are new to the medium.

Another finding that may deter blog participants was the idea of the “watchdog” mentality, meaning a lot of the participants felt a distrust towards their administration and felt like their reflective practices on blogs were being “watched” by administration to make sure teachers did not cross ethical boundaries. While there is research on distrust between teachers and administration members and how this impacted teacher effectiveness negatively (Ingersoll, 2009; Rafferty, 2003; Tschannen-Moran, 2009), there is little research in this area in regards to blogging practices.

A concept that a participant mentioned as a contention to blogging was time—whether or not blogging was worth the time. The lurker, Casey, discussed the responsibility of the English
teacher to teach 21st century literacies. This can be likened to the debate of content literacy and that “every teacher is a reading teacher” (Fisher & Ivey, 2012, p. 3). Content literacy experts have been, for years, debating the necessity of content area teachers aside from English teachers to teach reading and writing skills (Fisher & Ivey, 2012; Shanahan & Shanahan, 2008; Vacca & Vacca, 2005). 21st century literacies are no different—every content teacher should be utilizing technology personally and in their classrooms to help students develop necessary 21st century literacy skills.

According to current scholarship, age was expected to be one of the contentions against blogging, especially considering Prensky’s (2001) article on digital natives and digital immigrants where the major factor of comfort and use of technology seemed to be age. Other researchers also focused on age as a deciding factor between who is part of the Net generation and who is not (Oblinger, Oblinger, & Lippincott, 2005; Tapscott, 2008). The Net generation theory suggested that those who grew up with information technology are naturally inclined to use technology (Oblinger, Oblinger, & Lippincott, 2005).

However, years of experience was not a factor in whether or not a participant blogged in this research. One of the non-bloggers referenced age in the sense that blogs are a younger-generation form of communication, but other than that, no other participant mentioned age explicitly. Years of experience also did not seem to influence how survey participants viewed blogs and perceived the value of blogging in the Tier One data. The theory on digital immigrants and digital natives (Prensky, 2001) suggested that only those who were digital natives were comfortable using technology, and yet those who can be assumed to be digital immigrants in this study did not seem to show discomfort with technology. Similarly, this finding contends with the
theory of the Net generation, because experienced teachers seemed to be more comfortable with technology use compared to those with less teaching experience.

The idea that age is the crucial factor in deciding who is comfortable with technology and who is not is outdated. This is due to participants already having exposure to technology, thus becoming comfortable with the use of technology. Other researchers agree with the idea of technology permeating into a normalcy in society. Daley (2003) suggested “without knowledge of the language of the screen teachers become as irrelevant as Latin teachers” (p. 33). Yancey (2004) also suggested “no one is making anyone do any of this writing” (p. 298, original emphasis), speaking to the uses of blogs, emails, and new technology-based presentation software. Society is changing, technology is changing, and people are changing with it.

It is clear that the labels of digital immigrant and digital native cannot be used in this study, nor can the claim be made that age is a deciding factor of who is part of the Net generation. The lack of reference to age is due to the changes of technology in society. Since Prensky’s (2001) original argument, and since Tapscott (2008) and Oblinger, Oblinger, and Lippincott (2005) published their research on the Net generation, many contentions to the idea of age as a factor in 21st century literacy arose. For example, despite the terms digital native and digital immigrant rapidly being incorporated into educational research diction, much of Prensky’s (2001) theories are not backed by empirical evidence (Duffy, Peter, Bruns, & Axel, 2006; Underwood, 2007). While the Net generation theory claimed that younger people grow up surrounded by digital technologies (Tapscott, 2008), this omits an entire class of people who cannot access digital technologies.

Other researchers contested that there is not a clear dichotomy between digital natives and digital immigrants, and that Prensky (2001) did not suggest that the differences between
technological savvy may be due less to age and more to exposure and breadth of use of
technology (Bayne & Ross, 2007; Helsper & Enyon, 2009; Swisher, 2013). Finally, empirical
evidence showed that there are significant differences between how and why those considered
digital natives use new technologies and how successfully they use these technologies
(DiMaggio & Hargittai, 2001; Hargittai & Hinnart, 2008). Unlike the dichotomy depicted by
Prensky (2001) of young, technologically savvy digital natives part of the Net generation
(Tapscott, 2008) and old, traditional, and not technologically savvy digital immigrants, those
considered to be Net generation “digital natives” also sometimes have issues with technology
savvy and technological integration. These contentions against Prensky are similar to contentions
against the Net generation theory, as the idea of the Net generation is greatly premised on age as
a deciding factor much like Prensky’s (2001) theories.

This study adds to the contentions to Prensky’s (2001) original argument that digital
natives and digital immigrants vary the most due to age. Similarly, it adds to the contentions
regarding the Net generation and their inclination towards technology. It seemed that those even
with over 20 years of experience, assumed to be older, were comfortable with technology and
technologically savvy. Additionally, those labeled as non-bloggers were not completely unaware
of technology and did not lack technologically savvy, but did not have experience with blogs.
This adds to the research to the need for exposure to technology and breadth of use rather than
age as a factor for 21st century literacy, although further empirical evidence is necessary.

Despite the confounding evidence against the factor of age as delineation between digital
natives, digital immigrants, and the Net generation, there still seems to be a divide that
participants suggested between teachers and students. How this divide should be addressed
remains unclear. This divide may be due to the idea of problem solving, which came up a lot as a
21st century literacy skill—teachers commented that while they learned to problem solve through issues and were able to “problem solve” through technology integration, students seemed to lack problem solving skills and were more likely to give up and change tasks rather than persevering through a task. This concept of “problem solving” provides evidence that teaching the ability to use technology and problem solve through the fluid concepts and changing technology may be an important factor in 21st century literacy education. Perhaps continuous exposure and the ability to practice different literacy skills with technological tools may help students “problem solve” through 21st century literacy skill development.

The minimum literacy standards set by society, as well as common practices completed with technological assistance, such as imputing grades online and school sites and classroom web sites, has shifted the way that teachers incorporate technology, whether young or old. The ability to discuss, define, compare, and evaluate as part of literacy has not changed, but the means by which this happens has. Teachers need to be encouraging students to participate in the technology-rich environment, and need to be doing so personally as well.

**Differences between Blogger Categorizations**

It became clear in the data that there was a distinction between the more active bloggers that collaborated on blogs, the academic bloggers and the commenters, and the lurkers and non-bloggers. Although Dennen (2009) suggested that lurkers are the most common participant type on the blogosphere, their voices were not as prominent in this research as there were more academic bloggers and commenters participants and there were fewer lurkers to recruit from. Not only did academic bloggers and commenters, the more active blogger participants, participate and collaborate more on blogs, but they seemed like they were likely to incorporate higher-order
21st century literacy skills, and viewed technology as a medium for literacy practice rather than a tool.

A prominent difference between the blog participants (academic bloggers, commenters, and lurkers) and non-bloggers was the difference in perception of school support and the way that PD was allocated. The two non-bloggers were satisfied with the way that they PD was allocated, which was through a more autonomous and self-efficacious system compared to the mandated, top-down PD systems that other participants discussed. This may have influenced the decision to blog as participants who were dissatisfied looked for outside sources, especially an outside community for the support that they lacked, to participate in self-sponsored PD.

There were many similarities amongst participants, including the perceived importance of 21st century literacies. All 73 participants included technology into their classroom in some way, and participated in technology in some way as well. All participants incorporated elements of NCTE’s 21st Century Literacy definition in their definition of 21st century literacies, and all participants were aware of ethical responsibility on the web, although this did not seem to be an explicit expectation and was prompted by specific questions addressing the concept.

The way differently categorized participants viewed each other seemed to be based on preferences and personality. No active bloggers seemed to view lurkers negatively, nor did lurkers view more active bloggers negatively. Non-bloggers did not view active bloggers and other blog participants negatively, and most participants explained the differences between the types of bloggers based on personality and preferences. Furthermore, as NWP members that are aware of reflective practices through both reading and writing, these participants are a subset of the teacher population that recognize that some people love to read, hence read blogs, and others love to write, and hence write and post on blogs.
Researchers like Dennen (2009), Du and Wagner (2006), and Kwai and Wagner (2008) categorized bloggers into more or less frequent users, and this research added to the way scholarship discusses the differences between these kinds of users and particularly the ways teachers who are academic bloggers and comments differ from lurkers and non-bloggers.

Limitations of the Study

There are certain limitations in this study. The small sample size of the Tier One data collection influenced the researcher’s decision not to run inferential statistics in addition to the lack of fit of inferential statistics into this particular study’s focus. The interview data collected also included a small sample, and more research in this area with larger sample sizes, random selection, and a lower attrition and higher response rate can help explain differences with valid and reliable generalization to the population. The uneven amount of representation in the interview participation meant some voices were more prominent than others. A further investigation into the lurker perception may yield more results and comparison data amongst blogger categories. Because all of the participants were female, it is important to conduct future research with a more gender-equal sample.

The use of the National Writing Project consultant meant that all of the participants in this study were already engaged in some form of professional development. While National Writing Project participation was mandated for some participants, most participants were engaged in the NWP without mandated pressure, thus, may be more self-efficacious compared to the general teacher population in terms of self-sponsored, independent PD. Further research using a larger sample of teachers would be necessary to generalize to larger populations.

There were only a few participants who had less than five years of teaching experience. This demographic meant that the results could not be easily generalized to younger and/or less
experienced teachers. Further investigation into different viewpoints and perceptions comparing
digital native and digital immigrant participants and/or more or less experienced teachers may be
useful to research on blogging perceptions.

Because the form of the interview varied to include face-to-face, Skype, and phone interviews for
participant convenience, the researcher may have had data that were influenced by the form in
which the interview was conducted. Each form may have led to unintentional researcher influence
on participants’ answers. Because an open-coding scheme was used, research bias was inherent
and inevitable. Certain procedures, such as inter and intra coder agreement sessions, were
completed to help validate the coding scheme.

**Implications**

This study explained how high school teachers used blogs and how this use of blogs influenced
their classroom practices. It also illustrated how professional development may have impacted
these interactions. On a broader scale, this study informed changes that need to be executed for
future teacher education and classroom practice. It is written for in-service teachers, teacher
educators, educational researchers, and policy makers.

**Changing How We Do Mandated PD**

While the questions in this study focused primarily on the use of blogs for a teacher’s independent
professional development, the trends in the data showed how mandated PD might impact the use
of independent PD. It was clear through this research that teachers resented the distrust of
administration in terms of PD practices and had to find their own ways to learn about concepts,
lesson planning, and technology integration despite having to participate in mandated PD. This
seems like it would lead to disgruntled teachers who are pressed for time and resent the authority
of administration (Ingersoll, 2003). Instead, administration and teachers should work
PD practices should be a teacher’s responsibility and should be an individualized practice where teachers show self-efficacy through choice of PD mediums and practices. Administration should trust teachers enough to know that they want to influence their classroom and heighten student achievement. To help teachers, administration and districts should set up opportunities for teachers to incorporate PD into their daily or weekly schedules, as it was clear through both this study and other studies that extended, individualized, and collaborative PD is the most successful (Darling-Hammond & Richardson, 2009; Doolittle & Rattigan, 2007; Friend & Cook, 2000; Houseman & Martinez, 2001; Pashnyak & Dennen, 2009; Schmoker, 2012). This does not mean that blogging should be mandated—in fact, this might create the same effect as traditional mandated PD, just through a different medium. The element of choice is crucial for teachers to be satisfied with mandated PD practices and systems. If blogs were mandated for PD, blogging quality would diminish, because participants would be completing blog posts for extrinsic factors rather than purely out of intrinsic motivation and the desire to learn. Mandated PD falls back on transmission and content delivery and assumes that “one-size-fits all,” which is not accurate or useful in reality. Blogs, or whatever other technology forum is valued, are learner centered, so fit in with a learner-centered PD program.

Much of the mandated PD that was required of teachers took up a fraction of the time compared to the time that teachers used for independent PD. The goal of mandated PD is to have teachers learn about the profession to increase effectiveness in the classroom. If teachers are achieving this not by using mandated PD but by incorporating their own PD practices that they feel does impact their classroom, why is the independent PD they complete not compensated, for the most part? This idea builds on the need for teachers to have a choice in how they learn about the teaching field and their own pedagogical practices. Considering the overwhelming negative
perceptions of structured mandated PD programs, it is not only suggested but also essential that schools and school districts change the process in which teachers are expected to heighten student achievement through PD practices. If a teacher resents mandated PD and does not perceive its usefulness in the classroom, the teacher will not use it in the classroom, and that, in turn, may lead to lack of impact on student achievement. The support of mandated PD programs that take teachers out of their classrooms for no reason other than to “waste time” is unfair to schools, teachers, and students.

Furthermore, administration, districts, and government entities should help make it easier for teachers to incorporate technology into their classrooms, and allow access to technology support staff members that are not stretched across multiple schools or districts. This is essential for teachers to be able to utilize activities that promote 21st century literacy skills. Considering the state and federal mandates that promote the use of technology in schools, this lack of material and staff that continues to be a problem is rather perplexing. How do we expect teachers to incorporate technology if they do not have proper access to it?

Moreover, if teachers had more technology to work with in the classroom, teachers would not have felt like blogging was not an option for their classrooms. While blogging in the classroom was not a subject in this study, even the most active bloggers did not incorporate blogging into their own classrooms. For non-bloggers this may have been due to lack of knowledge about the tool. For academic bloggers, commenters, and lurkers the reason was primarily due to access. If teachers are going to teach 21st century literacy skills, they need to know how to use these skills personally. However, if teachers are not allowed to use these skills because of policy, school rules, or lack of access, the premise of enriching teacher’s knowledge of 21st century literacy skills becomes disputable.
Informing About Blogs and Blogging Practices

With more access to technology use in the classroom, teachers would potentially be more motivated to engage in these tools personally, because they would have to learn how to use the tool prior to teaching it. This research showed that non-bloggers were not necessarily opposed to the idea of blogging but rather lacked the resources, motivation, and knowledge to begin blogging. More exposure about the usefulness of blogging is necessary. This is a call for researchers, teachers, and administrations to provide more sources that attempt to teach educators why blogging is important, how it influences 21st century literacy skills and their use in the classroom, and what blogs to use. Participants in this research referenced several blogs that they use, including:

- Edutopia (2 references) - http://www.edutopia.org
- Teacher Channel (2 references) - http://www.teachingchannel.org
- Film English - film-english.com/
- Jim Burke’s Blog - englishcompanion.com/blog/
- Kylene Beers Blog - www.kylenebeers.com/
- John Green’s Vlog- www.youtube.com/user/vlogbrothers
- Three Teachers Talk - https://threeteacherstalk.wordpress.com/
- Teachers Pay Teachers - https://www.teacherspayteachers.com/

Participants also referenced using sources such as Twitter, Youtube, Facebook, and TED talks to help them learn and incorporate technology into the classroom. Regardless of forum or medium, policy, teacher, and research communities need to be actively encouraging participation in 21st century literacies through technology interaction. Actively encouraging blogging, if not
simply exposing teachers to blogging, means that participants would be more inclined to either read or write on these blogs once they feel they have a good source to begin with.

It seems that blogging was a good avenue for collaboration. Considering that there are many schools that lack school and teacher support (McConnell et al., 2012), blogs can be an avenue where teachers reflect and collaborate with like-minded teachers and feel supported while they are teaching. Blogs allowed teachers to find a source that is individualized for their own personal needs and the needs of their classroom.

In terms of reflective practices, this study added to the scholarship that blogs were a good source of reflection. For a teacher, reflective practices are a part of professional development and growth. As the 21st century brings a new form of literacy, a new form of reflection develops, and this is seen in how reflection occurs on blogs. Unlike the traditional reflective practices in which much of reflection occurs introspectively, blogging promotes a more active form of reflection. Reflective practices for teachers in terms of professional development have been focused on creating dialogue with other teachers or literacy coaches (Darling-Hammond & Richardson, 2009) instead of introspective reflection. The problem with creating a community face-to-face at a school is that many teachers may not feel comfortable enough to reflect on their practices with other teachers who they know or are close to, perhaps fearful of judgment. Open and comfortable school environments in which reflective practices are non-judgmental and useful take time, energy, and guidance to create. A blogging community inherently seems to have this non-judgmental environment because if a blogger posts on their own blog, they are creating an introspective reflection of their teaching that they are inviting others to create dialogue with, turning the practice into an active conversation. Because many teachers may not know each other, this unique environment supports both respectful commentary and dialogue because
bloggers do not know each other but also creates camaraderie because all bloggers are part of the teaching field. This unique form of reflection is then both introspective in ways as well as active, a useful tool for teachers to use that they can easily bring back to their own classroom practices. It is important to address the confidentiality of blogs as well, because while no one is truly anonymous online, bloggers partake in a certain level of confidentiality without losing their identity.

**Learning from the Hidden Nature of 21st Century Literacy**

While mandated PD issues and blogging knowledge issues are problems that in-service teachers face, researchers and teacher educators continue to wrestle with broader scope issues, such as the evasive definition of 21st century literacy. It is important to acknowledge that participating in 21st century literacy skills may lead to knowledge about 21st century literacy that remains implicit to participants. Whether or not this truly impacts the way 21st century literacies is defined is subject to further investigation, but the implicit nature of the awareness of 21st century literacy skill seems to be a reoccurring finding in this study through the code Fluency. There is not a way to measure 21st century literacy skill, but fluency in these skills are built through practice, and the implementation of these skills are tied closely with confidence and practice of these skills in the classroom. For educational researchers, teacher educators, and teachers, the definition of 21st century literacy becomes more complex, and should not be seen as a dichotomy, literate or not literate, but rather, as a scale. This scale may recognize beginning knowledge in 21st century literacies as knowledge of a tool, such as a blog. An intermediate knowledge in 21st century literacies may mean a person knows about the tool and is able to use it as a form of literacy and communication with a larger audience rather than just as a tool.
Figure 5.1- 21st Century Literacy Skill Level

An advanced knowledge of 21st century literacies may mean that a person is able to apply their knowledge to create cross-cultural connections with a large audience and is able to not only synthesis multiple modes of information but also is able to share their own knowledge through these modes. It is necessary to continue empirical as well as theoretical research on defining 21st century literacies.

Figure 5.1 was developed by the researcher using both NCTE’s 21st Century Literacies Framework and study findings, and is an example of how 21st century literacy levels can be distinguished. This visual representation of three proposed levels is distinguished by the six NCTE 21st Century Literacies Framework standards. The arrow depicts movement from a less complex to a more complex literacy level. To achieve a more complex literacy level, the assumption can be made that application should build off of personal use and knowledge and personal use to build off knowledge. This interconnection of basic and more advanced skills requires that teachers not only have advanced literacy skills but also recognize the representation
of how 21st century literacy is developed enough to provide scaffolded instruction. The first step to becoming more advanced in 21st century literacy is gaining knowledge about a tool. The next step would be to use that tool, gaining important, perhaps hidden, 21st century skills such as synthesis of information. The final level of literacy is not only to be able to use the tool on a personal level but to become part of global conversations with the use and knowledge of a tool. Considering the study, academic bloggers and commenters would be at an advanced literacy level in blogging, lurkers would be between a beginning and intermediate level, and non-bloggers would be at a beginning level of literacy in blogging. This particular figure would be most applicable in use with a focus on a particular tool, such as blogging.

In the practice of teaching, whether with blogs or not, it seems that the finding regarding implicitness of 21st century literacy means that teachers should be engaging with technology and practicing these inherent skills. Blogs seem to be a good avenue because the aspects of reflection and collaboration are inherently built into the medium. As teachers become more advanced in the knowledge of 21st century literacies, they may be able to apply this knowledge by teaching students not only about the skills necessary to engage with a digital tool but also use a tool for a literacy practice.

“New Ethos Stuff” – Using Technology as a Literacy Practice, Not a Tool

The concept of using technology as a literacy practice, not a tool, is not a new or unique idea. Knobel and Lankshear (2007) made the distinction between the knowledge of a tool and the skills needed for digital citizens to communicate in the digital realm, calling this new digital skill “new ethos stuff.” However, it seems that there is a disconnect between this discussion in educational research and teacher practice. It is essential that teachers, administrators, and other stakeholders in the practice of teaching high school students learn that technology integration is
not necessarily about overwhelming students with new information about new technology and getting students to use a variety of new technology tools, but rather allowing them to practice the skills necessary of this new and digital world. Teachers need to become educated, and after, educate their students, about the “literacy of the screen” (Daley, 2003, p. 33). This is where the NCTE 21st Century Literacies Framework gives a precise guideline to what these skills involve, including not only the ability to develop fluency with these tools, but also to “build intentional cross-cultural connections and relationships”, “design and share information for global communities,” “manage, analyze and synthesize multiple streams of information,” “create, critique, analyze, and evaluate multimedia texts,” and “attend to ethical responsibilities required by these complex environments” (NCTE, 2008, para 1). These all vary in terms of complexity and include knowledge of a tool, but on the most basic level of 21st century literacy (see Figure 5.1). Teachers, then, need to involve students not only in using the tool, but also allow students to communicate, collaborate, and share information through the use of technology tools in the classroom, regardless of whether it is an English classroom, a math classroom, a science classroom, or a social studies classroom.

**Blogging Participation**

Blog participant categorization is an additional broader scale impact of this research in addition to 21st century literacies. Certain bloggers, such as the academic bloggers or the commenters, could have been resentful towards those who did not participate in the blogging community actively, but this was not the case. In fact, comments regarding different types of bloggers almost always referenced personality and preference rather than intellect or skill. This shows the open environment in the teacher blogosphere that promotes participation in any form, even if that means that participation is not necessarily seen.
This impacts the in-service and pre-service teacher audience because it shows the open, reflective environment that a blogging community promotes. This may encourage teachers to engage with blogs. This knowledge about the blogging environment for teachers also impacts the way that teacher educators inform pre-service teachers about blogs and blogging communities. Perhaps exposure to these blogging communities may help pre-service teachers “get their feet wet” with the idea of collaborating with a larger audience.

This impacts the larger research community by exposing these perceptions of different categories of bloggers in the field of educational blogging. Because this field is growing and in need of much investigation, particularly regarding how teachers use blogs, this research informs future research endeavors using these four categories, including the perceptions of those who chose not to blog. These categorical findings, while important, also show the amount of complexity behind blogging and 21st century literacies in general. Just because a teacher chooses not to blog, does not mean that she or he is not engaging in 21st century literacy skills, or that she or he does not use another digital tool. Furthermore, because the scope of this research was only educational blogging, it was unclear whether or not teachers may have used blogs outside of teacher and education blogging communities. This impacts future directions of research regarding blogging and how teachers use blogs.

**Future Research**

As with much research, this study developed more questions than answers. Further research should build on this study and focus on extending the timeline with a longitudinal study of how teachers use blogs as a source of professional development from initial interaction onwards. Equal representation among bloggers as well as gender of teachers may present different findings. Further investigation is necessary to delineate the relationship between less
and more experienced teachers’ perceptions of blogs and whether or not teachers can, and should, be labeled digital immigrants and digital natives. In addition to quantitative findings of DiMaggio and Hargittai (2001) and Hargittai and Hinnart (2008) that showed significant differences amongst “digital native” technological savvy, further qualitative and quantitative research can focus on how older versus younger teachers incorporate technology into their lives personally and how this impacts use of 21st century literacies in their classrooms, building on this study’s finding that more experienced, thus older, teachers do not lack technologically skill and 21st century literacy skills.

Further research may focus on different mediums of technology, such as Twitter, Facebook, or Instagram, and how these social media sites compare to the purposes of blogs. Further research on the differences and similarities between academic bloggers, commenters, lurkers, and non-bloggers is necessary. This may build on Dennen’s (2012) research on blog users. Considering the research on personal learning environments (Lai & Chin-Pin, 2010; Farrell & Drezner, 2007; Nardi, Schiano, & Gubrecht, 2004), future research should investigate how blogs can be considered personal learning environments and how these compare to other personal learning environments.

Collaboration and the movement from technology to traditional face-to-face professional development should be investigated. While some research, such as Valtonen et al’s (2012) research, suggests that the move from traditional face-to-face PD to online PD is celebrated, further empirical evidence may show that teachers prefer one to the other. The effectiveness of the two can be compared—few, if any, research studies cover this comparison. Furthermore, the evidence in this study showed that face-to-face PD versus online PD is less of an either-or and more so a process that combines the two—for example, participants suggested that what they
learn online they bring into conversation with colleagues, and when they are face-to-face at conferences they write down blog names to follow the rest of the year.

This research brought up a dynamic between teachers and administrators, as well as teachers and other teachers—an element of distrust and control surfaced in the data. This prompts further investigation into how this can help or hinder teacher education and potentially, blog use. Ingersoll (2009), Rafferty (2003), and Tschannen-Moran (2009) are some researchers that study trust between teachers and administration, but these studies investigate the ways in which teachers and administration trust each other based on district decision making, student achievement, and teacher effectiveness. Very few, if any, studies seem to cover how this particular trust dynamics affects how teachers blog, and if they do not blog for the particular reasons of trust issues.

Future research can also focus on a content analysis of blogs and how particular blogs may be better sources for teacher professional development. Furthermore, different content areas, including math, science, and social studies, can be investigated in future research. Both how these content teachers use blogs in relation to English teachers as well as how blogs on different content areas differ would be potential research endeavors that complement this study.

Summary

This study had two purposes: to investigate how high school teachers used blogs, and how this in turn influenced their classroom practices. Through the use of mixed methods techniques, the researcher investigated the Tier One survey results and provided readers with a representation of how teachers use blogs and how this influences their classroom practices. Tier Two data collection and analysis provided an in-depth depiction of these Tier One trends. A review of the current research in connection to the study’s results shows that much of this study’s
findings parallels previous scholarship, but some contentions do arise. Findings that parallel previous research include blogging as a reflective practice, the lack of empirical evidence of age as a contributing factor to the digital immigrants/digital natives and Net Generation theories, and the new ethos of 21st century literacy skills. Much of this study adds to new and developing research areas. Findings include evidence of teacher’s distrust towards administration, evidence of teacher-blogger perceptions of professional development and 21st century literacies, 21st century literacy as an implicit skill, and the perceptions that teacher-bloggers have of more active or less active blog participants.

In the conclusions, the researcher discussed blog use and the classroom, blog use and PD practices, and blog use and reflective practices, answering the sub questions to the study’s research question. These were tied to current research and compared. Additionally, the researcher investigated the differences between the blogger categories, limitations to this study, and implications.

In the implications section, the researcher discussed how this study can impact real-world situations in teacher education. This included a discussion on how mandated PD can be changed, how teachers should be informed about blogs and blogging practices, learning from the implicit nature of fluency awareness, “new ethos stuff” and using technology as a literacy practice and not a tool, and finally future research directions.

A Final Word

Sometimes change is a scary thing. However, in the world today, it is the only constant. Today’s students need teachers who are not only apt at using the technology that surrounds them, but also know how to communicate and collaborate through technology, and more importantly, to teach them to do so too. The most pioneering teachers are those who are learners, and this has
become important more so in the 21st century than ever before. It is necessary to break “the crust of the conventional opinions and orthodox,” (Hall, 2010, p. 190) and teachers need to continue to “persist in innovation” (Watson, 2013, p. 3289). Only in this way can teachers and their students become successful.
APPENDIX A

SURVEY

This survey is part of the data collection for a project called “Professional Development 2.0: Teachers’ Use of Educational Blogs.” My goal with this research is to identify ways that 9-12th grade English teachers perceive educational blogs, professional development, and the use of educational blogs FOR professional development.

The survey is forty questions long, and should take about 20 minutes. If you complete the survey in its entirety, you will be placed in a lottery to win a $50 gift card for your time. Additionally, you will also be placed in a lottery to complete the next phase of the data collection, which is an interview. This interview will be conducted either at this year’s NWP annual meeting prior to the NCTE 2014 in Washington DC, or will be at an alternative location at the participant’s convenience. If you are chosen to participate in the follow-up interview, I will email you and/or call you regarding participation.

You may decline to participate in the interview if you wish. If you do participate in the interview, you will receive a lunch waiver up to $20 when we conduct the interview. You can take up as much time as you wish completing this survey. If you feel uncomfortable at any time during the survey, please do not hesitate to decline participation. If you have any questions, please do not hesitate to contact me.

Katie Rybakova
xxxx@my.fsu.edu; xxxxx@gmail.com; xxx-xxx-xxxx

YOU MUST BE A CURRENT OR FORMER PARTICIPANT OF THE NATIONAL WRITING PROJECT TO COMPLETE THIS SURVEY

Demographic information

1.) Name of your writing project site? ______________________________________
2.) Which subject(s) do you teach? ______________________________________
3.) Which grade level(s) do you teach? ______________________________________
4.) How long have you been teaching? ______________________________________
5.) When did you complete your teaching certification? __________________________

239
6.) What city and state do you currently reside in? ______________________________
7.) What is your preferred email address? ________________________________
8.) What is your preferred phone number? ________________________________

Professional development

This section will ask you questions regarding your opinions on professional development. Professional development is an activity that a teacher engages in to enhance their skills as a teacher. Mandated professional development is professional development that is typically set by school districts and/or individual schools. Typically these activities are on-campus seminars or workshops. Independent professional development is professional development that is done on the teacher’s time, and is completely self-sponsored and self-governing. This can range from attending a conference and looking up teaching tips on the Internet to using journaling as a form of reflective practice.

9.) Is there a mandated professional development program at your school? If so, what is it?

10.) If you independently engage in your own professional development, what types of strategies do you employ in the process? Please briefly list some activities in the space below. Rough explanations are fine.

11.) Do you utilize pedagogical strategies that you have learned through mandated professional development in your classroom? Please check the appropriate space.

   Yes No Not sure

12.) Do you utilize pedagogical strategies that you have learned independently in your classroom? Please check the appropriate space.

   Yes No Not sure

13.) If you independently engage in your own professional development, in what ways do you do so? Please select all that apply and elaborate if necessary.

   a. Books
   b. Research articles
   c. Conferences
   d. Seminars/workshops
   e. School-funded professional development
   f. District-funded professional development
   g. Museums/archives/libraries
   h. Google (or any other search engine)
   i. Educational blogs
   j. Facebook/Twitter (or any other social networking site)
   k. Podcasts (or any other audio)
   l. YouTube videos (or any other videos)
   m. TV
   n. Other (please specify):

   o. I DO NOT INDEPENDENTLY ENGAGE IN MY OWN PROFESSIONAL DEVELOPMENT
14.) Approximately what percent of your time is devoted to mandated professional development, over the course of a school year? Please select the closest estimate.

0%-20% 21%-40% 41%-60% 60%+

15.) Approximately what percent of your time is devoted to independent professional development, over the course of a school year? This includes lesson planning if you research content. Please select the closest estimate.

0%-20% 21%-40% 41%-60% 60%+

16.) Please indicate how important you consider independent professional development on a scale from 1-4, with 1 being completely unimportant and 4 being highly important.

1----------------------2----------------------3---------------------4

17.) If you have independently engaged in professional development, please indicate the level of success you observed in classroom practices due to your professional development activities, with 1 being completely ineffective and 4 being highly effective.

1----------------------2----------------------3---------------------4
e. I have not engaged in independent professional development

18.) How do you feel about independent professional development? (For example: Do you like/dislike independent professional development? Do you feel like it is an effective or ineffective use of time?) Please write a brief answer in the space below.

Educational blogs

Blogs are a web-publishing tool. Authors can quickly publish original text, as well as tools, links, and other content. This text is in the form of blog posts. Blog posts are often short, and authors of blogs are expected to frequently update with new blog posts. Every blog typically has a section where the readers can comment on that blog, forming a blogging community. Some blogs post from different authors, while some blogs have only one author.

Educational blogs are blogs that are made specifically geared towards educational activities and teachers. These vary from teacher blogs that are written for teachers by teachers to educational sources for specific content areas. The main difference between blogs and educational blogs is that a blog can be about anything, while an educational blog has to be about teaching in some way.

19.) Have you heard of educational blogs? Please check the appropriate space.

____________Yes  ________________No  _____Not sure

20.) Do you browse (look at) educational blogs? Please check the appropriate space.

____________Yes  ________________No  _______Not sure

21.) How often do you browse (look at) educational blogs? Please check the appropriate space.
a. Never
b. 1-2 times a year  
c. 2-6 times a year  
d. At least once a month  
e. At least twice a month  
f. At least once a week  
g. More than once a week  

22.) Do you **post** (write something; this **DOES NOT** include comments) on educational blogs? Please check the appropriate space.

____________Yes  ________________No  ___________Not sure  

23.) How often do you **post** (write something; this **DOES NOT** include comments) on educational blogs? Please check the appropriate space.

  h. Never  
  i. 1-2 times a year  
  j. 2-6 times a year  
  k. At least once a month  
  l. At least twice a month  
  m. At least once a week  
  n. More than once a week  

24.) How often do you **comment** (write something in reply to a post) on educational blogs? Please check the appropriate space.

  o. Never  
  p. 1-2 times a year  
  q. 2-6 times a year  
  r. At least once a month  
  s. At least twice a month  
  t. At least once a week  
  u. More than once a week  

25.) Do you have your OWN educational blog? *Note, this has to be a blog that is about teaching practices

____________Yes  __________No  ______Not sure  

26.) Would you consider having your OWN educational blog?

____________Yes  __________No  ______Not sure  

27.) If you do use educational blogs, how important do you consider blogging on a scale from 1-4, with 1 being completely unimportant and 4 being highly important?

1----------------------2----------------------3---------------------4
e.) I do not use blogs

28.) If you do use educational blogs, how effective do you consider blogging for professional development on a scale from 1-4, with 1 being complete ineffective and 4 being highly effective?

1----------------------2----------------------3---------------------4

e.) I do not use blogs

29.) If you independently engage in educational blogging, whether it is to browse or post, why do you do so? Please select all that apply and elaborate if necessary.

a.) To engage in independent professional development/to better myself as a teacher
b.) To learn new concepts
c.) To look up something I don’t know/understand
d.) To reflect on my teaching practices
e.) To build a network of teachers I can rely on
f.) To communicate with teachers
g.) To kill time
h.) To engage in 21st century technologies
i.) To learn about blogs and its uses
j.) Other (please specify): _____________________________________________

30.) If you DO use educational blogs, please explain for what purposes you do so. If you DO NOT use educational blogs, please explain why you do not do so.

________________________________________________________________________

31.) If you DO use educational blogs, please explain why it is important to do so as a teacher. If you DO NOT use educational blogs, please explain what would help you engage in educational blogging.

________________________________________________________________________

32.) If your school allowed you to gain or receive professional development credits for using or posting on educational blogs, please explain your reaction.

________________________________________________________________________

33.) Select the educational blogs that would be of most interest to you

a.) Personal blogs that showcase feelings, emotions, and reactions to current educational practices. These are written by a stakeholder in the educational field (i.e. a teacher, principal, ect.)
b.) Tool blogs. These blogs share resources and other blogs/tools/links that can be useful for classroom practices.
c.) Informational blogs. These blogs are written as informative sources to use. You do not need to hyper link or travel to another site to be informed about the subject. (i.e. a blog that showcases lesson plans or information about graduate schools)
d.) A mixture of the three above
21st century literacies & scenario questions

34.) What does it mean to be “21st century literate” to you? Please explain.

35.) Select all that you believe you incorporate into your classroom currently:

a) Develop proficiency and fluency with the tools of technology;

b) Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;

c) Design and share information for global communities to meet a variety of purposes;

d) Manage, analyze, and synthesize multiple streams of simultaneous information;

e) Create, critique, analyze, and evaluate multimedia texts;

f) Attend to the ethical responsibilities required by these complex environments.

36.) Select all that you believe you engage in YOURSELF:

a) Develop proficiency and fluency with the tools of technology;

b) Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;

c) Design and share information for global communities to meet a variety of purposes;

d) Manage, analyze, and synthesize multiple streams of simultaneous information;

e) Create, critique, analyze, and evaluate multimedia texts;

f) Attend to the ethical responsibilities required by these complex environments.

37.) Look at the following list. These are NCTE’s 21st century literacy practices. Do you believe that engaging in blogs yourself will help you develop these practices?

Develop proficiency and fluency with the tools of technology;

Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;

Design and share information for global communities to meet a variety of purposes;

Manage, analyze, and synthesize multiple streams of simultaneous information;
Create, critique, analyze, and evaluate multimedia texts;

Attend to the ethical responsibilities required by these complex environments.

a.) Yes
b.) No
c.) Maybe

38.) Look at the following list. These are NCTE’s 21st century literacy practices. Do you believe that engaging in MANDATED professional development will help you develop these practices?

Develop proficiency and fluency with the tools of technology;

Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;

Design and share information for global communities to meet a variety of purposes;

Manage, analyze, and synthesize multiple streams of simultaneous information;

Create, critique, analyze, and evaluate multimedia texts;

Attend to the ethical responsibilities required by these complex environments.

a.) Yes
b.) No
c.) Maybe

39.) What would you say are negatives of engaging in blogs as a form of professional development for a teacher?

40.) Do you believe you need to learn, as a teacher, 21st century literacy skills, as outlined by the following task competencies?

Develop proficiency and fluency with the tools of technology;

Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;

Design and share information for global communities to meet a variety of purposes;

Manage, analyze, and synthesize multiple streams of simultaneous information;
Create, critique, analyze, and evaluate multimedia texts;

Attend to the ethical responsibilities required by these complex environments.
APPENDIX B

INTERVIEW PROTOCOL

1.) What kind of previous schooling do you have for education (teacher prep, education minor, etc.)?
2.) What do you normally do to learn more about TECHNOLOGY and using technology during your instruction?
3.) Do you feel like the technological support that your school gives you is sufficient (professional development, resources, etc.)?
4.) Do you feel like the education you received as a pre-service teacher is now out of date? What do you do to stay with current technological advances, and if you don’t, why not?
5.) What is your opinion regarding 21st Century literacies in general? How do you feel technology impacts the students in your classroom as well as the teachers nowadays?
6.) If your school gave you the option of getting professional development credit through your time browsing, commenting, or posting on educational blogs, how would that make you feel? How does the impact the time you allot for professional development activities?
7.) What do you know about educational blogs?
8.) How do you use, if at all, educational blogs? If you use them, why? If you don’t why not?
9.) In the research about blogs, there are several different participants on blogs. There are the bloggers, who post, commenters, who add comments, lurkers, who simply read those blogs, and non-bloggers, or those who are not involved in blogs at all. What would you identify yourself as? Do you feel like one of these is the “best” in the sense of professional development?
10.) There are many types of educational blogs; there are student run blogs, teacher run blogs, there are blogs for teachers by teachers, and these vary from classroom management and lesson planning ideas to a common place to share experiences and thoughts. What do you feel would be most useful to you, if any? Please explain.
11.) How do you use, if at all, other source on the Internet to help you teach? Why do you choose this avenue over educational blogs?
12.) What kind of time do you put into educational blogs and professional development? Do you feel like this is a good use of your time? Why or why not?
13.) Do you feel the time you put into finding blogs that suit your classroom needs is used sufficiently compared to other types of professional development?

14.) If you were to control how professional development credits were allotted to teachers, what would be the avenue that you would most recommend? If funding was an issue, would your recommendation change?

15.) Do you feel professional development through the use of educational blogs impacts your classroom practices? Why or why not?

16.) Do you feel any type of professional development impacts your classroom practices? Why or why not?

17.) What if you were a teacher blogger who posted something on a blog that was then brought to the attention of your principal. He/she did not like this post and forbid you from blogging. How do you feel about this situation? How would you react?

18.) Do you think that it is important for teachers to engage themselves in “21st century literacy skills” like blogging to be able to then teach these skills? Why or why not?
APPENDIX C

INFORMED CONSENT FORM

My name is Katie Rybakova. I am a doctoral student researcher at Florida State University. My supervising profession is Dr. Shelbie Witte. I am asking you if you would like to be part of a research study called “Professional Development 2.0: Teachers’ Use of Educational Blogs,” which is about how current or former 9-12th grade English/LA teachers incorporate the use of educational blogs into their classroom and/or professional development, and their thoughts and opinions regarding the use of blogs as professional development.

If you agree to be in this study, you will be asked to take a fifteen-minute online survey. You can choose to stop this survey at any time without penalty. If you complete the online survey, you will be entered to win a $50 gift card. This is a lottery, and the winner will be picked at random. The survey results will remain confidential.

If you are chosen to be a part of the follow-up data collection, I will contact you using the information you provide in the survey regarding your willingness to participate. You will not be penalized if you are not willing to participate. You will still be entered into the $50 gift card lottery if you choose not to participate in the follow-up data collection.

If you do choose to participate in the follow-up data collection, you will be asked to conduct an open-ended interview that will be audio taped. In exchange for completing the interview, you will receive a $20 lunch waiver. You will also be asked to provide a sample lesson plan that you have used in the classroom. This lesson plan cannot have any student work or student names. If you do not provide a lesson plan at the time of the interview, you will not be penalized in any way. The interview will take between 30 and 40 minutes, and will be conducted either at the annual NWP meeting prior to the National Council of Teachers of English (NCTE) annual conference in Washington, DC, at a time convenient for the participant, or at a location and time convenient for the participant. You will remain anonymous in the write-up of this research.

The interview will be open ended and will discuss the preferences and opinions you have as a teacher regarding educational blogs and technology usage in the classroom.

If you decide to be part of this study, I will be allowed to use survey data to contact you, and will be allowed to audio record your interview. I will not be able to access any other type of
information or school records. I will keep the audio recordings private and in a place where it is safe and you will remain anonymous. The data that I will collect will be held in a locked cabinet in an office on the FSU campus. Once the project is finished and three years have gone by, the data will be destroyed by a paper shredder.

The results of the interview and survey will be written anonymously. This means that your name will not be used. You will remain anonymous even if individual quotes of yours will be used in the write up.

There are no perceived risks in completing the survey or, if you are chosen, the interview. If you feel uncomfortable completing any tasks or answering any questions asked of you, you may stop the interview or the survey at any time. The interview and survey are opinion-based and do not pose any physical or emotional harm. The interview and survey could potentially enhance your knowledge regarding educational blogs and technology usage in your classroom. This is a perceived benefit of completing this study.

If you wish not to be part of the study, you do not have to participate. This is a completely voluntary survey, and if you are chosen, interview. No one will be upset if you do not participate, or even if you change your mind and want to stop.

You can ask any questions that you have about this study. If you have any questions, please contact me at xxx-xxx-xxxx.

Signing your name below means that you want to participate in the study. You will be given a copy of this form once you have signed it.

Name of participant:

Signature of participant:

Date:
APPENDIX D

IRB APPROVAL

Informed Consent Form

My name is Katie Rybakova. I am a doctoral student researcher at Florida State University. My supervising profession is Dr. Shelbie Witte. I am asking you if you would like to be part of a research study called “Professional Development 2.0: Teachers’ Use of Educational Blogs,” which is about how current or former 9-12th grade English/LA teachers incorporate the use of educational blogs into their classroom and/or professional development, and their thoughts and opinions regarding the use of blogs as professional development.

If you agree to be in this study, you will be asked to take a twenty-minute online survey. You can choose to stop this survey at any time without penalty. If you complete the online survey, you will be entered to win a $50 gift card. This is a lottery, and the winner will be picked at random. The survey results will remain confidential.

If you are chosen to be a part of the follow-up data collection, I will contact you using the information you provide in the survey regarding your willingness to participate. You will not be penalized if you are not willing to participate. You will still be entered into the $50 gift card lottery if you choose not to participate in the follow-up data collection.

If you do choose to participate in the follow-up data collection, you will be asked to conduct an open-ended interview that will be audio taped. In exchange for completing the interview, you will receive a $20 lunch waiver. You will also be asked to provide a sample lesson plan that you have used in the classroom. This lesson plan cannot have any student work or student names. If you do not provide a lesson plan at the time of the interview, you will not be penalized in any way. The interview will take between 30 and 40 minutes, and will be conducted either at the annual NWP meeting prior to the National Council of Teachers of English (NCTE) annual conference in Washington, DC, at a time convenient for the participant, or through Skype or phone. You will remain anonymous in the write-up of this research.

The interview will be open-ended and will discuss the preferences and opinions you have as a teacher regarding educational blogs and technology usage in the classroom.

If you decide to be part of this study, I will be allowed to use survey data to contact you, and will be allowed to audio record your interview. I will not be able to access any other type of information or school records. I will keep the audio recordings private and in a place where it is safe and you will remain anonymous. The data that I will collect will be held in a locked cabinet in an office on the FSU campus. Once the project is finished and three years have gone by, the data will be destroyed by a paper shredder.

The results of the interview and survey will be written anonymously. This means that your name will not be used. You will remain anonymous even if individual quotes of yours will be used in the write up.

FSU Human Subjects Committee approved on 10/1/2014. Void after 7/30/2015. HSC # 2014.13656
There are no perceived risks in completing the survey or, if you are chosen, the interview. If you feel uncomfortable completing any tasks or answering any questions asked of you, you may stop the interview or the survey at any time. The interview and survey are opinion-based and do not pose any physical or emotional harm. The interview and survey could potentially enhance your knowledge regarding educational blogs and technology usage in your classroom. This is a perceived benefit of completing this study.

If you wish not to be part of the study, you do not have to participate. This is a completely voluntary survey, and if you are chosen, interview. No one will be upset if you do not participate, or even if you change your mind and want to stop.

You can ask any questions that you have about this study. If you have any questions, please contact me at 954-295-9860.

Signing your name below means that you want to participate in the study. You will be given a copy of this form once you have signed it.

Name of participant: _________________________________________

Signature of participant: _______________________________________

Date: ______________
APPROVAL MEMORANDUM

Date: 07/31/2014

To: Ekaterina Rybakova <er07c@my.fsu.edu>

Address:

Dept.: EDUCATION

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research

PROFESSIONAL DÉVELOPPEMENT 2.0: TEACHERS’ USE OF EDUCATIONAL BLOGS

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 07/30/2015 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc:
HSC No. 20

253
REFERENCES


254


Swisher, D. (2013). Beyond the “Digital natives” and “Digital immigrants” debate: Re-orientating the logic of immersion. Presented at *Summer Institute of Distance Learning & Instructional Technology*.


BIOGRAPHICAL SKETCH

Katie Rybakova was born in Moscow, Russia, and immigrated with her family to the USA when she was a one-year-old girl. She was a competitive tennis player throughout her adolescence, reaching a top ranking of 150 in the world. This led to a full-ride athletic scholarship to multiple universities. After choosing Florida State University, she continued to compete as a Division I tennis athlete, playing at the number 1 spot in singles and number 1, 2, and 3 spot in doubles, finishing her tennis career after four years as an academic all-American. Initially a nursing major, an English teacher her freshman year of college inspired her to “not waste creative talent” and she switched her major to English Education the next day. After a glorious four years and a wonderful learning experience teaching 6th graders, she graduated with a bachelors and a professional teaching certification. She was naturalized as a citizen of the USA shortly after, received an ACC post-graduate scholarship, and continued to pursue her passions in researching and teaching at Florida State in the English Education masters degree. After completing masters-level and PhD coursework, she became interested in how teachers learn about 21st century literacies, and this project was, ultimately, born. Katie hopes to pursue a career in teacher education, professional development, and research at a higher institution.