DESIGN OF INFORMAL ONLINE LEARNING COMMUNITIES IN EDUCATION

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The U.S. Department of Education, Office of Ed Tech Future Ready program has encouraged the use of open informal learning communities as professional learning opportunities for educators. This study categorizes 46 state Twitter chats by their moderation techniques and design. A purposive sample of Twitter chat designers participated in this phenomenological exploration that demonstrates how the designs of these informal learning spaces are aligned with the designers’ pedagogical philosophies. Recommendations for supporting, growing, and sustaining similar learning communities are included.
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CHAPTER 1

INTRODUCTION

Background

Online communities for educators have become a useful and important tool in overcoming teachers’ sense of isolation (Bransford, 2000, Nussbaum-Beach & Hall, 2012). A successful online community for educators has been shown to increase communication, collaboration, and support among participants (Booth, 2011). Traditional professional development often occurs within a school district and may be mandated or institution-driven (Kabilan, 2004; Marsick & Watkins, 1990). These formal PD sessions have not been known to be learner-centered, however, independent and informal learning that is driven by learners’ experiences, choice, personal needs, and interests can be considered learner-centered PD (Jones & Dexter, 2014). Educator Twitter chats provide one such informal learning opportunity where educators self-organize and opt-in to a conversation on a particular topic of interest (Ford, Veletsianos & Resta, 2014).

Scholarly research focused specifically on the use of Twitter chats, a fast-paced and synchronous chat discussion that makes use of Twitter for educator professional development, has recently been emerging. At the time of the writing of this research study there were 572 research articles found using the search term “Twitter chat educator professional development” and of these 392 were written and published in 2012-2015. This study will explore the structure and nature of education Twitter chats associated with a particular state in the United State (US) to support professional learning for
educators. In addition, the researcher found no peer reviewed research that has categorized Twitter chats by their structure and moderation methods.

In this phenomenological study, the pedagogical philosophy of the chat designers will be explored in order to determine the alignment of their personal philosophy to the design of Twitter chats. The literature review focuses on several key points; professional development for educators, communities of practice for educators, professional learning networks, affinity spaces, self-directed learning, twitter and learning, and community moderation.

Informal learning occurs during an individual’s daily experiences that allow learners to accumulate knowledge, skills, and insights as they interact at home, at work, or at play (Coombs & Ahmed, 1974). Informal learning is unsystematic and is often viewed as unorganized but it is important to note that informal learning accounts for the greatest portion of a person’s lifetime learning (Coombs & Ahmed, 1974). Bransford (2000) pointed out that “emerging technologies are leading to the development of many new opportunities to guide and enhance learning that were unimagined even a few years ago (p.4).” He goes on to mention that these technologies would provide opportunity for geographically distributed educators to be able to participate in information exchanges and innovations with support (Bransford, 2000).

Riel & Becker (2000) found significant differences in classroom practices of professionally engaged teachers and those who engage in private practices isolated in their classrooms. The teachers who played important roles in a larger educational community were more likely to use constructivist and collaborative instructional strategies in their classrooms. Those teachers who were less involved in collaborative
activities with other colleagues were more likely to use direct instruction (Riel & Becker, 2000).

Statement of the problem

There have been claims made about the use of Twitter as self-directed and self-selected professional development whereby the learner connects to their individual needs (Visser, Evering, & Barrett, 2014) and that online communities enable connected educators to gain access to information and resources that may not be available within their local school district (Booth, 2011). Additionally, because professional learning networks (PLNs) exist online; informal or independent learning is always accessible which allows it to become embedded in teachers' daily routines, which can lead to transformation of practice (Nussbaum-Beach & Hall, 2012; Lock, 2006; Romero, Guardia, Guitert & Sangra, 2014). However, we do not yet know how the pedagogical philosophies of individual chat designers influence the Twitter chat environment.

The specific topics of inquiry addressed in this study include:

1. How does the Twitter chat structure align with the designer of the chat’s teaching philosophy?

2. What practical processes are in place to support the Twitter chat? How are the chats run and by whom?

3. What structural changes have been made since the initial design of the chat?

4. What is the perceived value or utility of the chat?

Purpose of the study
Educators must continually learn new teaching methods in order to improve their practice. Educator Twitter chats provide teachers an opportunity to opt-in to learning new ideas from others when they are interested in the topic. This study reviews a series of state level twitter chats to evaluate their structure, nature and pedagogy.

The findings of this study provide insights to chat designers whose goals are to improve social learning through the development of technology mediated informal learning communities. In similar studies, visualizations of archival Twitter data have been presented, however, design intent, motivations and reasoning behind the design of the hashtag community has not been addressed (Carpenter & Krutka, 2014; Ford, Veletsianos, & Resta, 2014; Guidry & Pasquini, 2014).

Furthermore the US Department of Education’s (USDOE) Office of Educational Technology released their toolkit for Future Ready Schools: Empowering Educators through Professional Learning in November of 2014. The toolkit is designed to assist educators in identification of effective formal and informal online learning opportunities. The following characteristics of effective quality online learning experiences are presented by the USDOE, Office of Educational Technology in their publication Online Professional Learning Quality Checklist. Within this toolkit is the specific criteria for evaluating the value of hashtag Twitter chats. This toolkit was utilized in the categorization of the twitter chats evaluated in this study (U.S. Department of Education, 2014b).

Overview of the Dissertation

The second chapter of the dissertation is a review of relevant research related to learning theory, professional development for educators, the use of Twitter in both formal
and informal learning environments and community moderation. The third chapter focuses on the qualitative research design including the categorization of the various Twitter chats as well as the data collection and analysis of the interview data. The fourth chapter presents the findings from the study and points to the emergent themes that arose during the constant comparative coding process. The final chapter focuses on the findings and interpretations of those findings as they related to the topics of inquiry. Also presented in chapter five is the implications of these findings and the suggestions for future research.

Definition of Terms

The terms host, designer, moderator, and co-moderator are used interchangeably in the research. For the purposes of this dissertation the term chat designer refers only to the person/people who originally created the hashtag Twitter chat, where as moderator may refer to this same person, if they also serve as a moderator of the chat. A co-moderator is someone who has assisted in the facilitation of the chat but was not a part of the original design of the chat itself. And finally, the host or guest host is someone who is not affiliated with the chat on a regular basis but lends their expertise to the chat for one or more sessions.

Co-Moderator. Someone who has assisted in the facilitation of the chat but was not a part of the original design of the chat itself.

Google Hangouts. Google Hangouts is a unified communications service that allows members to initiate and participate in text, voice or video chats, either one-on-one or in a group. Hangouts are built into Google+ and Gmail, and mobile apps are available for iOS and Android devices. Hangouts also has an option called Google Hangouts on
Air, which allows Google+ users to broadcast video calls live on YouTube. Hangouts on Air has gained traction as a free way for organizations to conduct online seminars and talk shows. (TechTarget, n.d.)

**Guest Host.** Some chats bring in special guests (thought leaders) to lend their expertise. This person should be very adept at using twitter and have the fully support of the regular moderator when hosting.

**Hashtag.** A hashtag is a type of label or metadata tag used on social network and microblogging services, which makes it easier for users to find messages with a specific theme or content. Users create and use hashtags by placing the hash character (or pound sign) # in front of a word or unspaced phrase, either in the main text of a message or at the end. Searching for that hashtag will then present each message that has been tagged with it. A hashtag archive is consequently collected into a single stream under the same hashtag. (Wikipedia, n.d.)

**Twitter chat moderator.** A volunteer who has solid questions prepared and keeps a conversation flowing using a chat hashtag. They are prepared with resources to share and connect participants in the chat with others who can help. They reach out to everyone by highlighting quality comments with retweets. (Miller, 2013)

**Social Media.** Social media are computer-mediated tools that allow people or companies to create, share, or exchange information, career interests, ideas, and pictures/videos in virtual communities and networks. (Wikipedia, n.d.)

**Twitter.** Twitter is a service for friends, family, and coworkers to communicate and stay connected through the exchange of quick, frequent messages. People post Tweets, which may contain photos, videos, links and up to 140 characters of text. These
messages are posted to your profile, sent to your followers, and are searchable on Twitter search. (Twitter, n.d.)

**Twitter chat.** A tweet chat is a live Twitter event, usually moderated and focused around a general topic. To filter all the chatter on Twitter into a single conversation a hashtag is used. A set time is also established so that the moderator, guest or host is available to engage in the conversation. (Forbes, 2013)
CHAPTER 2

LITERATURE REVIEW

Introduction

Access to the Internet and social networking software (SNS) has changed the way we work, collaborate, and communicate with our families, friends, colleagues, and others. Learning is an incredibly social process and our educational systems are built upon the assumption that teaching is necessary for learning to occur (Thomas & Brown, 2011). This research study takes a close look at informal online learning communities where there is not a teacher, but rather a gathering of educational practitioners who freely share ideas and skills. This review of the literature is focused on identifying research that has been conducted regarding learning communities for educators in support of their informal professional learning, the underlying theory in support of such communities, and the need for moderation in the development and support of these digital affinity groups.

In April 2014, a report from the United States Department of Education (USDOE) titled *Exploratory Research on Designing Online Communities of Practice for Educators to Create Value* compiled evidence which indicated that within virtual collaboration spaces educators can effectively access, share, and create knowledge, as well as strengthen their commitment to the profession (Booth, 2011; Chen, Chen, & Tsai, 2009; Duncan-Howell, 2010; Gray, 2004; Hur & Brush, 2009; Schlager, Farooq, Fusco, Schank, & Dwyer, 2009; Vavasseur & MacGregor, 2008; Wang, Yang, & Chou, 2008). This exploratory report from the USDOE in 2014, sought to identify how successful online communities of practice for educators create value for their members that may lead to improved outcomes for students and for newly launched communities. Further,
the report aimed to answer the questions: what are the key challenges and decisions that leaders must negotiate in the crucial first year and how can what is learned from successful communities inform the process of helping a new community thrive? (U.S. Department of Education, 2014d)

According to this USDOE report there is significant research regarding the value of online learning communities for educators, which includes the reduction of feelings of isolation or loneliness (Duncan-Howell, 2010; Gray, 2004; Hur & Brush, 2009; Vavasseur & MacGregor, 2008). These digital spaces provide opportunities to encourage others and receive encouragement (Hur & Brush, 2009; Vavasseur & MacGregor, 2008). In addition, many digitally connected educators report that they have made changes to their curriculum or pedagogy based upon their newly acquired knowledge in online communities (Duncan-Howell, 2010).

Twitter is one social media tool that is increasingly providing educators with a venue in which to connect, collaborate, and learn with their peers. Twitter is a free online or small-scale blogging and content sharing venue. Although Twitter was not originally developed for the creation of learning networks, utilizing the symbols for “hashtag” and the “at” symbol (# and @) allows Twitter contributors to engage in dialogue and collaborative efforts (Lewis & Rush, 2013; Veletsianos, 2011). Messages sent through Twitter can be no longer than 140 characters in length. The use of hashtags in a message (i.e. #edchat) assists Twitter users in connecting with each other and is also when organizing and searching content (LaLonde, 2011). These hashtag or Twitter chats are similar to public discussions where groups of users address various topics by “tweeting” messages, posting questions, and responding to questions. A predetermined hashtag is
commonly used to connect the conversations of a Twitter chat (Guidry & Pasquini, 2013). Twitter proponents believe that these Web 2.0 technologies are a resource for establishing and growing a professional learning network. According to a participant in the study conducted by Forte, Humphreys & Park (2012) reflecting on their informal learning in Twitter hashtag communities: “[i]f you follow smart people and engage with them, there’s no telling what you can learn” (p. 110).

The United States Department of Education (USDOE) Office of Educational Technology announced the Future Ready initiative in November 2014 and released a series of reports and self-evaluation tools. The Future Ready program drew attention to the online informal learning that has occurred as networked educators have been collaborating and sharing online. The evaluation framework serves as a guide for school leadership to determine how their school district might document and recognize the achievements of their educators who are pursuing knowledge to inform their educational practices in their free time. The Future Ready self-evaluation tool is a simplified version of the framework developed by Wenger, Trayner, and de Laat (2011) in which they define five types of value that are created through participation in professional learning and collaboration activities such as: immediate, potential, applied, realized, and reframing values.

The immediate value may reduce feelings of isolation, foster a sense of academic camaraderie, appeal the educators’ desire to help others, and provide opportunities for them to give and receive encouragement for their efforts (U.S. Department of Education, 2014b). The potential value may allow participants to gain curriculum-based knowledge, develop a collection of stories of practices that inform their own, and develop a
professional learning network (U.S. Department of Education, 2014b). The applied value is when educators begin to make changes to their teaching practices based upon the learning that the informal learning community encourages (Duncan-Howell, 2010). There is a real opportunity to document both realized value and reframing value, as there is a lack of research that supports these two forms of value. According to the U.S. Department of Education (2014b), this may be due to the “dual challenge of isolating the contribution of community participation from other factors influencing success and the paucity of applicable evidence in the records of community activity” (p. 10).

The Future Ready program also recognizes that one of the ways that educators share knowledge is through Twitter and specifically Twitter chats. The Online Professional Learning Quality Checklist was designed to aid district leaders and educators in the identification of quality online professional development.

“The checklist provides an efficient way to evaluate discrete activities based on their content, characteristics, and format. When completed, the checklist shows decision makers at-a-glance which online activities will likely help educators further their district’s student learning and improvement goals and which ones are of high enough quality to count as part of the formal learning options considered for professional learning credit” (Office of Ed Tech, 2014, p. 1.)

The importance of this initiative cannot be overstated as it is the first time that policymakers are considering informal, networked learning for professional learning credits.

Professional Development for Educators

Professional development (PD) for educators has typically been one-size-fits-all (Carpenter & Krutka, 2014). Traditional professional development in the K-12 setting often occurs within a school district and may be mandated or institution-driven (Kabilan, 2004; Marskick & Watkins, 1990). These formal PD sessions are not generally learner-
centered; however, independent and informal learning that is driven by learners’ experiences, choice, personal needs, and interests can be considered to be learner-centered PD (Jones & Dexter, 2014). When educators contribute to their peers’ learning experiences it is a significant departure from the traditional PD model that has dominated K-12 educational practices (Wideman, 2010). “People are more connected to people, content is more connected to content, and systems are more connected to other systems than ever before” (Wiley & Hilton, 2009, p. 2.). Connections such as these allow learners to share information, learn, and problem solve on demand. Research indicates that social media allows network members to build and create formal and informal learning spaces (Dabbagh & Kitsantas, 2012).

Lewis and Rush (2013) report their findings that show small groups of people (in this case professionals) who are connected to each other through social media can develop a network and community. According to Trust (2012), educators transition from being isolated as teachers into life-long learners when they immerse themselves in a PLN using social media and also use the corresponding learning community to improve their practice and skills.

Duncan-Howell (2010) surveyed 98 educators in order to gain insights into their professional development experiences. Seventy-seven percent of respondents who participated in online learning communities “felt they had been exposed to new ideas and resources which they had used in their classrooms” (p. 337). This study documented a value of online learning communities, as “the ability to log on and participate according to their own schedule was a clear advantage and the asynchronous nature of the communities gave them time to think, reflect, and compose answers” (Duncan-Howell,
Additionally, the study showed that educators who are members of online learning communities are dedicating one to three hours per week to their digital participation (Duncan-Howell, 2010).

The traditional or “sit-and-get” format of professional development has typically shown in studies to only have short-lived or minimal shifts in pedagogical approaches applied in classrooms by those in attendance (Scott & Scott, 2010). Those researchers who see large-scale experimental studies as essential to determining the effectiveness of educational interventions note that there have been a limited number of these studies, and their results have been inconclusive (Gersten, Taylor, Keys, Rolfhus, & Newman-Conchar, 2014). According to the USDOE Office of Ed Tech report, “large scale experimental studies focused specifically on online professional development are particularly rare, and studies concentrating on online communities of practice are practically nonexistent” (U.S. Department of Education, 2014d, p. 6). It is this lack of empirical research that led the researcher to conduct this study of online informal learning communities.

Theory: Communities and Conversations

In the writings of cognitive anthropologists Lave and Wenger (1991) they coined the term Communities of Practice while working on an apprenticeship-learning model. This led to the development of their seminal work on the topic. As the research continued over the years Wenger et al. (2002) later defined a CoP as “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 9). And, later described
by Wenger (n.d.) as being “formed by people who engage in the process of collective learning in a shared domain of human endeavor” (p. 1).

There are several theories that are foundational to communities of practice such as situated learning, social learning, and knowledge management (Bandura, 1986; Lave & Wenger, 1991; Saint-Onge & Wallace, 2012). Social learning theorist, Bandura, explained, “much social learning occurs on the basis of casual or studied observation of exemplary models” (Bandura, 1971, p. 10). Situated learning points out the importance of participation in a community and again takes the stand that learning requires social interaction and collaboration and is often unintentional rather than deliberate (Lave & Wenger, 1991).

A community of practice can develop through electronic communications (Murillo, 2008; Wasko, Tiegland & Faraj, 2009) and Twitter is one such platform where a professional development community can emerge (Lewis & Rush, 2013). Learning communities within social media groups are formed collectively from the information being shared, connections created, and the collaboration that takes place among members (Brooks & Gibson, 2012; Manzo, 2009). The affordances of social networking technologies gives users of these tools the ability of “giving voice to the ideas of people we have never had access to before and enabling us to reshape our information experiences to suit our learning needs” (Warlick, 2009, p. 13). However, the literature points out that there are some differences between communities of practice and learning communities. “The term learning community refers to a community whose first purpose is not practice, but rather the advancement of learners.” (Wubbles, 2007, p. 229) Wubbles
encourages future research on the distinction between the two terms CoP and learning communities.

Beyond the theories that support communities of practice there are theories that are fundamental to the belief that all learning is a conversation. Sharples (2005) echoes this sentiment in his work and states:

“[a] framework for learning in the mobile age should recognize (sic) the essential role of communication in the process of coming to understand the world and in negotiating agreements among differing perspectives. It should also indicate the importance of context in establishing meaning, and the transformative effect of digital networks in supporting virtual communities that transcend barriers of age and culture” (p. 147).

Reflecting on Habermas’s (1998) Theory of Communicative Action, communication is based upon negotiated meaning. The more recent extension of Haberman’s ideas is found in the theory of Learning and Teaching as Communicative Actions (LTCA) (Warren & Stein, 2008). The LTCA Theory posits that “learning and teaching emerge from understanding and fostering learning activities that allow for all four communicative actions together to guide the learner and instructor towards reaching and improving understanding through effective communicative actions” (Wakefield, Warren, & Alsobrook, 2011, p. 568). The four communicative actions described in the LTCA theory include; normative, strategic, constative, and dramaturgical. Normative communications are those which allow participants to negotiate the norms of the learning environment that support their personal learning goals. In the case of a Twitter chat, this means that the participants and moderators should co-construct norms that support effective communication and where all participants are treated fairly and respectfully. Strategic communications are those where a leader provides knowledge of or access to
shared, socially validated facts that can be communicated by a technological tool, in this case Twitter. Constantive communications ensure that participants are given opportunities to engage in discussion. As participants share their experiences they may be challenged or critiqued in a respectful manner with the goal of ultimately constructing knowledge that can be applied toward future change. Finally, dramaturgical communications create opportunities for participants to share their personal and professional identities as well as their subjective truths and knowledge, which are open to critique through discourse with fellow participants, moderators, and others. The LTCA theory has been studied in conjunction with social learning platforms. (Wakefield, et. al., 2011; Warren 2016)

Twitter in Formal Learning

Several studies document the use of Twitter in support of formal learning opportunities. According to Warren (2016) the affordances of Twitter “lend themselves to community learning and discursive interactions” (p. 7) as well a challenge in formatting clear concise communications with a 140 character limit. In a mixed methods study of Twitter use to support formal learning by Wakefield, et. al. (2011) fast feedback or the free flow of communications helped support community development, a sense of belonging, and emergent intersubjective agreement regarding course topics. Although the number of students included in this study was small (n=13) the study provides insights into how the LTCA theory can be utilized as a framework for understanding the use of Twitter for meaning-making communications whether they be normative, strategic, constantive, or dramaturgical (Wakefield, et. al, 2011).
Dunlap and Lowenthal (2009) argue that Twitter is an effective and desirable way to enhance social presence. The researchers state that Twitter allowed students to present themselves as “real people”. While Dunlap and Lowenthal (2009) did not make it a class requirement to participate in tweeting, they found that students used Twitter for multiple purposes. Through Twitter the instructors and students were able to collaborate, brainstorm, solve problems, and create experiences. According to Dunlap and Lowenthal (2009) due to Twitter being an open community, it influenced students to be thoughtful when crafting their messages.

Evans (2014) explored the use of Twitter in formal learning situations and found a positive correlation between student engagement and the amount of Twitter usage. 252 first year undergraduate students aged 18 – 24 were included in this quantitative study. Factor analysis revealed that using Twitter reduced the boundaries between students and tutors and made the instructor seem more approachable.

A qualitative study conducted by Prestridge (2014) took a look at participatory practices of self-directed learners in their use of Twitter to support the development of social, emotional, and academic community engagement. The types of interactions that were the crux of this study were learner-learner-instructor, learner-content, and learner-interface. The findings from this study identified learner-instructor interactions were the predominant form of communication, which the author calls “participatory pedagogies” as they support the discourse (Prestridge, 2014). This finding pointed to the need for a moderator, leader, or facilitator to be present in the conversation in order to support such participatory pedagogies.

The Virtual CoP: The Professional Learning Network (PLN)
Predictions abounded that the Internet would change the way we learn and that connectivity would become as important as electricity to society as it changed from being a one-way or “push” of content to a two-way medium or “push-pull” (Brown, 2002). Online communities have become prevalent and are beginning to have an impact not only as a meaningful resource, but also helpful way to connect with colleagues (Moore & Chae, 2007).

By harnessing the power of the Internet and personal learning networks (PLNs) individuals are able to connect to the world of knowledge through their digital connections (Richardson & Mancabelli, 2011). We must acknowledge the complexities of learning in the digital age and develop insights into how learning can be managed through the better understanding of emerging technologies and their relationship to knowledge networks (Couros, 2010).

In a PLN, like-minded people share ideas with their peers across a variety of Web 2.0 tools facilitating development of a networked learner. Blogs, Twitter, Facebook, LinkedIn, and other social media networks are a part of this development. The PLN leverages social media sites that have become prevalent and commonplace, creating an emergent opportunity for learning. PLNs tend to be self-organized on the web which has created conditions that allow for the emergence of self-organized learning to flourish as the number of blogs, tweets, emails, and texts has grown to the billions (Richardson & Mancabelli, 2011).

Knowledge is acquired in a variety of ways through completion of work-related tasks, our personal networks, and communities of practice (Siemens, 2005). A learning network is a rich set of connections that help us to achieve our learning pursuits
(Richardson & Mancabelli, 2011). Today we can connect with others across the globe that shares a similar passion using social networking technologies.

The Internet enables communities to form, which would have been previously limited by geographic factors, and the removal of these barriers has seen an unprecedented growth in communities for whom learning is a key objective (Weller, 2011). While this study does not make use of social network analysis, the foundations of a social network are both cognitive and motivational. The human urge to network is tied to the basic needs for feelings of safety and to reach out to others (Kadushin, 2012).

Affinity Spaces: Hashtags as meeting places

Characterized as innovative and experimental, affinity spaces are defined by the space rather than by the membership and are known as a place where informal learning takes place (Gee, 2004; Arnone, Small, Chauncey & McKenna, 2011). These spaces draw people together because they share interests or a common activity; however they are not communities because they are not defined by their membership (Gee, 2004). People can come and go within affinity spaces thus personalizing their own learning experiences based upon their interests and preferences, while in our formal educational systems we do not have such freedom of mobility (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). Affinity spaces bring to light the development of a participatory culture and the need to nurture that within online spaces where collaboration occurs (Jenkins, Ito, & boyd, 2016). Social media has advanced the notion of a participatory culture of learning as proposed by Jenkins, Ito & boyd (2016) “people participate through and within communities: participatory culture requires us to move beyond a focus on individualized
personal expression; it is about an ethos of ‘doing it together’ in addition to ‘doing it yourself’” (p. 181).

The review of scholarly research points to a lack of clarity when it comes to defining Twitter chats. Some suggest that Twitter chats are communities of practice, while others call them professional or personal learning networks. Megele (2014) refers to Twitter chats as communities of practice or communities of interest in a paper on theorizing Twitter chats. Visser, Evering, and Barrett (2014) presented their findings on the foundation of Twitter chats as a network or PLN, a view shared by Guidry & Pasquini (2014). Amiruddin (2015) defines Twitter chats as sets or affinity spaces not CoP, CoI, PLN, or generative learning communities. Carpenter and Krutka (2014) and Gee (2003) share in the idea of Twitter chats being affinity spaces. Gee argues that communities require membership and that there is a sense of belonging or close-knit ties in a community that may not exist in informal social spaces (2005).

Twitter chats do not have official group membership as they are conducted in open social spaces and participation is fluid where individuals can come and go as they see fit. In this research study the words learning community, affinity spaces, community of practice and PLN have been used interchangeably as this paper makes no claim that there is one term to define Twitter chats but rather a collection of terms that may be utilized depending on the context within which they are used.

Self-Directed, Informal Learning, and PD through Twitter

The appeal of learning through informal learning communities has been noted by researchers to be due to the need for lifelong learning in a knowledge economy and the self-directed nature of opt-ing into these networked learning opportunities (Carter &
Nugent, 2011). Visser, Evering, & Barrett (2014) found that educators in their study were using Twitter for their own professional learning due to the fact that this form of learning is self-selected, but also self-directed. Carter and Nugent (2011) shared the importance of the technological savvy nature of self-directed learners in a digital world. The skills required extend beyond how to create a network of connections to critical evaluation of the appropriateness of resources shared across that network and how to embed learning through the use of these digital connections into one’s daily life (Whitaker, Zoul & Casas, 2015). “Personal learning networks are based on the premise that learning occurs with multiple people in multiple contexts through virtual communities” (Carter & Nugent, 2011, p. 226).

Informal learning occurs during an individual’s daily experiences that allow the learner to accumulate knowledge, skills, and insights as they interact at home, at work, or at play (Coombs & Ahmed, 1974; Eraut, 2004). Informal learning is unsystematic and is often viewed as unorganized but it is important to note that informal learning accounts for the greatest portion of a person’s lifetime learning (Coombs & Ahmed, 1974). Bransford (2000) pointed out that “emerging technologies are leading to the development of many new opportunities to guide and enhance learning that were unimaginined even a few years ago” (p. 4). However, Eraut suggests there are issues with conducting research related to informal learning. This is due to the idea that informal learning is not visible, and even those studied may be unaware of their learning and often knowledge gained (2004). It is important to note the affordances of technology to support educators in their own pursuit of knowledge in online learning communities as the existing financial constraints within
education, specifically for professional development continues to be a concern (Duncan-Howell, 2010).

Online communities of educators have become a useful and important tool for overcoming teachers’ sense of isolation (Bransford, 2000; Duncan-Howell, 2010; Gray, 2004; Hur & Brush, 2009; Vavasseur & MacGregor, 2008). In a study conducted by Carpenter and Krutka (2014), 755 K-16 teachers and administrators were surveyed regarding their use of Twitter. The survey indicated that educators used Twitter frequently and primarily as a source of professional learning and sharing information and connecting with digital colleagues. “Eight respondents who teach in rural and/or small districts commented that Twitter helped them overcome isolation, while nine others shared how the service enabled them to escape philosophical or methodological isolation within their schools” (Carpenter & Krutka, 2014, p. 427). Due in part to the fact that their survey respondents were Twitter users, there were very few negative comments about the experience. It was noted that teachers on Twitter are “forward-thinking” and that Twitter isn’t a place for “complaining or griping” rather it is for sharing and has a “positive vibe” (Carpenter & Krutka, 2014).

Twitter-based PD is self-directed and self-selected by the learner to connect to their individual needs (Visser, Evering, & Barrett, 2014). In one study, a respondent said “I can differentiate my own PD when school and district PD seems to be tailored for the lowest common denominator” (Carpenter & Krutka, 2014, p. 426). Because professional learning networks exist online, informal or independent learning is always accessible. This allows the learning to become embedded in teachers' daily routines, which can lead
to transformation of practice (Nussbaum-Beach & Hall, 2012, Lock, 2006; Romero et al., 2014).

Megele (2014) calls Twitter chats multilogue; that is they are many-to-many conversations.

“Multilogue conversations can be a powerful tool for brainstorming, idea generation, idea development, and other activities that may benefit from a wider engagement and broadening of communication base. However, such multilogue Twitter discussions may be less suitable for developing a focused in-depth discussion and analysis of a given topic” (Megele, 2014, add page number might also be over 40 words).

Comparably, Budak and Agrawal (2013) analyzed 71,411 Twitter users and 730,944 tweets over two years. This survey only captured data from 57 people, which is not statistically significant, however, the findings are relevant to the exploration of this phenomenon. It was noted that users return to Twitter chats that mention or retweet them and 93% of those surveyed indicated that they felt a sense of community in education Twitter chats that extended beyond the scheduled chat times with 79% interacting by other means such as blogging or email (Budak & Agrawal, 2013).

In a survey conducted by Forte, Humphreys & Park (2012) thirty-seven educators on Twitter and 2000 tweets on Twitter were analyzed. Participants in this study reported that their personal learning network is a “source of resources and inspiration for new practices” (p.109). One participant reported, “teachers on Twitter are not representative of my colleagues at large they are the exceptional ones” (Forte, Humphreys & Park, 2012, p. 110). This study reported that educators are using Twitter to share ideas and improving their practice. The comments by interviewees such as: “[i]t’s almost like it
self-generates learning opportunities” are very valuable to better understand the lived experiences of educators on Twitter (Forte, Humphreys & Park, 2012, p. 110).

Community Moderation as Social Glue

Findings in a study conducted by Gray (2004) suggest that the presence of a moderator in an online learning community “helped the community evolve from a forum for sharing information to a community of practice where knowledge was constructed by shared learning” (p. 29). The participants identified the role of the moderator as critical to their learning process and for the community in starting, supporting and sustaining the informal online environment. Moderator support was most critical at the beginning, middle, and end and was helpful in developing the sense of a social community (Gray, 2004). “Educators, like any other professionals, need peer-to-peer interactions and reciprocal investments in order to grow and develop” (Whitaker, et. al., 2015, p. 2).

In a study of community moderation conducted by Seddon & Postlethwaite (2007), the findings regarding suggested that identity sharing and socialization are the “glue” in formation of online communities. Members of close-knit communities tend to challenge other community members viewpoints. Participants in un-moderated networks tend to lack the challenges and disagreements that help drive deeper consideration and a professional discourse that questions an individual’s assumptions (Wideman, 2010).

The challenge of a community moderator is to build and sustain participation by the community members on a regular basis, help the learners explore ideas more deeply, and behind the scenes communications that encourage and support the ideas of individual contributors (Gray, 2004). Additional challenges can include technical and bandwidth
issues, scheduling or finding time for contribution by moderators, and finding experts as
guest moderators to stimulate reflections (Gray, 2004; Wubbles, 2007).

Summary

In summary, the literature related to the Future Ready project supports the
analysis of Twitter chats as an informal learning opportunity for K-12 educators to
participate in conversations on topics of interest. The informality leads to a learner-
centered approach to professional development as it creates an opt-in opportunity for
professional development (PD) based solely on their choice giving educators a greater
sense of agency in determining their own PD needs. Whether we define hashtag Twitter
chats as learning communities or conversations, there is empirical data to support that
when educators engage in these communities, learning occurs and classroom practices are
transformed. The LCTA (is it a theory or concept or just framework) provides a
framework grounded in theory and research for understanding how the communications
unfold during the Twitter chat.

The study of social networking to support both formal and informal learning is
relatively new however, in both cases it is the value of the communications that occur
across the network and the immediacy of information that provides value based on the
studies reviewed. There has been a positive correlation noted between engagement and
the use of Twitter in formal learning.

Chapter Three, Methodology, outlines the process of collecting archival Twitter
data in order to evaluation similarities and differences of the various state Twitter chats
leading to categorization based upon the findings. Further, the chapter describes the
selection of the participants for semi-structured interviews and the procedures for
analyzing the data collected in those interviews through multiple coding methods. The Methodology Chapter includes the following sections (1.) Purpose of the Study, (2.) Research Method and Design, (3.) Procedures, (4.) Categorization of state Twitter chats, (5.) Semi-structured interviews, and (6.) Analysis and Interpretation of Qualitative Data.
CHAPTER 3

METHODOLOGY

Purpose of the Study

In this study, the researcher employed a non-positivistic research paradigm and a qualitative phenomenological methodology. This research method allowed the researcher to find meaning as she sought to understand the pedagogy and design intent of various statewide educator Twitter chats. Phenomenology was chosen for this study specifically so that the researcher could better understand the conscious experience of the individual chat designers from their perspectives. Moustakas (1994) described phenomenology as “a return to experience in order to obtain comprehensive descriptions that provide the basis for a reflective structural analysis that portrays the essences of those experiences” (p. 13).

The purpose of this qualitative phenomenological study is to describe, classify, analyze, and interpret the lived experiences and pedagogical approaches of state hashtag Twitter chat designers. Phenomenological research methods were applied due to the desire of the researcher to capture and describe the conscious experiences of the participants in creating, leading, and adapting a Twitter hashtag chat. Central to this study was the review and categorization of 46 statewide Twitter chats to better understand their structure and design. Consideration of the descriptive statistics provided by this categorization process was useful to understand the structure of Twitter chats. However, it was through interviews with the chat designers, collection of information related to their worldview, and the pedagogy of the chat that allowed the researcher to obtain a more comprehensive understanding of the phenomenon of the Twitter chats.
After the preliminary analysis and categorization of statewide Twitter chats based on format, structure, changes in tools, and moderator teams, a purposive sample of Twitter chats was chosen for the study and semi-structured interviews were scheduled with the chat designers. Findings garnered from these interviews provided insights from chat designers whose goals were to improve social learning through the development of technology-mediated, informal learning communities. Extensive analysis of the data collected was necessary to present the findings in this dissertation.

Research Method and Design

In qualitative research studies, it is the scientist who synthesizes the rich descriptions of experiences and determines the underlying structures of said experiences (Moustakas, 1994). The qualitative researcher attempts to make sense of things in their natural settings in order to interpret “phenomena in terms of the meanings that people bring to them” (Denzin & Lincoln, 2005, p. 5). The reality that the researcher seeks is found through inductive analysis of the phenomenon in question, careful analysis of the empirical data until codes become categories, and then a review of themes which enable the researcher to tell the whole story. The findings or reality presented by the qualitative researcher portrays the essence of the experience or phenomena in question (Moustakas, 1994). In qualitative research, the researcher presents findings based on the representations of their own experiences interacting with others and shows an inductive reality, rather than an objective reality that can never be captured, as meaning or reality is socially constructed (Greene, 1978; Denzin & Lincoln, 2005; Bogdan & Biklen, 2003).
Qualitative Perspective

Qualitative research presents a series of representations of the world that result from “a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible” (Denzin & Lincoln, 2005, p.4). Qualitative researchers are more concerned with process than defining outcomes, which tends to be the work of the quantitative researcher (Bogdan & Biklen, 2003). “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between researcher and what is studied, and the situational constraints that shape inquiry. They seek answers to questions that stress how social experience is created and given meaning” (Denzin & Lincoln, 2005, p. 13). The research reports and articles produced by qualitative researchers are not “a transcendent truth, but as a particular rendering or interpretation of reality grounded in the empirical world” (Bogdan & Biklen, 2003, p. 27). According to Denzin and Lincoln (2005), “there is no single interpretive truth.” There are, however, “multiple interpretive communities, each with its criteria for evaluating an interpretation” (p. 37). The researcher is “constructing a picture that takes shape as you collect and examine the parts” (Bogdan & Biklen, 2003, p. 6).

Phenomenology

The qualitative research method—phenomenology—seeks to understand the essence of an experience of individuals and is the recommended philosophy to be used when the goal of a study is to understand the meaning of human experiences (Creswell, 1998). According to Moustakas (1994), phenomenology is best used when the researcher seeks to understand the how and why behind decisions (p. 4). In this study, it is the actions and decisions of the individual chat designers that are illuminated through the use
of this approach. Empirical phenomenological research allows the researcher to ask how others experience the world and provides a reflective analysis of those experiences (Moustakas, 1994; Neuman, 2006; Von Eckartsberg, 1986). Phenomenology, introduced by Edmund Husserl in 1913, allows researchers to conduct investigations by peering through the lens of individuals’ lives in order to provide insights into the social phenomenon (Moustakas, 1994).

Overview

The US Department of Education’s (USDOE) Office of Educational Technology released their toolkit for *Future Ready Schools: Empowering Educators through Professional Learning* in November 2014. A part of this toolkit, The Online Professional Learning Quality Checklist, takes a close look at professional learning opportunities for educators, including webinars, hashtag Twitter chats, online conferences, massive open online courses (MOOCs), online courses, and online communities of practice. This USDOE toolkit was designed to assist educators in the identification of effective formal and informal online learning opportunities. Twitter chats can provide educators with choices regarding what and when they want to learn by selecting a chat and the topic of interest from the list of education–related chats found here: [https://sites.google.com/site/twittereducationchats/education-chat-calendar](https://sites.google.com/site/twittereducationchats/education-chat-calendar).

Procedures

Preliminary Analysis of Archival Data

Once the University of North Texas granted IRB approval, archival Twitter data from each of the 46 statewide Twitter chats was collected and evaluated to determine the
various chat designs. A review of the similarities and differences of the state chats led to
the development of categories based upon chat format, the use of a regular moderator or
the scheduling of guest hosts, the number of moderators, and the use of additional tools
(e.g., Google Hangouts Live On Air) during the chat. This analysis defined the format,
structure, and participation exhibited by the various Twitter chats and provided evidence
to help inform the interview phase of the research. The five distinct phases of the research
study are outlined in Figure 1.

Figure 1. Qualitative Research Procedures

The research began with the categorization of the statewide Twitter chats listed on
the USDOE Office website. This process took into account the chat format, moderation
methods, digital tools used, and the volume of participation. Step two was the recruitment
of the participants for the interviews. One chat designer from the largest Twitter chat in
each of the categories was selected for the purposive sample in this study. The interviews
were recorded, transcribed and sent to the interviewee for review before coding and
analyzing began. The final steps of analysis and reporting will be detailed in chapter 4
and 5.
Categorization of State Twitter Chats

The following characteristics of effective quality online learning experiences are presented by the USDOE, Office of Educational Technology, in their publication *Online Professional Learning Quality Checklist*:

- supports active rather than passive participation
- grounded in empirical theories and models of learning
- aligns purposefully with student outcomes as well as individual educator and organizational learning goals
- engaging and relevant
- paced and timed appropriately
- led or designed by skilled online facilitators
- establishes a set of norms for participation.

These characteristics serve as the minimum guidelines in this research study and were used to correctly categorize all 46 of the state Twitter chats. Figure 2 is a screenshot from the U.S. DOE Office of Ed Tech website that identifies the various statewide Twitter chats included in this study. The categorization process started with the initial analysis to determine which of these chats would need to be included in the study. At the time that the data was collected, it was determined that 14 of the statewide Twitter chats did not meet the initial criteria to be included in the next phase of categorization.
Ed Twitter Chats

Technology provides new opportunities for educators to connect and collaborate online. One way to participate in online communities of educators is to join one of the many ed chats hosted on Twitter. The following map (created by Joe Maza, Jerry Blumengarten, and Tom Murray) shows the time and hashtag for ed chats in each state. Click the map for additional information.

![Map of Ed Twitter Chats](image)

*Figure 2. Statewide Twitter Chats*

The criteria provided by the USDOE were helpful in determining the state Twitter chats that should be reviewed for this study; however, further classification of the chats was needed based upon the designs of the chat. Using these initial criteria for categorization, the researcher was able to eliminate the group of statewide Twitter chats that do not meet the USDOE requirements for online, professional-quality learning experiences. Fourteen, or thirty percent, of the statewide Twitter hashtags did not meet the minimum requirements to be included in the study. The 14 chats that were eliminated based upon the USDOE criteria were primarily due to a lack of leadership, consistency, and management of the chat. Someone or some group of people is required to keep a chat “alive”. Some of the chats in this category may have been in existence previously and
recently stopped holding regular chats. It may also be that a competing chat may have
taken the audience away for the hashtag (example: #mnedchat became #mnlead).

The list of chats excluded from the study because they did not meet the initial criteria for
quality from the USDOE include #edchatwv, #coedchat, #azedchat, #mnedchat,
#laedchat, #ctedchat, #oredu, #edude, #nved, #uted, #ksed, #tnedchat, #msedchat, and
#mdedchat. Once the list was narrowed down from 46 to 32, the remaining twitter chats
were evaluated and categorized based on the following criteria:

• the use of moderator accounts

• the number of co-moderators

• the tools used in addition to Twitter during the chat

• the addition of guest moderators or guest hosts to lead the chat.

The remaining 32 chats were then more carefully evaluated using secondary criteria to
classify the chats defined in the *Online Professional Learning Quality Checklist* as shown
in Figure 3.
Hashtag Twitter Chat

A hashtag Twitter chat is a prearranged chat that happens on Twitter through the use of Twitter status updates (called tweets) that include a predefined hashtag (such as #edchat) to link those tweets together in a virtual conversation.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
<td>⬤</td>
<td>☠</td>
</tr>
<tr>
<td>Is facilitated by hosts skilled in online moderation. Effective facilita-</td>
<td>⬤</td>
<td>☠</td>
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<tr>
<td>tion techniques include the following:</td>
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<tr>
<td>- Open-ended, thought-provoking questioning techniques that draw</td>
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<tr>
<td>on personal as well as professional experiences</td>
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<tr>
<td>- Protocols to help learners connect around shared problems or</td>
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<td></td>
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<tr>
<td>possibilities</td>
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<td></td>
</tr>
<tr>
<td>- Paraphrasing of participants' contributions as well as comparisons</td>
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<td></td>
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<tr>
<td>and contrasts between participants' views</td>
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<tr>
<td>Uses precrafted questions to provide a structure within which more</td>
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</tr>
<tr>
<td>spontaneous give and take can occur</td>
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</tr>
<tr>
<td>Encourages participants to share resources, such as webpages and videos,</td>
<td>⬤</td>
<td>☠</td>
</tr>
<tr>
<td>via links during the chat</td>
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<td></td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
<td>⬤</td>
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</tr>
<tr>
<td>Encourages participants to share their learning outputs using a</td>
<td>⬤</td>
<td>☠</td>
</tr>
<tr>
<td>Creative Commons license</td>
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Here are possible ways to show evidence of the learning event’s value add through documentation and artifact collection as a means of credentialing or determining the quality for awarding of professional learning credits:

**LOW-LEVEL EVIDENCE**
- Transcript of chat participation

**MEDIUM-LEVEL EVIDENCE**
- Bookmarked collection of resources shared

**HIGH-LEVEL EVIDENCE**
- Blog post reflecting on the learning experience
- Documented changes in practice and corresponding effect on students resulting from participation

*Figure 3.* Hashtag Twitter chat criteria found in the US DOE Office of Ed Tech Online Professional Learning Quality Checklist.

Thirty-two state Twitter chats were included in the discovery phase which was an investigation of the Twitter chat phenomenon without treatment, whereby the researcher identified and documented the criteria to categorize the individual chats based upon their similarities and differences. Upon review of the various chats, additional criteria that set
the chats apart from each other were discovered. These other criteria were documented during the discovery phase. Categories emerged and the chats were placed into five distinct groups based upon the findings, as shown in Table 1.

Table 1

*Categorization of State Twitter Chats*

<table>
<thead>
<tr>
<th>Moderator Driven</th>
<th>Host Driven</th>
<th>Guest Host with Mod Support</th>
<th>Live Google Hangout During Chat</th>
<th>Rotating Moderators</th>
</tr>
</thead>
<tbody>
<tr>
<td>#vachat</td>
<td>#nebedchat</td>
<td>#edchatri</td>
<td>#nyedchat</td>
<td>#caedchat</td>
</tr>
<tr>
<td>#wyoedchat</td>
<td>#paedchat</td>
<td>#iledchat</td>
<td>#iaedchat</td>
<td>#njed</td>
</tr>
<tr>
<td>#gaed</td>
<td>#edchatme</td>
<td>#sced</td>
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<td>#edchathi</td>
<td>#nced</td>
<td>#kyedchat</td>
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<td>#idedchat</td>
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</tbody>
</table>
Moderator Driven

In moderator-driven chats a question and answer format is used. The questions are tweeted by the moderator Twitter account for the chat or by a co-founder who moderates the chat every week. This type of chat does not typically make use of guest hosts, thought leaders, authors, nor other moderators. The chat moderator has greater control when this format is used. Table 2 highlights the alignment of the USDOE quality professional learning criteria to the chat.

Table 2

*Chat Classification: Moderator Driven*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
<td>![green_circle]</td>
<td>Occasionally topics may not align with improved student learning outcomes</td>
</tr>
<tr>
<td>Is facilitated by hosts skilled in online moderation. Effective facilitation techniques include the following:</td>
<td>![green_circle]</td>
<td>The moderator runs the chat every week and therefore is skilled in effective facilitation techniques</td>
</tr>
<tr>
<td>• Open-ended, thought-provoking questioning techniques that draw on personal as well as professional experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Protocols to help learners connect around shared problems or possibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Paraphrasing of participants’ contributions as well as comparisons and contrasts between participants’ views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses pre-crafted questions to provide a structure within which more spontaneous give and take can occur</td>
<td>![green_circle]</td>
<td>Either the moderator’s personal account or a chat moderator Twitter account shares pre-crafted questions.</td>
</tr>
</tbody>
</table>
Encourages participants to share resources, such as webpages and videos, via links during the chat

<table>
<thead>
<tr>
<th>Rotating Moderators</th>
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<tbody>
<tr>
<td>Encourages participants to share resources, such as webpages and videos, via links during the chat</td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
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<tr>
<td>Encourages participants to share their learning outputs using a Creative Commons license</td>
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<table>
<thead>
<tr>
<th>Rotating Moderators</th>
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<tbody>
<tr>
<td>Little evidence of encouragement to share learning using Creative commons license was found</td>
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</table>

Regularly chats were documented

<table>
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<tr>
<th>Rotating Moderators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little evidence of encouragement to share learning using Creative commons license was found</td>
</tr>
</tbody>
</table>

Rotating Moderators

This chat format has multiple moderators who take turns moderating the chat or asking the questions. Two chats seem to use this approach in very different ways. One of the chats has multiple moderators and asks 2 moderators to moderate the chat each week, while the other has three moderators and they take turns asking the questions within the chat time each week. While the moderation of these two chats are different they are the only two chats that make use of rotating moderation in these ways. Table 3 demonstrates how this chat format meets the criteria put forth by the USDOE.

Table 3

*Chat classification: Rotating Moderator*

<table>
<thead>
<tr>
<th>Rotating Moderators</th>
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<tbody>
<tr>
<td>Rotating Moderators</td>
</tr>
<tr>
<td>Criteria</td>
</tr>
<tr>
<td>Status</td>
</tr>
<tr>
<td>Notes</td>
</tr>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
</tr>
<tr>
<td>The general principles are followed</td>
</tr>
</tbody>
</table>
| Is facilitated by hosts skilled in online moderation. Effective facilitation techniques include the following:
  - Open-ended, thought-provoking questioning techniques that draw on personal as well as |
| This chat is hosted by skilled moderators, the difference is that this format of chat has different moderators taking turns to post the questions for the chat |

38
professional experiences

- Protocols to help learners connect around shared problems or possibilities
- Paraphrasing of participants’ contributions as well as comparisons and contrasts between participants’ views

<table>
<thead>
<tr>
<th>Uses pre-crafted questions to provide a structure within which more spontaneous give and take can occur</th>
<th>These chats make use of the question and answer format and seem to be precrafted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourages participants to share resources, such as webpages and videos, via links during the chat</td>
<td>Participants are encouraged to share digital resources</td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
<td>Documented that these are all weekly chats</td>
</tr>
<tr>
<td>Encourages participants to share their learning outputs using a Creative Commons license</td>
<td>Limited evidence of this encouragement was documented</td>
</tr>
</tbody>
</table>

Guest Host with Moderator Support

The moderator of these chats takes ownership to ensure that there is an expert host scheduled each week to lead the chat on thought-provoking topics. The moderator ensures that the chat runs smoothly, typically managing the promotion of the chat, greeting participants, favoriting tweets, and ensuring that the host is fully supported while the host asks questions. The moderator may also provide the guest host with support with question development, graphic development, and promotion. Table 4 identifies the elements that align with the USDOE criteria for effective professional development.
### Table 4

**Chat Classification: Guest Host with Moderator Support**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
<td>![Green Circle]</td>
<td>Meets all principles of best practice</td>
</tr>
<tr>
<td>Is facilitated by hosts skilled in online moderation. Effective facilitation techniques include the following:</td>
<td>![Green Circle]</td>
<td>This chat format is the most structured and fully supported</td>
</tr>
<tr>
<td>• Open-ended, thought-provoking questioning techniques that draw on personal as well as professional experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Protocols to help learners connect around shared problems or possibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Paraphrasing of participants’ contributions as well as comparisons and contrasts between participants’ views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses pre-crafted questions to provide a structure within which more spontaneous give and take can occur</td>
<td>![Green Circle]</td>
<td>Pre-crafted questions with spontaneous conversation were documented</td>
</tr>
<tr>
<td>Encourages participants to share resources, such as webpages and videos, via links during the chat</td>
<td>![Green Circle]</td>
<td>Levels of encouragement were high</td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
<td>![Green Circle]</td>
<td>Regular weekly chats were documented</td>
</tr>
<tr>
<td>Encourages participants to share their learning outputs using a Creative Commons license</td>
<td>![Yellow Circle]</td>
<td>Limited evidence of this encouragement was documented</td>
</tr>
</tbody>
</table>
Live Google Hangout During Chat

This format of chat seems to be experimental as the evidence shows that these chats are not weekly Google Hangouts, but rather they began with a weekly Twitter chat and then sought ways extend and transform the experience. The moderators and a special guest meet in a live Google Hangout on Air and have a conversation about a topic of interest. These chats provide a live link to a conversation in a Google hangout on Twitter. The chat participants are able to view the live session and can tweet questions for the interviewee into the hashtag for the Twitter chat. This chat format uses Twitter less as the communication channel since it relies on other technologies for the communications between the moderators and the host. There are only two chats were identified to be making use of this type of format.

Table 5

*Chat Classification: Live Google Hangout During Chat*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
<td><img src="#" alt="Yellow" /></td>
<td>This chat format supports active participation of those inside the Google Hangout but provides limited engagement for those on Twitter.</td>
</tr>
<tr>
<td>Is facilitated by hosts skilled in online moderation. Effective facilitation techniques include the following:</td>
<td><img src="#" alt="Green" /></td>
<td>Open-ended, thought-provoking questioning techniques that draw on personal as well as professional experiences Protocols to help learners connect around shared problems or possibilities</td>
</tr>
</tbody>
</table>

41
Paraphrasing of participants’ contributions as well as comparisons and contrasts between participants’ views

<table>
<thead>
<tr>
<th>Uses pre-crafted questions to provide a structure within which more spontaneous give and take can occur</th>
<th>During the live Google Hangout there is little to no encouragement of sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourages participants to share resources, such as webpages and videos, via links during the chat</td>
<td>The chats are weekly but the use of the Google Hangout is irregular</td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
<td></td>
</tr>
<tr>
<td>Encourages participants to share their learning outputs using a Creative Commons license</td>
<td>Limited evidence of this encouragement was documented</td>
</tr>
</tbody>
</table>

Host Driven

These chats are led by a host for the week and do not have moderator support.

The hosts run the chat when it is their time to do so. Some chats have circulated a Google doc that allows individuals to sign up to host chats. Some chats have more dedicated leadership that proactively reaches out to find hosts, and others may take over a particular chat when the chat no longer seems to run on a regular basis. Running a chat without a moderator requires that the host knows how to moderate a chat and understands the role of a chat host. The host prepares questions in advance of the chat, promotes the chat prior to hosting, and not only asks the questions but communicates with participants during the chat. The host may also greet participants, favorite tweets, and comment back on the posts of others. Table 6 documents the host driven chat criteria elements against the guidelines for the USDOE.
Table 6
Chat Classification: Host Driven Chat

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with the general principles of best practice listed on page 1</td>
<td>green</td>
<td>This format of chat is not fully supported by a chat moderator and lacks skilled facilitation at times.</td>
</tr>
<tr>
<td>Is facilitated by hosts skilled in online moderation. Effective facilitation techniques include the following:</td>
<td>yellow</td>
<td>Because the host leads these chats, some hosts are skilled at chat moderation while others are not. Host led chats are not consistent in format and facilitation.</td>
</tr>
<tr>
<td>Open-ended, thought-provoking questioning techniques that draw on personal as well as professional experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protocols to help learners connect around shared problems or possibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paraphrasing of participants’ contributions as well as comparisons and contrasts between participants’ views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses pre-crafted questions to provide a structure within which more spontaneous give and take can occur</td>
<td>yellow</td>
<td>It was difficult to find evidence that the host had pre-crafted the questions for these chats.</td>
</tr>
<tr>
<td>Encourages participants to share resources, such as webpages and videos, via links during the chat</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>Is part of a regular series of chats rather than a one-time event</td>
<td>yellow</td>
<td>With limited leadership these chats can sometimes have gaps in scheduling weekly hosts</td>
</tr>
<tr>
<td>Encourages participants to share their learning outputs using a Creative Commons license</td>
<td>yellow</td>
<td>This format is less likely to support the encouragement of sharing resources</td>
</tr>
</tbody>
</table>

Semi-Structured Interviews

A purposive sampling of chat designers was selected to gain a better understanding of each of the various chat formats. Had a randomized sample been used,
all of the chat designers interviewed may have utilized the same design principles and the chats could have possibly unfolded in the exact same manner. Categorizing the chats based upon their design and the structure of the chat to choose the designers across a breadth of chat designs allowed the study to explore the variances in the chat designs. One chat from each of the categories was selected and the chat designer identified so that an interview could be scheduled.

All five of the interviewees responded in a timely fashion and agreed to be a part of the study. Semi-structured interviews were conducted and recorded for transcription purposes. The transcripts of each interview were returned to the interviewee for review and approval prior to use in the data analysis. The resulting text files provided input for analysis that allowed the researcher to make sense of the data and assemble the perspectives of the chat designers being studied.

Analysis and Interpretation of Qualitative Information

The transcripts were coded and analyzed using qualitative methods. Computer-mediated discourse analysis—specifically, the constant comparative coding methods—were employed in this study. The goal of the process was to identify the emergent themes from the collection of codes that helped the researcher formulate the underlying story within the interviews. The comparison across interviews was necessary to find similarities across individual experiences. It was through coding, reviewing, and analyzing the fragments of the interviews that insights became clear. Coding and theme development for this study took six months to complete and was verified by a colleague who was a peer coder, and by the researcher’s major professor. Peer debriefing, peer
coding, and intersubjective agreement was reached after an extensive and exhaustive coding process had been performed.

**First cycle coding methods**

The first stage of coding began with attribute coding which allowed the researcher to identify the demographics of each of the participants and assign their pseudonym. “Attribute coding is good qualitative data management and provides essential participant information and contexts for analysis and interpretation” (Saldana, 2009, p. 56). The second step was to determine the structural codes. Structural coding was an essential step to determine the alignment of the participants’ responses to the topics of inquiry. According to Saldana (2009), the use of structural codes is perfectly suitable to use with interview data to index and label the information for later analysis (p. 67). The third step in the process was descriptive coding which allowed the researcher to define in a short phrase or word the meaning of essential elements of the data collection. The final step in the first-cycle coding process was the selection of the In Vivo codes. To maintain the integrity of their meaning, a selection of compelling short phrases or statements made by the participants needed to remain intact and shared as quotes in the reporting.

The first coding phase resulted in numerous insights. First, was a greater understanding of each of the interviewees’ individual perspectives. Second, was a review of each of the participants’ points related to the topics of inquiry for the study. And third, was the opportunity to verify the initial categorization of the chat and determine if there were any misunderstandings.

**Constant Comparative Analysis – Themes/Categories**
After the development of the preliminary codes in the first cycle, the constant comparative method was used to continue the analysis and determine the final set of codes or themes for the study. The constant comparative method was chosen for its ability to “increase both the traceability and credibility of the researchers’ analysis in their qualitative studies” (Boeije, 2002). Within the analysis, there were many opportunities to compare interviewees’ answers, codes, and themes. This method allowed the researcher and peer coder to collaborate to ensure the themes were accurate and appropriate. The comparisons were made within a single interview and by topic of inquiry across multiple interviews. This process was not linear, but rather cyclical in nature. After several iterations, the following eleven themes emerged: (1) co-moderators, (2) learning community, (3) pedagogy, (4) topics, (5) issues, (6) participants, (7) hosts, (8) planning/tools, (9) format, (10) moderator control, and (11) promotion. Additional detail regarding how these themes relate to the topics of inquiry will be revealed in Chapter Four.

Trustworthiness

The researcher in this study was diligent in ensuring the ethical treatment of the data and the validity and reliability of the findings produced in this study. Peer support was used in both coding the qualitative information and in reaching intersubjective agreement regarding the outcomes of the codes, categories, and themes from the analysis. Regular meetings were held with the peer coder and the major professor to ensure that the analysis followed the necessary protocols.

In an effort to ensure the validity of the findings, the researcher shared her subjectivity statement with the peer coder and major professor prior to analysis of the data.
data. During the data analysis, the peer coder and researcher reviewed any concerns regarding possible bias, checking codes, categories, and themes to ensure that they were subjective in nature. The researcher was mindful of inserting possible bias during the analysis and used the bracketing approach to set aside items that may come into question for further review. The items that were bracketed were used as topics for discussion with the peer coder for additional conversation to ensure the congruency of the findings. Phenomenological reduction, or as Merriam and Tisdell (2016) call it, “the process of continually returning to the essence of the experience to derive the inner structure or meaning in and of itself” (p. 27) was used to better understand the phenomenon in question. And, finally, the horizontalization process was undertaken using the transcripts and post-it notes to group and regroup the codes into categories and later develop the themes in this study. The researcher took into consideration each horizon and the “textural qualities” of each experience shared by the participants to find the essence and meaning behind the stories. These textural qualities lend themselves well to the narrative in Chapter Four, which illuminates the detailed discoveries (Moustakas, 1994).

Triangulation was possible due to the multiple methods of data collection and analysis employed in this study. The researcher has lived alongside the participants and has collected data for over a year, which provided the researcher the ability to continually reflect on the outcomes of the study. The stories shared by the interviewees were easily checked against the observations of the Twitter chat, chat archives, and blog posts.

Summary

This chapter presents the methodology employed by the researcher for this phenomenological study of educator twitter chats. Qualitative research methods were
chosen to make sense of this phenomenon through the rich descriptions of lived experiences by the chat designers. The analysis and categorization of state hashtag Twitter chats led to the identification of five chat formats: host driven, moderator driven, guest host with moderator support, live google hangout during chat, and rotating moderators.

The participants of the study were designers and/or moderators of their states’ hashtag Twitter chat. A purposive sampling was utilized to select a chat designer from each format of chat identified in the preliminary analysis. Five semi-structured interviews were conducted, recorded, transcribed, member-checked, coded, and analyzed. The semi-structured interviews provided an opportunity for the researcher to determine the critical components of Twitter chats as designers highlighted their personal positive and negative experiences.

A two-phased, qualitative coding process included descriptive, attribute, InVivo, and structural coding in phase one. Phase two employed the constant comparative method until saturation was reached. Ethical treatment of the data, phenomenological reduction, bracketing, peer coding, and triangulation ensures that the information presented in Chapters Four and Five is trustworthy and valid.
CHAPTER 4
RESEARCH FINDINGS

Introduction

The data analysis presented in this chapter summarizes the findings from five semi-structured interviews with Twitter chat designers. The interviewees were selected as a purposive sample of all statewide educator Twitter chats. The purpose of this phenomenological study was to explore the phenomena of Twitter chats and illuminate their alignment to the pedagogical philosophy of the chat designer. To present these findings, the data was codified until categories emerged and finally themes presented themselves. This chapter will present the categorical and demographic information of each interviewee followed by sharing the data specific to the themes that emerged from the study and the information gathered related to each of the topics of inquiry.

This study investigated statewide educator Twitter chats and specifically sought to address the following topics of inquiry:

1. How does the Twitter chat structure align with the designer of the chat’s teaching philosophy?
2. What practical processes are in place to support the Twitter chat? How are the chats run and by whom?
3. What structural changes have been made since the initial design of the chat?
4. What is the perceived value or utility of the chat?

The information collected from each of the interviews was anonymized. The chat designers names have been substituted for pseudonyms and the hashtags are not used to describe the chat itself; instead each chat has been given a letter, A through E, to further protect the identity of the participants in the study.
Categorical and Demographic Information

As mentioned in Chapter Three, forty-six statewide Twitter chats were monitored for one month during which time, the format and structure of the chats were documented. The data collected was analyzed, and the chats categorized based upon their similarities and differences. This process presented six chat categories. One of these categories did not meet the minimum criteria for this study and was eliminated. The five chat categories featured in this study include moderator driven, rotating moderator, chat with live Google hangout on air, a guest host with moderator support, and host driven. One chat designer from each of these categories was selected as a purposive sample to better understand their lived experiences. Table 7 presents the chat category and demographic data pertaining to each of the interviewees.

Table 7

Demographic Information

<table>
<thead>
<tr>
<th>Chat</th>
<th>Chat Format</th>
<th>Pseudonym</th>
<th>Age</th>
<th>Gender (M/F)</th>
<th>Ethnicity</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Moderator Driven</td>
<td>Rachel</td>
<td>40</td>
<td>F</td>
<td>Caucasian</td>
<td>Principal at private school</td>
</tr>
<tr>
<td>B</td>
<td>Rotating Moderator</td>
<td>Phoebe</td>
<td>39</td>
<td>F</td>
<td>Caucasian</td>
<td>Educational consultant</td>
</tr>
<tr>
<td>C</td>
<td>Chat with Live Google Hangout on Air</td>
<td>Chandler</td>
<td>48</td>
<td>M</td>
<td>Mexican-American</td>
<td>High School Principal</td>
</tr>
<tr>
<td>D</td>
<td>Guest Host with Moderator Support</td>
<td>Ross</td>
<td>50</td>
<td>M</td>
<td>Caucasian</td>
<td>Superintendent of K-12 school district</td>
</tr>
<tr>
<td>E</td>
<td>Host Driven</td>
<td>Joey</td>
<td>35</td>
<td>M</td>
<td>Caucasian</td>
<td>Middle School Vice Principal</td>
</tr>
</tbody>
</table>
Moderator Driven

A moderator leads these chats and they utilize a question and answer format. The questions are posted either by the moderator account for the Twitter chat or by a chat moderator who leads the chat regularly. In this category, Rachel a 40-year-old female who runs chat A, was interviewed. Rachel is currently serving as a principal at a private school and was the original creator of the chat that she moderates.

Rotating Moderator

This chat format makes use of multiple moderators who take turns running the chat or asking the questions. Phoebe, a 39-year-old female, is an educational consultant, and one of the moderators of chat B. She was involved in the original design of the chat as well as deciding upon and establishing the roles and responsibilities of the moderator team.

Chat with Live Google Hangout on Air

These chats provide a live look at a conversation using live broadcasted Google hangouts online. During the Twitter chat, a link to a Google Hangout is posted to the chat hashtag. Chat participants can watch a live interview conducted by the chat moderators and a special guest and tweet their thoughts and questions using the hashtag. Chat C was created by three male K12 principals who connected on Twitter and determined that educators in their state could benefit from a state wide Twitter chat. Chandler was one of these principals, he is approximately 48 years of age, and is the only original developer of the chat who is still involved and moderating Chat C at the time that this study was conducted.

Guest host with Moderator Support
These chats have the support of a moderator who lines up guest hosts who are typically experts or authors. The moderator supports the chat (welcoming guests, favoriting tweets, providing guidelines and reminders) while the host asks questions. A superintendent of a K12 school district leads chat D. Ross is a white male and is 50 years of age. He was a part of the original team that created the chat in 2013 and he has moderated it since that time.

Host Driven (Q/A)

These chats are led by the host for the week and do not have moderator support. The hosts run the chat when it is their scheduled time to do so. This lack of moderator support requires that the hosts know how to moderate a chat themselves and understand the role of a chat moderator. When the researcher reviewed the chats and developed the categories, chat E was selected from this category. However, at the time the interview was conducted, this chat had changed significantly. Joey, a 35-year-old white Caucasian middle school vice principal, shared with the researcher how the chat had evolved over time and those changes are chronicled in the study.

Findings

This research study sought to determine if there was an alignment between the interviewees’ pedagogical philosophy and the format of the chat, and also to identify practical processes that were used to run each of the chats. Changes to the structure or format of the chats were also documented, as well as the interviewees’ perceived utility of the chat that they manage. Table 8 presents a high-level summary of the findings aligned to each of these topics of inquiry.
Table 8

Summary of Findings

Summary of findings organized by topic of inquiry

<table>
<thead>
<tr>
<th>(Topic 1) Chat structure and alignment to teaching philosophy</th>
<th>(Topic 2) Practical processes</th>
<th>(Topic 3) Structural changes since the first design</th>
<th>(Topic 4) Perceived utility of the chat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined various pedagogies</td>
<td>Built upon tried and true model</td>
<td>Share the questions in advance of the chat</td>
<td>Access to experts</td>
</tr>
<tr>
<td>Relationships that allow for professional discourse</td>
<td>One-hour chat once a week</td>
<td>Added a chat time that didn’t work out</td>
<td>Learning community</td>
</tr>
<tr>
<td>Create positive learning environments</td>
<td>Question/Answer format</td>
<td>Moderators changed</td>
<td>Participant voice</td>
</tr>
<tr>
<td>Student-led, inquiry based learning</td>
<td>Selection of broad topics that appeal to a large audience</td>
<td>Added Google Hangouts on Air to the chat (2 chats attempted this – 1 kept this new format, 1 did not)</td>
<td>Invigorates educators for the next day</td>
</tr>
<tr>
<td>Flexible pedagogy</td>
<td>Invite hosts that have large numbers of followers</td>
<td>One chat stopped completely for a 6-month period of time and then came back – co-moderators was key to this.</td>
<td>Connecting educators</td>
</tr>
<tr>
<td>Creating teacher choice in PD</td>
<td></td>
<td></td>
<td>Advocate for educators</td>
</tr>
</tbody>
</table>

The information provided by the interviewees, related to their teaching philosophy, presented a need to combine various pedagogies. Their desire to create learner-led or inquiry based learning opportunities and positive learning environments for other educators was expressed. All of the interviewees were in a leadership position at the time they created their chat ranging from educational consultant, to vice-principal, to
principal or superintendent. The various roles held by the interviewees may provide some insights into their perspectives regarding the provision of choices in teacher professional development and development of relationships that afford professional discourse with their peers in the field of education. There was an importance placed upon relationships and a human connection between teachers beyond the school building so that they can learn from each other.

The most commonly used format is question and answer based where the questions are numbered (Q1, Q2, Q3…) and the corresponding answers were labeled (A1, A2, A3…). The Google Hangout format was different from this design. The Twitter chats studied were all held for one hour, once a week and while most of the chats at their inception had the goal of focusing on their respective state topics, they have all evolved to include topics with broader appeal and to a wider audience. There are only two chats in the study, which still dedicate time to state specific topics and legislative issues. While only two of the chats studied invite hosts or experts each week, two others mentioned that they have occasionally invited guest hosts. The use of hosts or experts assists with promotion of the Twitter chat if the host invited has a large Twitter following.

The changes in the design of the chats that were documented were quite varied. The stories shared by chat founders varied from minor changes like sharing the questions in advance of the chat or major changes such as adding a second chat time or a Google Hangout. Each chat founder expressed that their had struggled in some way with it’s moderation and keeping moderators on board with the exception of Chat B. Chat E had struggled so much with the aspect of moderation and keeping it’s moderators involved
that the founder (or moderator) explained that the chat completely stopped for six months.

The value of Twitter chats, or the perceived utility of the chat as described by the participants in this study, included concepts such as the ability to connect and invigorate educators, creation of a learning community, and advocacy for teachers. Each of the interviewees shared stories that they had heard from their chat participants that expressed value the chat had provided to that individual. The details of the findings from each of the four topics of inquiry are described, in detail in this chapter.

Emergent Themes

During the process of coding the qualitative data eleven themes emerged. Table 9 presents these themes organized by the topic of inquiry that they support. Two of the emergent themes, format and moderator control, were found to each support two topics of inquiry.

Table 9

Emergent Themes

<table>
<thead>
<tr>
<th>Emergent themes organized by topic of inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Chat structure and alignment to teaching philosophy</td>
</tr>
<tr>
<td>Pedagogy</td>
</tr>
<tr>
<td>Format</td>
</tr>
<tr>
<td>Participants</td>
</tr>
<tr>
<td>Hosts</td>
</tr>
<tr>
<td>Planning Tools</td>
</tr>
<tr>
<td>Format</td>
</tr>
<tr>
<td>Moderator Control</td>
</tr>
<tr>
<td>Promotion</td>
</tr>
</tbody>
</table>

55
The themes that emerged in the coding process that were related to chat structure and teaching philosophy are pedagogy and format. The pedagogies of the interviewees were similar in that they all expressed value for voice and choice and respect and support of the varied teaching practices that the educators in their schools leverage in classroom practice. As the findings show, Twitter chats provide an inquiry-based learning environment where teacher-centered professional discourse occurs.

The question and answer format and the use of pre-crafted questions in Twitter chats were identified as creating the inquiry learning experience for the participants. The other themes that emerged in this topic of inquiry include topics, participants, moderator control, co-moderators, planning tools, hosts, and promotion. Due to the nature of Twitter chats as self-directed learning experiences that educator’s opt-in to, it is useful to use broad topics with a wide appeal to increase participation in the chat. The responsibilities of scheduling hosts, scripting questions, organizing topics, favoriting and retweeting participants, and ensuring the chat runs each week all lie with the moderator or host. There were various levels of moderator control, evidenced within the chat formats studied. All of the interviewees expressed the need for support in the form of co-moderators where one specifically said, “it is overwhelming to be the sole moderator”. Planning tools varied somewhat, but all interviewees related use of Google documents for collaborative development of questions. Two of the chats included in the study made use of guest hosts regularly, while two others invited hosts occasionally and one mentioned that the co-moderators were not yet ready to consider such an approach. Lastly, the issue of promotion came up in the interviews. Without participation, there is no Twitter chat, there would only be questions tweeted into a hashtag. Promotion of the chat is necessary
to help educators know when to join and what the topic or discussion is for the week. Having others with large followings contribute to promoting the chat is helpful in this effort, as is inviting guests with large Twitter followings.

Significant structural changes have taken place since the initial design of a couple of the chats. These changes led to the development of the themes related to topics, challenges, and moderator control. State specific topics came up in all of the interviews, and several mentioned the need to shift toward topics with a broader appeal. Challenges were described, as powerful motivators of change to the chat formats, where lack of availability of moderators or adding new moderators had the largest perceived impacts. The amount of moderator control that was exercised over the chat also came up as an emergent theme. Finally, when considering the perceived utility of the chat, the development of a learning community emerged as a key theme.

Topic of Inquiry 1
How does the Twitter chat structure align with the designer of the chat’s teaching philosophy?

Rachel expressed a personal pedagogical philosophy that she described as being flexible. Her mission is always to meet students where they are and do what is best for them. She said that her teaching philosophy has evolved over time, and made the case for encouraging a flexible teaching philosophy during the interview. She commented, “I think it's really important as educators that our teaching philosophy isn't one that's set in stone, that our teaching philosophy really modifies as we're moving forward.” Rachel stated that her goal has been to create teacher choice in PD, as this aligns with her philosophy of meeting learners where they are and taking them where they want to go.
When it comes to learning, Phoebe, the co-designer of Twitter chat B expects learning to be student-led and inquiry-based. She explains her personal philosophy of teaching as promoting conversation and helping learners discover answers to their own questions. She promotes conversation and describes her perfect classroom as noisy. Phoebe defines the teacher not as the expert, but rather as a guide to assist learners as they follow the curiosity trail. She said, “I love posing questions with my students to find answers too, I like to help lead them towards the answers rather than giving them answers, I believe the questions are more valuable than the answers actually are.” The Twitter chat is an extension of this philosophy as it allows educators to find their voice, share, support, and challenge each other and also promotes a culture of curiosity. The chat is a network of educators who inspire and support lifelong learning.

Twitter chat C’s leader related that he has had his share of bad school experiences and feels compelled to protect others, serving them so that they don’t suffer the same fate. He mentioned, “I just want everyone to have that positive experience that I feel like I never had.” He explained that his hopes are that others not only have a better experience than he did, but that learners also have a very positive learning environment where that can occur. He asked “how do we create … positive environments, where every kid has an opportunity and quite frankly every staff member has an opportunity, to leave their legacy?” He said that he works hard to provide opportunities for his team to leave their legacy on the school where he is the principal. He mentioned it takes intention “from a philosophy of education or from a leadership perspective, it's always thinking about how do you give of yourself to others to provide that positive experience?”
Chat D is led by Ross, who is a superintendent at one of the school districts in his state. Rather than identify his personal teaching philosophy, as he has been out of the classroom for many years, he focused on recruitment of teachers with various pedagogical philosophies. He expressed that there is a need for educators who are out of the box thinkers and said “teachers have gone from being the controllers of information to the facilitators of the information. There's so much information available for kids on their cell phones. You better learn to facilitate because they can learn as much as you know in minutes, or seconds even." In the case of Chat D, it is the guest host who co-moderates the chat and who exerts the most control over the format of the chat. While Ross explained that he provides the guidance regarding the structure and format of the typical chat, the host is critical to the success of the chat for the week they are leading the conversation.

Joey, the leader of Chat E, articulated that educators are in a people business, and that everything they do is built from their relationships. He went on to express that the more teachers connect with fellow educators and can share and learn from and with them, the better able they are to do their jobs. Joey said “The more people we connect with and the more people we're able to share and learn from, I think the better we are at doing our job. Which is one of the reasons why I think Twitter can be so powerful, is that it's a great way to share ideas, it's a great way to build relationships, and it's an opportunity for you to learn from others and not just be limited to your geographical location or your school district or you school to gain ideas from.” Joey went on to say that his hope is that by leveraging the affordances of social media, these educator connections will be extended beyond the walls of our schools. The goal of Chat E is aligned in the sense that they wish
to be a smaller chat that is focused on conversations, which allow for development of relationships and professional discourse.

Topic of Inquiry 2
What practical processes are in place to support the Twitter chat? How are the chats run and by whom?

The themes that emerged within this topic of inquiry included format, co-moderators, hosts, and moderator control, topics and promotion, participants, and planning tools. The lived experiences of the chat designers presented in this chapter are organized by these themes that came up while interviewees were answering questions related to the topic of inquiry.

Format

Chat A’s leader Rachel explained that she connected with other chat leaders in 2013 to learn how they ran their chats. She started Chat A with a tried and true model that she learned from other chat moderators. In February of 2013, Phoebe sent out a single tweet that led to a planning meeting at a local edcamp. It was this meeting that led to the creation of Chat B.

All of the interviewees use the question and answer format for their chat except Chat C, which utilizes the live Google hangouts on air design. Chandler became active on Twitter in 2013, joining in other edchats as a participant. After connecting with another principal from his home state in a different state Twitter chat, the two later connected and formed Chat C to serve educators in their state. Chandler sought guidance from a colleague who had been a chat moderator. This person shared their entire existing process and offered its use “as-is” or for it to be changed to suit his needs.
Five or six people were a part of the creation of the Chat D in 2013 when Twitter chat was formed. Ross started by exploring a few twitter chats and then connecting with a state blogger. Before starting the chat, Ross searched potential chat hashtags on Twitter to determine what would be a good hashtag for the chat. Once a hashtag that did not have any tweets posted to it was found, the decision was made to use it. A month later during an EdCamp in that state, interested parties joined, and the chat was formed.

Chat E was started by a group of educators, but Joey has been the one constant stakeholder as chat moderators have come and gone. The chat was modeled after the larger State chats but is still small enough to have an excellent discussion with about 10 to 20 participants each week.

Co-moderators, Hosts, and Moderator Control

Chat A is a moderator driven chat that is facilitiated by Rachel with one other person assisting. She talked about the need for a co-moderator. While the level of support that her co-moderator provides has not been consistent, she stressed the need for such assistance in running a chat. Rachel invites occasional guest hosts when it works out from a scheduling perspective. Chat A’s guest hosts are typically experts in a topic that has been deemed beneficial to chat participants.

Ten moderators share the responsibility of running and supporting chat B. Each week is led by two of the ten, and each has a different style that makes the chat unique. The moderator pairs create the questions for the week collaboratively. Phoebe, the interviewee in this study, moderates the second Sunday of the month and uses the same script that the others use to facilitate the chat. The only real changes from week to week are the topic and the questions. Phoebe expressed that shared ownership of the chat
provides scalability, does not overwork any one moderator, and requires trust in the other leaders. She stated that having two moderators each week helps with moving the conversation along and supporting side conversations.

Chandler determined that it would take three people to run Chat C and was able to find two other like-minded male principals to help out. He said that this core team gave a lot of thought to how they could attract the largest audience that would allow them to have the most impact on education. One of the biggest challenges that Chat C, in his opinion, has faced has been finding people to host the weekly chat. He related that a good host is an expert in a particular topic and is someone that a lot of people will enjoy hearing from which draws a large audience. Chat C is so large now that the moderators only bring in a guest host about once every six weeks. Communication between the moderators is critical to ensuring that the chat gets moderated and archived. Chandler said that a critical process is the development of the weekly questions. Thinking through possible responses and editing the questions is helpful to the process and that there are two people dominant in crafting the questions.

Ross says that while the chat is engaging it varies based upon the host for the week, with some having follow-up questions and some not. While the hosts tweet the questions and manage their own conversations, Ross moderates the chat each week. He stated that he is the person responsible for ensuring that the chat runs on a weekly basis, that guest hosts are scheduled, and that each of the chats has support. Chat D’s hosts have included school board members, teachers, authors, superintendents, parents, and others. The goal was to have a variety of hosts and to ensure that there is a diversity of people and topics.
Topics, Promotion, and Participants

According to Rachel, the topics for Chat A are occasionally focused on state issues but more often are hot topics that have a broader appeal. Rachel’s original intention was to have a larger impact in her state but found that the participants in the chat came from a variety of locations. Over the last 6-9 months, the participation from educators in her state has increased in her opinion. Chandler also mentioned that in Chat C the topic of the chat would be specific to the state from time to time, but that topics that appeal to a larger audience have often been chosen so that others beyond state lines could join the conversation. While Chat D is known for its ability to impact the state legislative agenda, the topics on the Twitter chat may also include more topics that may interest educators beyond state lines. Joey said that it was an excellent opportunity to bring educators together from across his state in order to share ideas. Joey stated that as chat leaders, it is important to model consistency and pick compelling topics that will elicit a discussion.

Promotion is an essential consideration in establishing the chat and encourages others to join. According to Rachel asking other educators, who have significant followings, to assist in the promotion of the chat is helpful as well as having these same educators guest host the chat. These guest hosts may bring their followers with them to the chat and lend their expertise.

Phoebe discussed how topics had stemmed from a curiosity of the moderators, their personal research, or current events. Occasionally an expert may be asked to host the chat on a particular topic, but that happens infrequently. Ross said that in his case, not only does he ask people (leaders, experts, teachers, and parents) to host the chat but also...
that his guest hosts also select the topic and then develops the questions in advance of the chat. Both Ross and Chandler both expressed a desire for the conversation on their chat to be inclusive of teachers’, parents’, students’, and administrators’ opinions.

While the topic of promotion did not specifically come up in all of the interviews, there were nuances of this when the designers talked about guest hosts and the need for support. Without getting the word out about the Twitter chat, there will not be an audience for the chat, so promotion is a necessity. Rachel described being organized and having an established professional learning network (PLN) as essential. However, inviting guest hosts that have large followings was a concern for Chandler at first until Chat C grew to be a certain size.

Planning Tools

All five of the chat designers interviewed said that they use the collaborative planning tools provided by Google Docs to develop the questions and plan the chat in advance. In the case of Chat A, Rachel dominates the development of chat topics and questions as her co-moderator is sometimes not entirely available to support the chat. In addition to Google Docs, Rachel uses Storify to archive the chat each week. Chat B moderators use Google docs, sites, and sheets in support of their chat and Phoebe said that they even meet annually in person to coordinate and plan the chat for the year.

When Chat C was just getting started, Chandler and the other two chat moderators used a conference call line and a Google Doc to allow the moderators to collaborate and plan each chat. As the chat evolved over time, Chandler said that they began to use Google Docs, Twitter, and Voxer, a two-way walkie-talkie application for smart phones. Chandler said that the roles and responsibilities (welcoming guests, responding to people,
keeping the discussion going, and archiving the chats) used to be more organized, but have become less structured as the moderator team is attempting to balance life, family, and travel. Chandler expressed that these factors have made it difficult for some of the moderators to be in the chat.

Ross explained that he uses Google docs, spreadsheets, and Twitter to manage the chat and stay in touch with upcoming hosts. He typically has eight questions in reserve in case a host cancels. Chat E’s moderator, Joey stated that he does not use guest hosts and typically has 6 or 7 questions prepared in a Google Doc that is shared during the Thursday night chat.

Topic of Inquiry 3: What structural changes have been made since the initial design of the chat?

Format Changes & Challenges

While Rachel described that there have been no substantive changes to the design or format of Chat A, she explained some of the fine-tuning or streamlining of processes that have made it easier to moderate the chat. Chat E went through significant changes due to the lack of ability by the original team to moderate the chat regularly. The complexity of the original moderators’ schedules did not allow them to participate. The chat went dormant for a period before Joey asked others to help co-moderate. After six months, the chat restarted with a new moderator team and has continued since.

Phoebe shared that the only substantive change made to the overall format of their weekly chat was the decision to share the questions in advance. After about six months of running Chat B, the team of moderators realized that the questions were difficult to find during the chat due to the number of tweets posted to the hashtag. Now Chat B’s
moderators share a Google Doc that contains the questions and resources in advance of the chat to alleviate this problem. At one point the moderator team attempted to add live Google hangouts to the chat, but they found this distracting and potentially made it hard for participants to concentrate. There was also a concern raised by one of the participants in the chat who thought a large company managed Chat B, but this misinformation was quickly corrected.

Chandler described the numerous modifications to Chat C such as a changes in moderators, chat time, and the tools that are used to run the chat itself. In the last year Chat C has added three people to the moderator team. These include a tech director, a librarian, and an elementary school principal. The moderator team was, and is, male dominated. Previously, three men moderated it and now there are five males and one female moderator. Chat C’s new moderator team found Sunday night to be a difficult time, due to their own personal obligations, and determined that it would be best to add a morning chat time. Additionally, the moderator team felt that the addition of a live Google Hangout on Air during the chat would prove valuable to the community of educators who participate in Chat C. Google Hangouts on Air allow users to host and broadcast synchronous videos-based conversations. These Hangouts on Air worked well for Chat C and allowed the moderators to invite a variety of people to be interviewed that may or may not have a Twitter following or even an active Twitter account. According to Chandler “this new format breaks up the chat format and allows participants to listen to a discussion.” The Twitter stream moves more slowly during one of the Hangouts versus the speed of the stream during the typical chat that only uses Twitter. The live chat audience is not as involved and smaller than the regular Twitter-only chat unless the
person is well known. It has been difficult for the moderators to schedule the live hangouts consistently once a month. Chandler said that the feedback from the live shows has been positive and he feels confident that people who are watching like it.

According to Chandler, when they first began, the live shows during Chat C were very structured and organized. All six moderators took part in the early shows and there were clear roles and responsibilities. However, now there are only 2 or 3 moderators who regularly join the live shows. He explained that this has meant that the moderators are taking on many roles during the chat such as watching the backchannel for questions and comments while also participating in the interviews.

**Moderator Control/Co-moderator Support**

When Rachel started Chat A she asked one of the teachers who worked for her to co-moderate the chat. Rachel’s co-moderator is often times not on her computer, and when she is connecting from a mobile device, there may be internet connectivity issues. The co-moderator is also not comfortable running the chat without Rachel so that means that when she cannot be available they have to cancel the chat for that week. The lack of proper moderation and support for the chat, which Rachel mentioned is “a lot of work”, leads her to be concerned about the sustainability of the chat.

Chat B relies heavily on co-moderators to take ownership of their respective week each month that they moderate. There are 10 co-moderators of Chat B with each team of two people responsible for one of the weekend chats each month. These co-moderators are empowered and trusted to lead the chat making use of their unique styles. Co-moderation in this chat is unique in that they are the only state chat studied that uses a distributed leadership model without central authority.
Phoebe talked about how important it is to share the workload across a team of people. Phoebe shared the story of a fifth Sunday of one month where none of the Chat B moderators had taken responsibility for running it that week. She related that she went to the Google doc to see “Oh, who's leading chat tonight and what's the topic?” and determined that no one was driving it so she “put together a chat last minute, which ended up being a really great chat.”

Chat C started with three co-moderators and added three more about a year ago. They added the additional co-moderators to address various audience types and add some diversity to the team of secondary education principals. The new team includes a librarian, a technology director, and an elementary school principal to the lineup. Of these moderators, five were men, and only one was female. Each week two of the six moderators contribute to writing the questions to be used during the chat. Chandler described that several of the moderators have had difficulty balancing work, like, and the chat, which has resulted in several responsibilities being redistributed. At the time of the interview Chandler shared that several of the moderators were too busy to continue supporting Chat C; the morning chat has been dropped due to lack of support and competing priorities.

Chat D started with five or six co-moderators but after a short period that changed. Ross described losing the support for the chat and needing to reach out to some colleagues in order to provide the support required to sustain the chat. The current co-moderator team favorites and retweets the good tweets shared by others in the chat each week. The power to determine guest hosts, topics, and questions for Chat D each week lies solely with Ross. He expressed that at times are participants in the chat who is
negative. The local newspaper covers the chat, and may get concerned about this taking place. The newspaper is primarily worried about groups that aren't pro-education or pro-public education jumping in and sharing a blog or tweeting. Ross related that an early member of Chat D tried to police the chat a long time ago. He thought Chat D should stay out of the political and legislative aspects of education. Ross said that he asserted himself and made sure that everyone knew they couldn't police the chat. When considering the changes to the chat over time, Ross explained that initially there were a lot of people willing to help with the chat and that this group dwindled down to three people. Ross shared that in the early days they were scheduling hosts on a weekly basis, and now they are booked two months in advance.

The other two co-moderators who originally helped Joey start the chat had scheduling difficulties and at one point in the summer of 2015 the chat stopped. It had become difficult for Joey to manage alone due to work commitments. He related that he had to prioritize things in his life by stating “When that other person dropped out it really was me sustaining the chat, and it just became just too much for me to be the sole facilitator. The chat went dormant I want to say for about six months, from about January of 2015 until July of 2015.” People wanted to have some way to connect digitally, which helped restart the chat. There are 7 or 8 members of the new Chat E moderator team that regularly manage the chat since it became active again. When it was just him Joey said it was hard to stay ahead of the chats, and now there are enough folks that they can divide up the responsibilities. He commented that sharing the workload “is nice, because I've found is when I was the sole moderator, I was very involved in trying to get the questions up and keep the chat running that I felt I was missing out on some of the learning and the
relationships that you get when you can just come and share, and you don't have the other responsibilities. It's almost like you're so worried about everybody else that you forget to take care of yourself a little bit.”

While Joey is still the primary moderator, the other co-moderators who help with the chat also help make decisions on topics and develop the questions with him. They use Google Docs and use group direct messages on Twitter to ensure that everything is well organized. Joey shared his excitement with the new co-moderators who have brought new ideas to Chat E and helped it to evolve into what it is today.

Joey shared his experience of losing his co-moderators and then being unable to sustain the chat. He said that it “became difficult to balance life, work, and the chat as the sole moderator. Sharing the responsibility with others takes this issue away.” After a six-month period when the chat was no longer active, Joey was able to assemble what he called a proper team of 8 educators who share the responsibility of moderating the chat. He is delighted with the team, saying “New moderators bring a wealth of experiences to the team and new ideas that have been helpful.” He describes the business of leading and moderating a chat as “a big job” and explained that a team is needed.

The recurring theme expressed by a majority of the interviewees was the importance of moderators support. When there is a lack of support the chat leader must either add new moderators or risk the chat going dormant. In the case of Chat D, when moderator support was lacking, the leader rebuilt the team. Chat A described a perceived weakness in only having one co-moderator who had difficulty supporting the chat regularly. Chat E went dark for six months due to the lack of moderator support before Joey was able to rebuild the moderator team and bring the chat back online.
Topic of Inquiry 4:

What is the perceived value or utility of the chat?

All of the interviewees mentioned the collaborative learning community that forms in these statewide Twitter chats. The participants have the opportunity to build relationships with like-minded educators beyond the walls of their school building. These participants share ideas during and beyond the chat. As Rachel mentioned “A lot of conversations sprout out from the chat just like individual conversations with people, "Here is something that they like that someone else is doing, like digital portfolios or something that someone else is doing.”

Each of the chat designers mentioned that these communities connect educators so that they can collaborate, communicate, and challenge each other’s ideas in a professional discourse that can lead to improvement in one’s teaching practices. This was one of the primary goals of Chat B which Phoebe articulated as “we really wanted to give teachers a voice and a place to share that, that would be not just supportive, but also a place where ideas can be challenged, where you’ve might be introduced to a new way of thinking that you might not have thought about before. It was a way to find a network of people, who not only inspired you to be better but also supported you in your journey of becoming better.”

Interviewees expressed there being value in the chat participants having access to experts and each participant having a voice in the conversation, even those who would not normally speak up. Chat A connects people and encourages the sharing of ideas. Connecting educators with information and each other is valuable and Rachel shared that leading the chat has led to her being asked to keynote a conference.
Phoebe stated that the value of Chat B is that “we are advocating for teachers in California. Our teachers are phenomenal, but that story isn't getting told in the media.” There is also immense value in the community and the connections. Meeting chat participants during a Chat B meet up at a conference puts a unique spin on the event.

Chandler stated that chat C has become a forum for educators 24/7, not just a chat or hashtag and that the conversation has expanded far beyond just their state educators. Chandler has heard from participants that the Sunday night chat invigorates them for Monday by connecting educators who may find themselves isolated and connect them together. This feedback from chat participants’ helps Chandler feels like Chat C is having an impact and making a difference.

Chandler shared that the chat archive also provides evidence that the chat is valuable. "I know people are offering really good ideas because there's follow-up." Moderator connections and relationships are precious and when the Department of Ed is reaching out to ask them to take on a topic to gather feedback for the State. Chandler expanded on this saying that this helped him feel “like the work that you are doing is viewed as valuable”. Today Chat C is seen as a forum where state educational leaders can get input from a lot of educators regarding what they are doing at the state level. The moderators of Chat C are invited to be a part of the conversation at the State Board of Education during the summer in person as a result of the chat. Ross explained that there are many, many more people listening than there are participating on any edchat in his opinion and that the biggest value is that Chat D is a group of individuals sharing best practices to help kids.
Joey mentioned that he felt that he learned in Twitter chats himself as he transitioned from a lurker to a more engaged learner. Based on Joey’s personal experience he now feels that others would benefit from developing a state Twitter Chat in his state. “Creation of another Twitter chat in the education sector does not take anything away from the other chats; it just increases the opportunities for people to learn and share.” Twitter chats provide an opportunity for people to connect and build relationships. One teacher in Joey’s school was able to make a connection and mystery Skype with this other teacher's classroom. This connection was made with educators and students from across the state and may not have happened without the influence of the chat.

While the value of the Twitter chat is hard to quantify, Joey mentioned that he derives value from it in the connections he establishes. He also hears from educators in the chat that they find it valuable. After already knowing other educators on Twitter, it is exciting to meet each other at a conference. Joey expressed that the goal of Chat E is to bring people together and get them talking about ideas that impact education, their lives, and careers. The hope is that they affect classrooms and people’s mindsets.

Summary

Each of the interviewees were able to identify ways in which their chat aligned with their own teaching philosophy. Even in the case of the most significant structural changes to the chat, Chat C, Chandler talked about how the shift to using Google Hangouts Live on Air was more aligned with his philosophy of teaching than the previous question & answer format on Twitter. Each of the chat designers shared the
details of their practical processes for supporting their chat and how the chats are run and by whom. In addition the perceived value or utility of the chats were described.

The emergent themes were identified and specific examples of how each of these themes was important to the topics of inquiry. The importance of co-moderators came up multiple times and ownership or someone who takes responsibility for the chat is critical to the chat’s success. Without the participants, there would be no chat at all so it is essential to promote the chat and have a format that is easy to understand and well planned. The topics need to have a broad appeal and the hosts or moderators need to be skilled at supporting a community of learners who became compelled to be a part of the chat each week.
CHAPTER 5
DISCUSSION AND CONCLUSIONS

Introduction

After the categorization of these 46 state educator Twitter chats based upon their designs and documenting the qualitative findings from each of the interviews, it is important to consider the implications of this research. Based upon careful examination of the data in this study, the researcher presents the alignment to the existing literature summarized in chapter two as well as providing implications and additional considerations for future research.

Summary of the Findings

Chat Categorization

Using the USDOE guidelines from their publication Online Professional Learning Quality Checklist the chats were reviewed to ensure they would meet the criteria provided with either a medium or high level of evidence in each of the categories. Fourteen of the forty-six chats were eliminated because they did not meet the USDOE standards of quality at the time this study was conducted. The remaining thirty-two chats were then categorized based upon their chat design, the moderation methods, digital tools used and the volume of participation. This step in the process was an investigation of the phenomenon without treatment, where the researcher simply identified and documented the criteria in order to develop the categories based upon the Twitter chats similarities and differences.

As described in chapter three, upon conclusion of the documentation, five categories emerged: moderator driven, rotating moderator, chat with live Google hangout
on air, guest host with moderator support, and host driven. When considering the pedagogy of the chat itself, it became necessary to consider the control of the learning environment and how facilitation occurs in order to better understand how this may link to the philosophy of the individual chat designer. This is described in greater detail in the summary of the qualitative findings.

Summary of the Qualitative Findings

Each of the various chat designs demonstrated different levels of moderator control over the Twitter chat. For example, the moderator driven chat has a very high level of moderator control over the chat, while the guest host with moderator support format has much less or little moderator control (see Figure 4).

![Figure 4: Chat design organized by amount of moderator control](image)

While it may be hard to believe (or consider) that one could have control over something on Twitter because of the nature of it being an open forum, the conversation in each case revolved around a set of norms established by the community leader. In the case of
Rachel, when she can’t moderate she cancels the chat for the week. These phenomena don’t exist without some leadership.

One other consideration regarding chat design that relates to pedagogical philosophy is the aspect of social learning. The chat with the live Google hangout on air is the only chat format that mentioned a limited or reduced social participation. Chandler shared that he feels the live shows are more aligned with his personal philosophy of education because classrooms are about picking up on nuances like “body language and their sense of emotion. It's a connectivity thing to me.” While the format limits participants to watching the video feed and perhaps tweeting questions, Chandler suggests that the guests he invites on the show are connecting with the audience “even though there isn't a give and take with the audience.”

Rachel’s moderator driven chat has a high degree of moderator control over the learning environment compared to the other chat formats, but her philosophy is more flexible. This presents a misalignment between her philosophy and the design of her Twitter chat. Phoebe’s approach to create student-led and inquiry based learning environments is partially supported in the design of her chat, however, this is a chat where there are 10 moderators and there is shared decision making and moderation which may be the cause of this partial misalignment. Chandler articulated that he wants to create positive learning experiences and not only leave a legacy but help others to do so as well. His chat aligns well to the philosophy he articulated as the chat design is well controlled and is not only a part of his legacy, but is a big part of his digital identity. Ross shared that he believes that educators should shift from the role of controllers of information to facilitators of information and his chat is very well aligned with this
philosophy. Finally, in the case of Joey, when asked about his pedagogical philosophy he said, “everything we do is built off of relationships. We are in a people business. Relationships with kids, relationships with peers, relationships with colleagues and with administrators and with parents, so everything we do is about connecting with people.” However, after the interview was conducted with Joey, the researcher discovered that this chat had been miscategorized. This was due in part to the fact that the chat had been offline for a period of time. Joey’s chat is not host driven and this category is no longer relevant. Table 10 summarizes the pedagogical philosophy of the chat designers, the chat design, the level of moderator control, and the alignment of the chat to the designers’ personal pedagogical philosophy.

Table 10

Alignment of Pedagogical Philosophy and Chat Design

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Pedagogical Philosophy (in their own words)</th>
<th>Chat Design</th>
<th>Level of Moderator Control</th>
<th>Alignment of Chat to Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachel</td>
<td>Flexible pedagogy, meeting learners need</td>
<td>Moderator Driven</td>
<td>High</td>
<td>Misaligned: Chat is moderator centric, but topics vary to support learners needs</td>
</tr>
<tr>
<td>Phoebe</td>
<td>Student Led &amp; Inquiry-based</td>
<td>Rotating Moderator</td>
<td>Moderate</td>
<td>Somewhat Aligned: Not student led, but the Q/A format supports Inquiry Based Learning</td>
</tr>
<tr>
<td>Chandler</td>
<td>Create positive experiences and leave a legacy</td>
<td>Chat with Live Google Hangout on Air</td>
<td>High with Reduced Social Learning</td>
<td>Aligned: The high moderator control supports his desire to create the experience</td>
</tr>
<tr>
<td></td>
<td>Shifted from Controller of information to facilitator</td>
<td>Guest Host with Moderator Support</td>
<td>Low</td>
<td>Aligned: The low moderator control is aligned with facilitating</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------</td>
<td>----------------------------------</td>
<td>-----</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Ross</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joey</td>
<td>Education is about relationships</td>
<td>Host Driven (Q/A)</td>
<td>None</td>
<td>*This chat was miscategorized</td>
</tr>
</tbody>
</table>

Findings, Interpretations and the Literature

According to the literature there was research that supported the value of online communities to: connect educators, reduce feelings of isolation and loneliness, provide opportunities to encourage others and be encouraged (Duncan-Howell, 2010; Gray, 2004; Hur & Brush, 2009; Vavasseur & MacGregor, 2008). This study confirmed these findings supporting the Wenger, et. al (2011) model for evaluating immediate value as Chandler stated “we connect people who perhaps find themselves isolated or are doing this crazy, professional thing called education and surrounding themselves with other people that understand that world.” In support of the potential value of these communities is the connections that help form the educators PLN and allow them to share curriculum-based knowledge or classroom practices. This was evidenced in the interview with Phoebe where she said, at a state conference, “we usually do a chat meet up one of the nights, where everyone can actually meet each other face to face, and it really puts a unique spin on attending conferences. It makes you feel like you're going home to see your friends, and it's just relationships that have developed on Twitter by talking about what we love most, which is our teaching profession.”

In consideration of the potential value described by Wenger et al (2011), the question is how has the participation changed the participant. Chandler described the
increased energy level described by participants he stated, “I've heard this from a
gazillion people. They love the Sunday night chat because it invigorates them for
Monday morning.” While Phoebe spoke of the access to new social relationships as
mentioned previously and Rachel shared how the Twitter chats provide a place where
everyone has a voice and is equal, “Nobody's better than anyone else. Nobody's smarter
than anyone else. We're all just the same and we're all trying to talk about what we think
works for kids, what we think is best for kids. I think that that's kind of a rare situation.”
Applied value, realized value, and reframing value were difficult to capture in this study
as the design did not include interviewing chat participants where this data could be
collected, however, Ross mentioned that “the biggest value is the network of teachers and
administrators, and the things you can learn, the shared logs and links, and different
things.” Since this is not a direct observation but merely an uttered assumption an
extension of this study could and should seek to document these forms of value from the
Wenger et. al, (2011) framework as this is a gap in the current research literature.
Professional development via informal learning

Addressed in the literature was the need for learner-centered approaches to
professional development for educators and a shift away from the one size fits all PD
(Carpenter & Krutka, 2014). The ability for educators to join Twitter chats at anytime
from anywhere on any device provides them with the flexibility to participate around
their schedule. Online informal learning communities provide educators with the ability
to seek information and share based upon their own personal schedule (Duncan-Howell,
2010)
Chandler described the 24/7 nature of Chat C “creating that hashtag was not about Sunday nights at 8:00PM. It was about creating a forum that people could go to 24/7 to share their thoughts, to share their perspectives, to offer resources, to ask questions, to create a community that is 24 hours a day, 7 days a week.” And Rachel was focused on providing her teachers choice in their PD. She even awards PD credit for participation in the chat recognizing that it is a learning experience for her teachers.

Educators contributing to their peers’ learning is a significant departure from the typical professional development format that has dominated K12 practices (Wideman, 2010). Rachel described how chat participants were connecting and sharing “[a] lot of conversations that sprout out from the chat like individual conversations with people that say, "Here is something that they like that someone else is doing," like digital portfolios or something that someone else is doing.”

Ross said “It's a huge network, kindergarten teachers meet kindergarten teachers in Oklahoma. You just share things, we're all going through this together and they may be your kids and my kids but they're all kids. If there's something I can do, I'm doing this helping your kids. For lack of a better term, it's a group of people that are sharing their best practices to help kids all over, not just the kids at their place.”

Joey shared how connections are made though the edchat and how one such connection has led to collaborations and impacted classroom practice all because educators connected on the chat. “[A]nd now they are able to do mystery Skypes together, talk about classrooms together, so again it's about giving that person another resource and building that relationship that otherwise would not have been matched or been put together without this avenue.”
EdChats are Learning Communities in a PLN

According to the argument made by Wubbles (2007) edchats are learning communities not communities of practice because their purpose is the advancement of learners. These communities are comprised of a variety of different individuals from superintendent and school board members to classroom teachers, librarians, students, parents and more. Rachel shared her thoughts on the learning community “I think that you meet all kinds of different people and you find out different expertise that they have in different areas. …I think that that's something that we do by having a chat like that. It gives us exposure to different people that know steps about things that we're not experts in.” And, Ross commented “I think the biggest value is the network of teachers and administrators, and the things you can learn, the shared logs and links, and different things.”

Phoebe said “Our biggest motivators was getting teachers to collaborate together. Especially since we all came from the EdCamp movement, we know the smartest person in the room is the room, and we really wanted to give teachers a voice and a place to share that, that would be not just supportive, but also a place where ideas can be challenged, where you've might be introduced to a new way of thinking that you might not have thought about before.” And Rachel commented similarly that “[i]t was a way to find a network of people, who not only inspired you to be better, but also supported you in your journey of becoming better.”

These informal learning communities are also affinity spaces since they exist in the open space of social media and anyone can join, participate fully, or simply watch the conversation unfold. The community is at the core but participants can come and go. A
community can also pull you back in where an affinity space cannot. Joey described his experience of the community pull when his chat went offline for a period of time.

“What I found out, it was kind of nice, but it hit home a little bit, when the chat went away, people started to ask for it again. Which made me feel good, because people did miss it but also made me feel bad because I personally could not just keep up with the chat and all my other obligations on top of each other. Before you get to that point, make sure you have a support system that you can support this if you need to step away. If you need to take care of other things or, like I said, if you have other responsibilities that need to be taken care of. When the chat was up and running, you had people that were looking for it, that wanted to have that connection. I think the only thing worse than not having the connection is not having the connection and taking that connection away. Then people really look for it and ask for it and want it back.”

Learning and Teaching as Communicative Actions (LTCA Theory)

The LTCA theory presented a framework for understanding the various communications within the learning community in a thoughtful manner. Table 11 is an adaption of the table found in Wakefield et. al. (2011) where the LTCA learning theory is aligned with the instructional design principles and design of learning experiences. The differences between informal learning spaces and utilizing a SNS tool like Twitter to extend formal learning beyond the walls of the classroom are subtle. The adaptations of the table change the model from an extension of formal learning to the design of informal learning via Twitter chats.

Table 11

LTCA Theory aligned effective practices (from Wakefield et. al., 2011)

<table>
<thead>
<tr>
<th>Communicative Action</th>
<th>Instructional Design Principle</th>
<th>Twitter Chat Design Direction</th>
</tr>
</thead>
</table>

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### Normative

Allow participants to negotiate the norms of the chat that support their personal learning goals. Participants and moderators should co-construct norms that support effective communication where all members of the informal learning community are treated fairly and respectfully.

Moderators share guidance regarding norms at the start of the chat and continually monitor the chat to ensure that all participants are being treated fairly and respectfully. Issues are handled swiftly.

### Strategic

Chat moderator provides knowledge of or access to shared, socially validated facts that can be communicated by a technological tool.

Moderator provides the questions and resources that support the topic for the chat that provide value to the participants.

### Constative

Participants are given opportunities to engage in discussion. As participants share their experiences they may be challenged or critiqued in a respectful manner with the goal of ultimately constructing knowledge that can be applied toward future change.

Participants are encouraged to share their knowledge on the topic or ask relevant questions that can assist them and others in better understanding the truth claims raised by other participants.

### Dramaturgical

Create opportunities for participants to share their personal and professional identities as well as their subjective truths and knowledge, which are open to critique through discourse with fellow participants, moderators, and others.

Moderators encourage participants to introduce themselves and facilitate open sharing within the learning community. Moderators should allow for and encourage professional critique.

Necessary components for a supportive Twitter chat learning community

Considering the insights shared by the participants, the researcher constructed a diagram that would highlight the essential characteristics of an effective Twitter chat.

Figure 5 captures the necessary considerations to properly develop and support a hashtag Twitter chat learning community based solely upon the findings presented in chapter four.
Figure 5: Required components to build, support, and sustain a Twitter chat

The first four mandatory components include regularity, leadership, support, and design. All the participants as important highlighted consistency or regularity of the chat schedule, but it was Joey who spoke about not being able to support his chat properly that also brought leadership forward as a critical and necessary element. Joey said “[w]hen that other person dropped out it really was me sustaining the chat and it just became just too much for me solely to be the sole facilitator. The chat went dormant I want to say for about six months, from about January of 2015 until July of 2015.” He goes on to talk about his reengagement with the Twitter chat but without his leadership for a short period of time, the chat did not sustain itself. The leadership component is more complex when the chat has multiple leaders; Chandler has taken ownership of his chat and shared the importance of the chat to him stating, “I have a lot invested in that because honestly I feel
like it's my credibility. I feel like it's my reputation. It's like anything else. I think the team knows that no matter what happens, it will always be ready. It will always be organized because I will make sure that it's going to be ready and organized.”

The topic of support or co-moderators to help with the planning, tweeting, retweeting, moderation, and community building came up with each of the participants and Phoebe stressed this point when she mentioned that her co-moderator will moderate the chat alone occasionally giving Phoebe the night off but the co-moderator does not like to do it because “she doesn't feel that comfortable doing it by herself”. Because of this, Phoebe is more inclined to cancel the chat if she can’t moderate it. The chat design is important, because all five participants started their chats with the same fundamental designs. Building a chat requires a strong foundation and once the learning community is established, modifications to the chat design, tools used, or how it is moderated can be layered in. More than anything, organization was stressed when it come to the design of the chat which included the behind the scenes tools and communication techniques used to stay in touch with co-moderators and guest hosts.

After the first four mandatory components are in place, then promotion, topics, and participants should be considered. Promotion of a new chat can be difficult because there are presently hundreds of educator Twitter chats each week. It helps to start with a large PLN (professional learning network) to help spread the word. Phoebe described how her colleagues across the Twitterverse assisted her in sharing the promotion of her chat when she first started it:

“[t]hat was really helpful but because I didn’t have that many followers at that time so it was hard for me to get the word out. I had a lot of people that were really good to help me promote the chat. I was able to establish a
base of educators that I could really promote to. Now, I don't have to rely on other people to help me promote the chat.”

Taking the time to ensure that the chat topics are aligned with the participants’ interests is another critical component to drawing individuals into the conversation. Each of the participants mentioned that they felt having broad topics with general appeal was helpful in building a learning community. Finally, there would be no community without the participants. Supporting and including participants in the conversation during a Twitter chat is the role of the chat moderator as well as other co-moderators. Ross clarified this point when he talked about the need to retweet and favorite the chat participants’ contributions in the chat and equated it to patting someone on the back. Once all these elements are in place the learning community forms and can be properly supported.

Recommendations

Each participant was asked at the conclusion of the interview “what are the most important things that a new chat designer should consider?” Phoebe shared 5 questions that you should ask yourself before considering the creation of a new Twitter chat:

1. What is your purpose for the chat?
2. Why do you want to do this chat?
3. Is it going to take the place of one that already exists?
4. Is there a chat that already exists that's already doing what you want to do?
5. Could you be involved in that chat because there's so many educational chats out there now?

Further, Phoebe stated, “[y]ou want to make sure that there's a need for what
you're going to do. If it's a chat just for your district, then there's definitely a need.”

Should the need exist then you should be very organized and make sure that everyone understand how to participate in a Twitter chat. If you are doing an in-district chat then make sure that there is proper training and support to encourage participation and sustain it. It takes a network if it is going to work. Phoebe shared “If you're just going to do a whole new chat on your own, then you need to make sure that you have a professional learning network established because if you just go out and tweet, Hey. I'm going to have a Twitter about special ed for elementary kids on this day, and you only have three followers, no one's coming.”

Establish a need and a strong PLN first. Phoebe said, “I think now, with so many Twitter chats, I wouldn't start a new one until I really scoured and made sure that there wasn't one that was already were there to meet my needs and that the people would be willing to take me and to help them.” Rather than start a new chat Phoebe suggests that connected educators offer to host an existing chat.

Her claim that there are hundreds of Twitter chats for educators already is supported by the data. Figure 6 illustrates the number of education related Twitter chats per hour online already. The single day with the most Twitter chats is Wednesday with 46 in just that one day, while Friday only has one reported on the official education Twitter chat schedule found here: https://sites.google.com/site/twittereducationchats/
Figure 6: Distribution of education specific Twitter chats over time

Chandler said, “[r]each out to people who are doing it already, ask experts with a large Twitter following to host the chat so they can bring their audience with them” while Ross said similarly, “[g]uest moderators are good. Big name hosts can bring an extra couple of hundred people on the chat.”

Rachel’s suggestion was to gather a team, have a good hashtag, and be consistent. She says “you should have a team with you because you can’t go at it alone. Have a good hashtag, don’t make it a long hashtag. I think regular weekly chats are better than once a month chats. It helps keep that community consistent.” Chandler also suggested having the chat every week and stressed the importance of consistency.

Experiencing as many chats as possible, as well as having a team to support the serious time commitment is important according to Joey. “Go forth and experience as many chats as you can before you consider creating one of your own. It is a serious time
commitment and a strong team is required, two or three people is not enough. You need access to enough people to host or co-moderate because it is a big job and sharing responsibilities is helpful.” Ross agreed that a support team is critical to success saying, “you will need people welcoming guests, favoriting important tweets and retweeting participants.” He suggested that the co-moderators and hosts who help out will also help promote the chat across their networks and grow the chat. But Ross also advised, “if you don’t like what someone has to say then block them.”

Recommendations for Future Research

Numerous possibilities for future research arose during the course of conducting this study either by attempting to limit the scope of this research study or by thinking of ways to extend this study and develop a personal research agenda. Evaluating the various state Twitter chats using Social Network Analysis (SNA) specifically the primary groups, cliques, and clusters could be a useful way to better understand the cohesion of the various groups (Kadushin, 2012) and may illuminate some similarities and differences that are worth noting. Additionally, there were a group of Twitter chats that were listed on the USDOE websites but were no longer active at the time this study was conducted. Interviewing those who were a part of the leadership of these state chats could point to sustainability issues and may provide insights into how these issues could be avoided.

Another important topic to explore is a deeper understanding of the lived experiences of the chat participants’. Specifically, asking participants why they engage in Twitter chats and what value they feel it provides to them both personally and professionally. Do they feel a sense of membership in any particular Twitter chat or do they feel more compelled to join based upon the moderator, guest host, or topic? What
have been their experiences in Twitter chats interacting with others and what have they applied to their educational practices that they learned in a Twitter chat?

Finally, it may be useful to the field to conduct research that uses an adapted version of the participant and facilitator questions from the work of Seddon & Postlethwaite (2007) in a detailed review of Twitter chats in support of professional learning found in Table 12.

Table 12

*Participant and Facilitator Questions (from Seddon & Postlethwaite (2007))*

<table>
<thead>
<tr>
<th>Question Zone</th>
<th>Participant</th>
<th>Facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sharing</strong></td>
<td>What personal information can I offer to help create an atmosphere for sharing?</td>
<td>How can I encourage participants to offer personal information to help create an atmosphere for sharing?</td>
</tr>
<tr>
<td></td>
<td>What professional knowledge can I present to add to the dialogue?</td>
<td>How can I encourage participants to offer professional knowledge to enrich the dialogue?</td>
</tr>
<tr>
<td><strong>Comprehending</strong></td>
<td>Do I agree or disagree with the information that participant has presented, and offer a reason for my opinion?</td>
<td>How can I encourage participants to make comments that agree or disagree with information a participant has presented and to offer reasons why they agree or disagree?</td>
</tr>
<tr>
<td></td>
<td>What questions get asked to help my understanding?</td>
<td>How can I encourage participants to ask for more information to help their understanding?</td>
</tr>
<tr>
<td><strong>Analyzing</strong></td>
<td>Can I pull in common threads from other contributions?</td>
<td>How can I encourage participants to pull out common threads from other contributions and present them in the debate - and point out differences between other contributions?</td>
</tr>
<tr>
<td></td>
<td>Can I point out differences between contributions?</td>
<td></td>
</tr>
<tr>
<td><strong>Synthesizing</strong></td>
<td>Can I summarize a group of contributions?</td>
<td>How can I encourage participants to summarize a group of contributions?</td>
</tr>
<tr>
<td></td>
<td>Can I put forward information from outside this debate that would enrich it?</td>
<td>How can I encourage participants to put forward information from outside this debate that would enrich it?</td>
</tr>
</tbody>
</table>
Transforming

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can I think of how this information might lead to action- and state this in the debate?</td>
<td>How can I encourage participants to think of how this information might lead to action - and state this in the debate?</td>
</tr>
<tr>
<td>Have I carried out this action-then report how it went?</td>
<td>How can I encourage participants to report on results if they carried out this action?</td>
</tr>
<tr>
<td>Can I offer comments about my learning or change through this online interaction?</td>
<td>How can I encourage participants to offer comments about their learning or change through this online interaction?</td>
</tr>
</tbody>
</table>

Conclusion

This dissertation has developed emergent categories of chat designs that can be used in future studies in order to continue to document informal learning community designs. Included in this report are insights into the alignment between the design of state educator Twitter chats and the pedagogical philosophy of the chat designers. Documenting the lived experiences of the designers themselves informed this alignment. The practical processes as well as recommendations were shared that may be used as effective practices for other education researchers or chat designers in the development of a new edchat or modification of an existing chat. The structural changes made to each of the chats documented in this report provide considerable insights into possible changes with regard to technologies, moderation teams & techniques as well as adding chat times. And, finally the value or at least the perceived value was documented.

Education Twitter chats are only one of many possible forms of online professional learning for people interested in learning about the field of education. The
US Department of Education is supporting school districts with tools and methods that allow them to recognize educators who are taking part in these online informal learning opportunities.
APPENDIX A

IRB APPROVAL AND INFORMED CONSENT
August 14, 2015

Supervising Investigator: Dr. Scott Warren
Student Investigator: Whitney Kilgore
Department of Learning Technologies
University of North Texas

Re: Human Subjects Application No. 15307

Dear Dr. Warren:

As permitted by federal law and regulations governing the use of human subjects in research projects (45 CFR 46), the UNT Institutional Review Board has reviewed your proposed project titled “Design Intent of Informal Online Learning Communities in Education.” The risks inherent in this research are minimal, and the potential benefits to the subject outweigh those risks. The submitted protocol is hereby approved for the use of human subjects in this study. Federal Policy 45 CFR 46.109(e) stipulates that IRB approval is for one year only, August 14, 2015 to August 13, 2016.

Enclosed is the consent document with stamped IRB approval. Please copy and use this form only for your study subjects.

It is your responsibility according to U.S. Department of Health and Human Services regulations to submit annual and terminal progress reports to the IRB for this project. The IRB must also review this project prior to any modifications. If continuing review is not granted before August 13, 2016, IRB approval of this research expires on that date.

Please contact Sheila Bourne, Research Compliance Analyst at extension 4643 if you wish to make changes or need additional information.

Sincerely,

Chad R. Trulson, Ph.D.
Professor
Department of Criminal Justice
Chair, Institutional Review Board

CT/sb
University of North Texas Institutional Review Board

Informed Consent Notice

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: DESIGN INTENT OF INFORMAL ONLINE LEARNING COMMUNITIES IN EDUCATION

Student Investigator: Whitney Kilgore
University of North Texas (UNT) Department of Learning Technologies

Supervising Investigator: Dr. Scott J. Warren

Purpose of the Study: You are being asked to participate in a research study, which will explore the design of various state educator Twitter chats as well as the design intent of the chat designers who created some of the chats.

Study Procedures: You will be asked to answer a few questions in the following survey that will assist in scheduling an interview. During the interview you will be asked a series of questions, in a Google Hangout, that will take about 20 to 30 minutes of your time. This conversation will be recorded for so that it can be transcribed. Once the interview is transcribed, you will be sent a copy of the transcription for verification that the transcript is accurate. If additional questions come up after the interview transcript has been analyzed, you may be contacted for clarification either via email or through another short 15-minute follow-up interview.

Foreseeable Risks: Your participation in this online survey and subsequent interview(s) involves risks to confidentiality similar to a person’s everyday use of the Internet.

Benefits to the Subjects or Others: This study may not be of any direct benefit to you, but we hope to learn more about the design and pedagogy of twitter chats for educators.

Compensation for Participants: None

Procedures for Maintaining Confidentiality of Research Records: The confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Whitney Kilgore at whitneykilgore@my.unt.edu or Dr. Scott J. Warren at scott.warren@unt.edu

Office of Research Integrity & Compliance
University of North Texas
Last Updated: August 9, 2007

APPROVED BY THE UNT IRB
FROM 8/14/15 TO 9/3/16

Page 1 of 2
Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-4643 with any questions regarding the rights of research subjects.

Research Participants’ Rights:

Your participation in the survey confirms that you have read all of the above and that you agree to all of the following:

- Whitney Kilgore has explained the study to you and you have had an opportunity to contact him/her with any questions about the study. You have been informed of the possible benefits and the potential risks of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You understand you may print a copy of this form for your records.
APPENDIX B

INTERVIEW QUESTIONS
Topic of Inquiry A - Structure and alignment to learning philosophy

1. Please describe your teaching philosophy.
2. Please tell me about when and why you designed your particular Twitter chat.
3. Tell me about the organization or structure of the chat at the time you first designed it.
4. Tell me about the instructional design and pedagogy underlying your chat.
   a. FOLLOW-UP/ CLARIFICATION IF NEEDED: That is, how did you make it and why do you expect learning to result from it?
5. What tools do you use as the chat designer to support the chat itself?
6. Please describe how the design of the chat aligns with your teaching philosophy.

Topic of Inquiry B – Practical processes

1. Please tell me about your process for deciding on discussion topics for a particular week and give an example from your actual practice.
2. Please tell me about how the chats are run and by whom.
   a. FOLLOW-UP: Do you have hosts or moderators and do they vary or are they regularly the same?

Topic of Inquiry C – Structural changes since the first design

1. Please describe any issues and/or problems you have had during the time that the chat has been in place.
2. Tell me about any changes you have made since that first design and why you felt you had to make them.

Topic of Inquiry D – Perceived utility of the chat
1. Please describe the value you believe your chat provides to the educational community.
   
a. FOLLOW-UP: How do you know it gives this value? What evidence do you have?

2. If you were going to give advice to someone who wanted to start a chat, what would be the most important things they should consider?
APPENDIX C

SUBJECTIVITY STATEMENT
I have been a member of the educational community for the last 16 years. My experiences as a former K-12 educator and instructional technology coordinator in a school district before becoming an online program developer and faculty trainer in higher education have helped shape my worldview. As a social constructivist, my epistemological belief is that learning is a social endeavor that occurs when humans are engaged in social activities with each other and their environment.

In September 2013, I co-designed a Twitter chat (#txeduchat) scheduled for one hour every Sunday night (8:00 – 9:00 p.m. Central time). This is a voluntary activity that I have undertaken with my husband to connect educators with ideas and other educators to co-construct knowledge. We regularly contact thought leaders in education and schedule them to host the Sunday night chats. The hosts have included well-known authors, education professors, EdTech leaders, building or district administrators, librarians, or classroom teachers. We receive no compensation for this activity. We view this as service work to give back to the K-12 education community. It is this experience as a chat designer that both qualifies me to conduct this research and connects me to the other chat designers, which should allow me to easily schedule the interviews.

The Twitter chat that my husband and I created (#txeduchat) will be included in the initial data collection; however, it will be eliminated from the interview portion of the study to eliminate any possible bias. Some believe that subjectivity in qualitative research can be a positive (e.g., Peshkin), allowing the researcher to make better sense of the data they collect. My challenge is to remain vigilant through reflection that my personal subjectivity does not impact the data collection or analysis (Given, 2008).
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