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Dissertation

"CHOICE AND VOICE": ELEMENTARY TEACHERS' PERCEPTIONS OF THE INFLUENCE OF EDCAMPS ON THEIR PROFESSIONAL PRACTICE

by

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A.B., Duke University, 2009
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Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Education

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DEDICATION

To my loving parents, Kim Hong Thi Phan and Nam Hoai Phan

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“CHOICE AND VOICE”:

ELEMENTARY TEACHERS’ PERCEPTIONS OF THE

INFLUENCE OF EDCAMPS ON THEIR PROFESSIONAL PRACTICE

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ABSTRACT

Created by a group of educators in 2009, Edcamps are “free, voluntary, participant-driven” unconferences for educators to informally learn from one another (Carpenter & Linton, 2016, p. 97). Since the first Edcamp in 2010, over 700 Edcamps have been held across the United States and in 25 total countries (Edcamp Foundation, 2016). In spite of the viral, organic growth of Edcamps and the extensive research literature on the need for high-quality teacher professional development (PD), almost no empirical research exists on this model of teacher PD. As a result, education stakeholders have little understanding of the possible value and influence of Edcamps on teachers’ professional practice.

The purpose of this qualitative, multiple case study was to explore U.S. public elementary teachers’ perceptions of their Edcamp experiences and how, if at all, their Edcamp experiences influenced their professional practice, specifically in the areas of student instruction, peer collaboration, and teacher leadership. Two semi-structured interviews were conducted with each of the twelve study participants. During the second of these interviews, participants shared and discussed artifacts demonstrating the

influence of Edcamps on their professional practice. A total of 68 unique artifacts were collected and examined from among all participants.

A thematic analysis (Braun & Clarke, 2006) of the interview data revealed that all twelve teachers perceived that their Edcamp experiences were legitimate, high-quality PD. All teachers also perceived that their Edcamp experiences had influenced their professional practice in at least one of the following areas: student instruction, peer collaboration, and teacher leadership. Teachers spoke of applying the discrete knowledge and skills that they had learned during Edcamp sessions as well as applying the format and beliefs of the Edcamp model of PD itself to their professional practice. Based on teachers' interview responses, three major factors contributed to whether Edcamps influenced teachers' professional practice: teachers' motivations, colleague support, and administrator support. Additionally, all participants stated that teachers should have greater choice and voice in their PD. The findings of this study may inform future studies about Edcamps and, more generally, teacher-driven PD. Recommendations for practice and future research are discussed.

Keywords: Edcamp; teacher professional development; professional learning network (PLN); Twitter.

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CHAPTER 1: INTRODUCTION

Statement of the Problem

There is strong consensus in the research literature that teachers play a central role in improving student learning outcomes and that professional development (PD) is the primary means for improving their instructional practice (Ball & Cohen, 1999; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). It is also well-documented that the demands on K–12 public school teachers have been growing over the last few decades as schools strive to raise student achievement for an increasingly diverse student population (Valli & Buese, 2007; Datnow, 2011). Teachers are expected to improve instruction through collaborating with colleagues and they are increasingly asked to take on teacher leadership roles to build the organizational capacity of schools and districts (DuFour, 2004). Considering the intensifying demands on teachers, it is more imperative than ever before for them to engage in PD that is relevant and effective in cultivating their professional practice (Sparks, 2004; Lieberman & Mace, 2008; Darling-Hammond et al., 2009; Datnow, 2011).

Unfortunately, traditional teacher PD is often negatively perceived by teachers as top-down and disconnected from the instructional issues and challenges they face in their classrooms (Ball & Cohen, 1999; Sparks, 2004; Lieberman & Mace, 2008; Van Veen, Zwart, & Meirink, 2011). Since teachers do not often have a choice or voice in their own PD, they find PD to be irrelevant to their instructions needs (Ball & Cohen, 1999; Sparks, 2004; Van Veen, Zwart, & Meirink, 2011). In spite of teachers' perceptions that

traditional PD is often ineffective, little attention has been given in the literature to exploring new and alternative PD models that can potentially meet teachers' professional needs.

Background on Edcamps

Edcamps[1], free, participant-driven unconferences[2] for educators to informally learn from each other, have emerged as a promising model of teacher professional development. According to the Edcamp Foundation website, the goal of Edcamp is to provide "high quality, personalized professional learning for all educators" (Edcamp Foundation, 2016). Many teachers have described their Edcamp participation as empowering and professionalizing experiences that stand in stark contrast to traditional teacher PD (Miles, 2014; Swanson, 2014).

The story of Edcamp began in 2009 when a group of educators in a Twitter professional learning network (PLN) connected with each other at Barcamp Philly, a technology-focused unconference (Miles, 2014). Inspired by Barcamp's format and the enthusiasm of its participants, this group of educators worked together online and in person in the months following the event to develop an unconference model for teachers

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[1] There are many different spellings for 'Edcamp.' These include: 'edcamp' (no capitalization); 'EdCamp'; 'Ed camp'; and 'EDcamp.' The spelling used in this dissertation is what is used by the Edcamp Foundation and by Carpenter (2015) in the first-peer reviewed research article on Edcamps.

[2] Unconferences have their origins in Open Space Technology (OST) which "hinges on the belief that a group of people, given a purpose and freedom, have the ability to self-govern, self-organize, and produce results" (Boule, 2011, p. 17). One of the first unconferences was Foo Camp in 2003, an invitation-only event focused on technology (Boule, 2011). This eventually gave way to Barcamp in 2005, which then became the inspiration for Edcamp in 2010. There are also other education unconferences. TeachMeet, a popular UK-based unconference, also provides teachers opportunities to informally learn from each other (McCulloch, 2011).

and their specific needs. In 2010, the group hosted the first Edcamp event in Philadelphia, using Twitter and other social networks to spread the word.

The Edcamp model of "do-it-yourself" PD has since become a viral phenomenon (Demski, 2012). Since 2010, over 700 Edcamps have been held across the United States and in 25 countries, with a total of over 50,000 participants (Edcamp Foundation, 2016). In 2015, tickets to the second annual U.S. Department of Education Edcamp and to Edcamp Boston were all claimed within hours of being available (Edcamp Boston, 2015). The exponential growth and popularity of Edcamps point to a strong desire for this form of PD and speaks to the power of social media in connecting educators and rapidly spreading their ideas (Miles, 2014; Swanson, 2014).

There are several qualities that distinguish Edcamp unconferences from traditional education conferences. First, Edcamps are free. Attendees of traditional conferences can pay high admission fees in addition to paying for conference materials (e.g., session handouts), but Edcamps cost nothing to attend and all materials are free and often publicly available online. Second, Edcamps can be hosted by anyone and are open to everyone. The vast majority of Edcamps, however, are organized by teachers who have connected through professional learning networks (PLNs) on platforms such as Twitter (Ferriter & Provenzano, 2013). While everyone is welcome at Edcamps, teachers and topics related to teaching dominate (Marcinek, 2014). Third, Edcamp participants collaboratively determine the topics for each breakout session at the beginning of the event, a change from traditional conferences with predetermined agendas. Finally, Edcamp breakout sessions do not feature one expert presenting in front of a group.

Instead, it is assumed that all participants can learn from and teach others though group discussions. If sessions do not meet the needs of participants, they can use the "law of two feet" which encourages them to leave to find more relevant sessions (Swanson, 2014).

Edcamps are different from more traditional forms of teacher PD because they do not have clear learning goals or standards for quality. Kristen Swanson (2014), one of the cofounders of the Edcamp model of PD, maintains that, in spite of this, valuable learning almost always happens when self-motivated teachers discuss their practice together, an idea supported by the literature on andragogy (Knowles et al., 2011) and discussed in Miles' (2014) dissertation study of Edcamp participants. Open-ended opportunities to connect with colleagues are rare and highly sought after by teachers (Compton, 2012), making Edcamps inherently valuable to proponents of this model of PD.

Technology plays an important role in Edcamps. Edcamps have been characterized as the "physical representations of the self-directed, evolutionary learning that takes place in social spaces like Twitter" (Ferriter & Provenzano, 2013, p. 19). (The vast majority of Edcamps are held in-person, but virtual forms of this unconference have also taken place.) Miles (2014) explains that the Twitter backchannel is "an integral piece of Edcamp, with participants fervently tweeting before, during, and after each event" (p. 6). These participants "share resources, react to the ideas of the day, and share their reflections with their professional network" (Miles, 2014, p. 6). Participants' tweets may also influence other participants' Edcamp experiences. Miles (2014) explains that

participants may choose to join an Edcamp breakout session based on tweets they read about it.

In 2013, the original cofounders of Edcamp created the Edcamp Foundation, a 501c(3) non-profit organization whose purpose is to support the growth of Edcamp. Led by a full-time Executive Director, the Edcamp Foundation has been recognized by the "Bammy Awards for Education, the Association for Supervision and Curriculum Development (ASCD), the International Society for Technology in Education (ISTE), [and] the TEDx program" (Edcamp Foundation, 2016). In August 2015, the Edcamp Foundation received a $2 million grant from the Bill and Melinda Gates Foundation to further expand its reach (Edcamp Foundation, 2016).

In spite of the viral growth of Edcamp, the positive reviews from educators, and the accolades the Edcamp Foundation has received, very little empirical research exists on this model of teacher PD. For example, no research has been done on the influence of Edcamps on teachers' professional practice. As such, education stakeholders have little understanding of the possible value of this model of PD. Exploring teachers' perceptions of their Edcamp experiences may give scholars, policymakers, and school leaders a deeper understanding of relevant and engaging teacher PD and teachers' roles in leading these learning experiences. This understanding may help to solve the larger problem in education of building organizational capacity to improve student learning outcomes. Schools are now highly complex organizations that cannot be led by administrators alone (Hargreaves, 2003). Teacher leaders are needed to shape and implement schools' learning goals and effective PD plays a critical role in this ongoing effort.

Purpose of the Study

The purpose of this qualitative, multiple-case study was to explore the perceptions of U.S. public elementary classroom teachers who had recently participated in at least one Edcamp. This study explored teachers' perceptions of their Edcamp experiences and how, if at all, their Edcamp experiences had influenced their professional practice. I conducted two semi-structured interviews with each of the twelve study participants. During the second of these two interviews, teachers also shared and discussed artifacts that demonstrated the influence of their Edcamp experiences on their professional practice.

Research Questions

The following research questions guided this study:

1. What are public elementary classroom teachers' perceptions of their Edcamp experiences?
    a. If applicable, what are teachers' perceptions of their learning experiences during Edcamps?
    b. If applicable, what are teachers' perceptions of their experiences sharing during Edcamps?
    c. What are teachers' perceptions of the quality of their Edcamp experiences?
2. Do public elementary classroom teachers perceive that their Edcamp experiences have influenced their professional practice? If so, what are teachers' perceptions of this influence and what artifacts do they share to demonstrate this influence?

a. If applicable, what are teachers' perceptions of the influence on student instruction?
b. If applicable, what are teachers' perceptions of the influence on peer collaboration?
c. If applicable, what are teachers' perceptions of the influence on teacher leadership?

3. What are public elementary classroom teachers' perceptions of the factors that contribute to whether their Edcamp experiences actually influence their professional practice?
4. What do public elementary classroom teachers who have participated in Edcamps want from teacher professional development?

For the purposes of this study, the term 'Edcamp experience' refers to teachers' participation in an organized Edcamp event (e.g., Edcamp Boston) as well as to teachers' related participation in online professional learning networks (PLNs) such as Twitter prior to, during, and/or following Edcamp events. Past research indicate that Edcamp participants' online activities, specifically on Twitter, are an important component of understanding participants' Edcamp experiences (Miles, 2014; Brown, 2015; Carpenter, 2015).

In this study, a teacher's 'professional practice' refers to all of the professional responsibilities, activities, and roles of a teacher. The following three areas of teachers' professional practice were specifically explored as possible areas of influence: student instruction, peer collaboration, and teacher leadership. During the interviews, teachers

were also encouraged to share other areas of influence, if applicable.

Overview of Research Methods

To answer the above research questions, I carried out a descriptive, multiple case study of twelve U.S. public elementary classroom teachers who had recently participated in at least one Edcamp. In this study, 'recently' was defined as within twelve months prior to the participant's enrollment in the study.

I conducted two semi-structured, approximately one-hour interviews with each of the participants on Google Hangouts, a video chat platform. These audio-recorded interviews took place during non-instructional hours and without any students in the classroom. In the first interview, I asked participants to give an overview of their educational and professional backgrounds; to describe their Edcamp experiences; and to describe their views about teacher PD. Participants were also asked to share how, if at all, their Edcamp experiences had influenced their professional practice and to discuss the factors that they believed contributed to why or why not. Since all the participants reported in the first interview that Edcamps did influence their professional practice, the second interview with participants focused on the ways in which it did. Specifically, participants shared and discussed artifacts (e.g., student work, lesson plans, presentations, and blog posts) that they believed demonstrated this influence.

After conducting the two interviews with each participant, I sent a follow-up email to each of the participants asking them to clarify their interview responses as needed and to offer any additional information they believed was important to understanding their Edcamp experiences.

After the data collection process, I conducted a thematic analysis (Braun & Clarke, 2006) of all twelve cases, searching for key themes and patterns across the cases. I also created an inventory of the artifacts, categorizing them by what teachers perceived to be the area(s) of influence on their professional practice. The product of this study was a “rich, thick description” (Merriam, 2009, p. 43) of participants’ perceptions of their Edcamp experiences and their corresponding influence on participants’ professional practice.

Throughout this study, I made efforts to establish trusting relationships with participants and strived to maintain researcher reflexivity through writing memos and conferring with peers on a regular basis. I also outlined participants’ rights through a detailed informed consent form and protected participants’ privacy by anonymizing and securely storing all of the data collected for the study.

I ensured the validity of this study through triangulation of multiple data sources (two interviews and collected artifacts; peer debriefings; continuous learning about Edcamps; and “a rich, thick description” (Merriam, 2009, p. 43) of the major themes from the interview data. I acknowledged the limitations of this study, including the narrow focus on twelve U.S. public elementary classroom teachers who belong to the very small and self-selecting group of teachers who have participated in Edcamps.

Rationale

Traditional teacher PD is often negatively perceived by teachers as top-down and disconnected from the instructional issues and challenges teachers face in their classrooms (Ball & Cohen, 1999; Sparks, 2004; Lieberman & Mace, 2008; Van Veen,

Zwart, & Meirink, 2011). In spite of teachers' perceptions that traditional PD is often ineffective, little attention has been given in the literature to exploring new and alternative PD models which can potentially meet teachers' professional needs. To address this problem, this study investigated teachers' perceptions of Edcamps, a promising new model of teacher PD.

The extant empirical research on Edcamps currently consists of two doctoral dissertations (Miles, 2014; Brown, 2015) and two peer-reviewed journal articles (Carpenter, 2015; Carpenter & Linton, 2016), all published in the last three years. Miles (2014) conducted a survey of 449 Edcamp participants' perceptions of their Edcamp experiences and their traditional teacher PD experiences. Brown (2015) utilized Q methodology to explore 19 teachers' perceptions of the perceived utility of Edcamps as a form of teacher PD. Carpenter (2015) conducted a survey of 95 participants' motivations for attending a particular Edcamp and their perceptions of the strengths and weaknesses of this Edcamp experience. Finally, Carpenter and Linton (2016) investigated 769 Edcamp participants' motivations for attendance and their perceptions of their experiences through two online surveys. While all four studies offer compelling evidence of teachers' positive perceptions of Edcamp as a form of PD, none of the studies explores the influence of Edcamps on teachers' professional practice and the self-perceived factors that contributed to this influence. This investigation aimed to fill these gaps.

Significance

This was the first research study to investigate the influence of Edcamps on teachers' professional practice and to explore the factors that contributed to this influence. Schools have a significant stake in forming robust PD opportunities that can systematically address student learning issues and foster teacher growth and improvement (Little, 2012). The findings of this study may be used to expand theory on effective teacher professional development and the role of informal, self-directed teacher learning on teachers' professional practice. This study may help education stakeholders further assess the legitimacy and value of the Edcamp model of PD and the ways in which it can expand current understandings of high-quality teacher PD.

Researcher Role

Since I was interested in understanding participants' perceptions of their Edcamp experiences, it was critical for participants to feel comfortable enough with me to authentically share their perceptions. I tried to establish myself as a credible and trustworthy interviewer by disclosing that I am a former elementary classroom teacher and have participated in multiple Edcamps. I explicitly stated that while I have participated in Edcamps, I am a student researcher who is not officially affiliated with any Edcamp organization. I explicitly stated that I was only interested in participants' individual perceptions of their Edcamp experiences. I also told participants that I did not want to unintentionally influence their impressions about Edcamps.

I made efforts to establish a rapport with participants, explicitly stating that I respected and valued what they had to share (Patton, 2015). At the same time, I tried to

be neutral and not positively or negatively evaluate participants' responses (Patton, 2015). In the interviews, I asked open-ended questions that allowed participants to give complete responses and followed up with probes to expand upon these responses (Patton, 2015). Since I was a key instrument for data collection and analysis (Creswell, 2014), these measures helped me to effectively collect the interview data.

Researcher Assumptions

Patton (2015) defines reflexivity as reflecting on how the researcher's identity, beliefs, and history may influence the study findings. Here, I report my potential biases and personal perspective:

I personally prefer teacher-driven PD to administrator-led teacher PD. I have positive perceptions of the Edcamp model of PD, but my own Edcamp experiences have been hit-or-miss in terms of usefulness and enjoyment. (This may be, in large part, because I was actually a doctoral student when I began attending them and not a classroom teacher.) I am, however, deeply fascinated by Edcamp's rapid growth as a teacher-led, grassroots movement and by participants' strongly positive reviews of this form of teacher PD. Because I chose to conduct this study based on my own personal interest in Edcamp and my belief that this is a special and significant phenomenon deserving of study, I tried to be especially diligent about not ignoring ideas and themes that were contrary to my initial beliefs. To avoid confirmation bias, negative or discrepant cases were recognized and accounted for in the presentation of my findings.

Conceptual Framework

Below are the clusters of key ideas, theories, and research findings which guided this study.

Teacher Professional Development. Scholars are in general agreement that high-quality PD should allow teachers to collectively learn from each other's expertise and strengths and should build collegial relationships (Ball and Cohen, 1999; Colbert et al., 2008; Little, 2012). Additionally, scholars agree that teachers should be allowed to influence the structure and content of their PD (Ball and Cohen, 1999; Colbert et al., 2008; Little, 2012). It is also widely recognized in the literature that high-quality teacher PD is ongoing; deeply connected to instructional practice; and tied to school goals and initiatives (McLaughlin & Talbert, 2006; Colbert et al., 2008; Darling-Hammond et al., 2009; Little, 2012). These aforementioned characteristics of high-quality PD help education stakeholders understand the potential strengths and weaknesses of the Edcamp model of PD.

Desimone (2009) offers a conceptual framework that describes how effective PD leads to improved student learning. In this model, teachers first experience PD. This PD "increases teachers' knowledge and skills, changes their attitudes and beliefs, or both" (Desimone, 2009, p. 184). Teachers then use what they have learned to improve their pedagogical approach and/or the content of their teaching. Finally, the "instructional changes that the teachers introduce to the classroom boost their students' learning" (Desimone, 2009, p. 184). Desimone's (2009) framework suggests that if Edcamps are a high-quality or effective form of PD, they must influence or create a change in teachers'

professional practice.

Edcamps. The extant literature on the Edcamp model of PD informs this study in numerous ways. In these studies, Edcamp participants describe their experiences in very positive terms and perceived this model of PD to be useful (Miles, 2014; Brown, 2015; Carpenter; 2015; Carpenter & Linton, 2016). However, the existing studies did not closely investigate the nature of teachers' learning experiences during Edcamps and how, if at all, teachers' Edcamp experiences influence their professional practice. This investigation aimed to fill these important gaps by asking teachers to describe their Edcamp experiences in depth and to describe how, if at all, teachers' Edcamp experiences influence their professional practice. In this study, participants were asked to share and discuss artifacts that demonstrate this perceived influence on their professional practice, particularly in the areas of student instruction, peer collaboration, and teacher leadership.

Andragogy. Merriam (2003) writes that there is no single theory or model that can encapsulate what is known about adult learning. Adult learning was not a focus of study until the second half of the 20th century when Malcolm Knowles brought the term *andragogy*, "the art and science of helping adults learn," to American audiences from Europe (Knowles, 1980, p. 43). Prior to this, theories about and research on learning were focused on children and findings would be often inappropriately applied to adults (Merriam, 2003). Andragogy was critical in building the foundation for the field of adult learning theory.

Knowles (1980) writes that andragogy assumes that adult learners have a self-concept of themselves as independent and capable of directing their own learning. Adult

learners also use their personal life experiences as resources for learning. Adult learners are internally motivated to learn and are interested in learning that is problem-centered, immediately applicable, and that can aid them in their social roles. Knowles (1980) argues that adult learning experiences should be participant-driven (vs. teacher-driven), experiential, practical and in an environment that fosters trust and respect for all learners. Knowles, Holton, and Swanson (2011) also argue that teachers should play the role of facilitators in adult learning. These aforementioned aspects of andragogy are deeply embedded in the Edcamp model of PD and help to explain why adult learners, such as teachers, have positive perceptions of Edcamps.

Connectivism. Developed by George Siemens (2004), connectivism is a learning theory that acknowledges the powerful role technology plays in accessing, processing, and creating knowledge. Connectivism also addresses the impact of technology on learning and the rise of informal learning in ill-defined environments like personal learning networks and communities of practice. The focus of learning, according to this theory, is on making connections among information, ideas, and networks in a way that enables more learning. In the current digital age, information is abundant and constantly changing and/or growing. Sorting through and evaluating the relevance of new information is now a critical component of learning.

Siemens (2004) writes that the rapid growth of the internet and Web 2.0 have created new learning environments and opportunities. Learners determine what they learn and how they participate in that learning within the online and face-to-face networks they build. Learners are able to self-direct their own learning through seeking,

creating, and sharing information on their own. The role of teachers and institutions will be increasingly minimized as learning will not depend on them, but on the interests of the individual learner. Unlike andragogy, connectivism acknowledges how technology is changing the way human beings learn. This theory had many implications for this study because it provided a lens for understanding teachers' self-directed, technology-supported Edcamp learning experiences.

Definitions of Key Terms

The following terms were operationally defined for the context of this study:

Teacher Professional Development (PD): The processes, activities, and relationships teachers engage in to grow as professionals and to improve student learning experiences and outcomes.

Teacher-Driven Professional Development: Professional development that is considered teacher-driven must have at least one of the following characteristics: teacher-created, initiated, and/or led; driven by the self-identified needs of teachers; and/or respectful of teacher voice and autonomy.

Teacher Collaboration: Teachers working together to improve student learning through the sharing and implementation of knowledge and ideas (Leonard & Leonard, 2003).

Teacher Leadership: The "process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, p. 287).

Professional Learning Communities (PLCs): There is no "universal definition" of professional learning community (PLC), but at its simplest, a professional learning community is a deliberate effort to increase student learning and achievement through on-going teacher collaboration (Stoll, McMahon, Wallace, & Thomas, 2006, p. 222).

Professional Practice: A teacher's professional practice refers to all of the professional responsibilities, activities, and roles of a teacher. Areas of a teacher's professional practice include student instruction, peer collaboration, and teacher leadership.

Professional Learning Network (PLN): Professional learning networks (PLNs) are informal, online communities in which teachers voluntarily work together to improve their professional practice through sharing, collaboration, and relationship-building (Trust, 2012). Professional learning networks are also often referred to as 'personal learning networks' or 'personalized learning networks.'

Twitter: Founded in 2006, Twitter is an online microblogging, social networking platform (Twitter, 2015). Twitter users can "tweet" or share messages that are 140 characters or less (including links to images and videos). Hashtags ('#' symbol) are used to label messages and allows users to search for other tweets about the same topic. Using hashtags, Twitter users can engage in synchronous or asynchronous communication with other users around the world. Twitter has become one of the most popular platforms for teacher PLNs (Greene, 2014; Carpenter & Krutka, 2014).

Edcamps: Edcamps are free unconferences that cater to teachers' professional learning needs and interests (Edcamp Foundation, 2016). At the beginning of each

Edcamp, participants work together to create the schedule of breakout sessions for the day. Throughout the Edcamp event, participants are free to attend any session. Each session is intended to be discussion-based rather than presentation-based, with participants being encouraged to share the thoughts, ideas, and questions that matter most to them. Teachers attend Edcamps not only to learn new ideas, but to build professional relationships with other teachers.

Technology plays an important role in Edcamps. Miles (2014) and Carpenter (2015) both make the case that Edcamp participants' online activities, specifically on Twitter, are an important component of understanding participants' experiences of Edcamps. This is why, in this study, the term 'Edcamp experience' refers to teachers' participation in an organized Edcamp event (e.g., Edcamp Boston) as well as teachers' participation in online professional learning networks (PLNs) prior to, during, and/or following an Edcamp event.

Organization of the Dissertation

In Chapter 1, I provided an overview of the context, research methods, and significance of this study of U.S. public elementary classroom teachers' perceptions of their Edcamp experiences. In Chapter 2, I situate this study in the empirical and theoretical literature on formal and informal teacher professional development, Edcamps, andragogy, and connectivism. The extant research in these areas provides the conceptual framework for this study and also validates the contribution this study would make to the literature. In Chapter 3, I provide a comprehensive overview of the methodology for this descriptive, multiple case study. I explain how I identified and recruited participants as

well as how I collected and analyzed the data for this study. In Chapter 4, I present the study findings through a "rich, thick description" (Merriam, 2009, p. 43) of the major themes that emerged from the data. In Chapter 5, I present the discussion and recommendations for practice and future research.

CHAPTER 2: LITERATURE REVIEW

Introduction

The purpose of this literature review is to situate this study in the empirical and theoretical literature. The extant literature on teacher professional development (PD), Edcamps, and adult learning theory provide the conceptual framework for this study. This literature review begins with an overview of public school teacher PD in the United States. The next section provides an overview of formal, teacher-driven PD such as professional learning communities (PLCs). The following section provides an overview of informal, teacher-driven PD, with a special focus on Twitter PLNs and Edcamps. This review closes with an overview of two adult learning theories: andragogy and connectivism.

Literature Search Methodology

The literature search process took place in multiple stages between January 2014 and January 2017. The primary search engines used for the search were ERIC, JSTOR, EBSCO Host, ProQuest, SAGE, Web of Science, and Google Scholar. The search process began in ERIC with the search terms 'Edcamp' and 'Twitter PLN.' Given how new Twitter PLNs and Edcamps are in the education landscape, fewer than 50 search results actually covered the subject of Twitter PLNs and Edcamps. Of these results, the vast majority were brief how-to guides featured in professional publications. This suggests that most of the knowledge on Edcamps is from the world of practice and not the research literature.

To tether Edcamps to rich scholarly literature, the search was expanded to include the following search terms: teacher professional development/learning; teacher-driven/led/initiated/created professional development/learning; adult learning; teacher leadership; genuine/authentic teacher learning; web 2.0 or social media (Twitter, Facebook, Pinterest, Wiki) and teachers; teacher voice/autonomy/empowerment in professional development/learning; and what teachers want from professional learning/development. The search yielded thousands of peer-reviewed texts, including highly influential works from Ball and Cohen (1999), York-Barr and Duke (2004), Siemens (2004), and Guskey (2000).

Bibliographies from comprehensive literature reviews, national reports, and dissertation studies were also used to gather sources. Both peer-reviewed scholarly sources and practitioner sources (e.g. *Educational Leadership*) are represented in this review. With the exception of key seminal texts, the literature selected for this review was written in or after the year 2005 in order to offer the most current and relevant depiction of teacher-driven PD.

Scope and Limitations

This literature review focuses on the in-school and out-of-school teacher PD of K–12 public school teachers in the United States beginning in the 1990s to the present day. Since teacher PD is a broad and complex topic, this review focuses on PD that has at least one of the following qualities: a) teacher-created or directed b) driven by the self-identified needs of teachers; and/or c) respectful of teacher voice and autonomy. This review is significant because it explores the interplay of teacher PD, teacher leadership,

technological innovation, and accountability for student learning.

Overview of K–12 Teacher PD

"Effective" PD. Teacher PD programs and offerings strive to be "effective" but defining and evaluating PD effectiveness is problematic. One assumption researchers often make when studying PD effectiveness is that effective teaching and learning can be neatly defined (Webster-Wright, 2009). Cochran-Smith (2003) counters this supposition, writing:

> Teaching is unforgivably complex. It is not simply good or bad, right or wrong, working or failing. [A]bsolutes and dichotomies…[t]acitly assume there is consensus across our diverse society about the purposes of schooling and what it means to be engaged in the process of becoming an educated person as well as consensus about whose knowledge and values are of most worth and what counts as evidence of the effectiveness of teaching and learning. (p.4)

In the same vein, Webster-Wright (2009) writes that many researchers who study PD effectiveness assume that a well-designed PD program will guarantee teacher learning. However, teacher learning is too multifaceted, contextual, and unpredictable to be thought of in such simplistic terms. Webster-Wright claims that too many studies focus on the effectiveness of specific programs instead of how participants reflect on their learning process, thereby losing valuable perspectives on what would make PD effective for these individuals. In actuality, "effective" PD may look very different based on the specific needs and contexts of teachers, students, schools, and communities (Wei et al., 2010).

With these caveats in mind, it is widely recognized in the research literature that "effective" teacher PD should be focused on improving instructional practice, tied to overarching school goals, and supported by school leaders (McLaughlin & Talbert, 2006; Colbert et al., 2008; Darling-Hammond et al., 2009; Desimone, 2009; Wei, Darling-Hammond, & Adamson, 2010; Little, 2012). Additionally, PD is considered effective when it empowers teachers to learn from one another's expertise and strengths through collaborative communities of inquiry (Ball & Cohen, 1999; Colbert et al., 2008; Little, 2012). School-wide instructional improvement is not the result of one individual teacher's efforts, but the collaborative effort of teachers and school leaders (Ball & Cohen, 1999; Wei et al., 2010). As such, high-quality teacher PD should be engaging, relevant, and meaningful to teachers and allow them to have a voice in in what and how they learn (Fullan, 1994, 2007; Lieberman & Pointer-Mace, 2009; Wei et al., 2010).

Guskey (2003) argues that PD effectiveness should be measured by improvements in student learning outcomes. These outcomes should be intentionally wide-ranging and include "assessment results, portfolio evaluations, marks or grades, or scores from standardized examinations" as well as "affective and behavioral outcomes, such as students' attitudes, attendance rates, dropout statistics, and participation in school activities" (Guskey, 2003, p. 750).

In his seminal work, Guskey (2000) offers a five-level system for evaluating teacher PD. Level 1 refers to participants' personal reactions to the PD, including whether participants enjoyed the PD and found it worthy of their time. Level 2 refers to whether participants actually learned the intended content of the PD program or

intervention. Level 3 refers to whether those at the organizational level supported the implementation of the PD. Level 4 refers to whether participants actually apply what they've learned from the PD to their instruction. Level 5 refers to how the application of the PD impacts students' learning outcomes.

Guskey's (2000) model has both influenced and is reflected in other models for teacher PD evaluation. After conducting an extensive analysis of studies on teacher PD, Desimone (2009) a conceptual framework that describes how effective PD leads to improved student learning. In this model, teachers first experience PD. This PD "increases teachers' knowledge and skills, changes their attitudes and beliefs, or both" (Desimone, 2009, p. 184). Teachers then use what they have learned to improve their pedagogical approach and/or the content of their teaching. Finally, the "instructional changes that the teachers introduce to the classroom boost their students' learning" (Desimone, 2009, p. 184). Desimone's framework is designed to focus attention on whether PD actually impacts teachers' practice and whether students are benefiting academically. However, the measures for determining effective PD are inconsistent within the literature, with some scholars using teachers' self-reported feedback and others using theoretical frameworks (Guskey, 2003).

There are also models of evidence-based PD, in which teachers share and implement interventions that have had a positive impact on student learning outcomes. The most common evidence-based PD model is the professional learning community (PLC). PLCs aim to increase student learning and achievement through on-going teacher collaboration (Stoll, McMahon, Wallace, & Thomas, 2006, p. 222). Teachers share their

practice with colleagues, gain feedback for improving their practice, implement this feedback, and then continue the cycle by sharing their results in order to gain more ideas for implementation. Since student learning is at the heart of a PLC's work, DuFour (2004) states that successful professional learning communities are distinguished by their attention and response to the following questions:

"What do we want each student to learn?

How will we know when each student has learned it?

How will we respond when a student experiences difficulty in learning?" (p. 8)

Members of effective professional learning communities must work collaboratively to ensure that all students are learning at high levels (DuFour, 2004). In order to do this, professional learning communities must be results-focused, creating clear and specific goals such as, '"We will increase the percentage of students who meet the state standard in language arts from 83 percent to 90 percent"' (p. 10). DuFour argues that, for too long, the focus has been merely on having standards in place, not the effective implementation of these standards. Professional learning communities make it possible for teachers to systematically examine and improve their individual and collective instructional practice.

Dichotomies in Teacher PD

Despite general agreement on the qualities of effective PD, teachers' actual experiences of PD vary greatly (Darling-Hammond et al., 2009). Sparks (2004) describes a two-tiered PD system. The first tier emerged recently and focuses on ongoing professional community, professional judgment, relationships between colleagues and

students, and collaborative decision-making. The second tier of PD has been in existence longer and is narrowly focused on implementing external mandates to improve scores on high-stakes standardized tests. Professional community and professional judgment are not cultivated in this tier, with school leaders and policymakers undervaluing teachers' abilities to improve student learning outcomes. Many education researchers and scholars assert that the current national education reform movement has sparked a revival of second-tier PD (Sparks, 2004; Lieberman & Miller, 2005; Colbert et al., 2008; Datnow, 2011).

After examining 95 studies and 11 comprehensive literature reviews on PD interventions, Van Veen, Zwart, & Meirink (2011) also chose to divide professional learning into two categories. The bulk of the research they analyzed was labeled 'traditional' and primarily consisted of off-site, one-time workshops in which teachers receive knowledge from outside experts who know little about the context of their practice. These "episodic and superficial" forms of PD are heavily criticized in the literature (Ball & Cohen, 1999; Little, 2012, p. 43). The other category was labeled 'innovative' and involves professional learning that emphasizes ongoing collegial collaboration and is deeply embedded in daily practice. This form of PD is widely endorsed in the literature as effective and sustainable, but still not experienced by many teachers (Ball & Cohen, 1999; Van Veen et al., 2011).

Considerations. There is no agreement on what improved teaching looks like and it is difficult to isolate the influence of PD on a teacher's practice. While these aforementioned delineations are helpful in understanding the general landscape of teacher

PD, it is important to remember that the majority of PD research is fragmented and overwhelmingly limited to qualitative studies that investigate one form of PD in one specific context (Blitz, 2013). In order to draw valid and generalizable conclusions, future teacher PD research needs to include more studies exploring a specific form of PD being implemented in multiple settings (Van Veen et al., 2011). Furthermore, a comprehensive range of research tools, methods, and designs should be used to enrich and expand the literature on effective teacher PD (Borko, 2004).

Formal Teacher-Driven PD

Teacher collaboration. The pressures of the national accountability movement in education have created a strong interest in teacher collaboration as a means of improving professional practice and increasing student achievement (Datnow, 2011). Professional collaboration takes place when teachers work together in an ongoing basis to improve student learning through the sharing of knowledge and ideas and the implementation and assessment of group goals (Leonard & Leonard, 2003). In this regard, teacher professional learning communities ((PLCs) have shown the most potential to build the organizational capacity needed to meet the demands of accountability *and* provide authentic professional learning and growth to its members (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). Since teacher collaboration is a broad and complex topic, this review focuses on the collaboration that occurs in teacher professional communities committed to improving instructional practice and student achievement. While the literature stresses the importance of in-school teacher collaborative learning in improving student performance, this kind of learning is not

common in many schools across the nation (Darling-Hammond et al., 2009).

Conflict and resistance. Teacher collaboration produces conflict that is crucial to ongoing inquiry and improvement (Ball and Cohen, 1999; Achinstein, 2002). Without conflict, teacher professional communities maintain the status quo and are closed off to new perspectives and beliefs that could improve their practice. Embracing conflict means allowing teachers to challenge and reevaluate the work of the professional community (Achinstein, 2002). Conflict is linked to creativity and innovation because it allows members of professional communities to stray from the norm (Little, 2003).

However, not all agree that conflict is necessarily welcomed in professional communities. O'Keeffe (2012), a teacher of 12 years, argues that PLCs do not allow room for individual teachers to have differing views or practices in their classroom:

> I dislike PLC's penchant for groupthink, its change-process fetish, and its insinuation that individual teachers, under reasonable supervision, can't be trusted to do the right thing. I do not always agree with them, nor they with me, but I would trust any of my colleagues to make the right choice for their students with or without my consent. They are the only bona fide educational "experts" I know…If there is no room for dissent [in PLCs], then there is no room for integrity. (p. 58)

Riveros, Newton, and Burgess (2012) argue that "teacher resistance as an exercise of teacher agency is a fundamental challenge to current formulations of PLCs and represent a significant addition to our understandings of teacher practice within PLCs" (p.208). They call for teacher agency within professional learning communities to be

recognized and critically examined for this model of professional learning to be effective and sustainable.

Dufour (2011) asserts that conflict over the central purpose and goal of PLCs—increasing student achievement—can derail these teacher communities and render them ineffective. While this argument is understandable on a surface level, it fails to fully recognize the complex and potentially controversial discussions which are vital to robust PLCs. Administrators' vision and goals need to be accepted and shared by teachers in order for PLCs to exist at their full capacity (Morrissey & Cowan, 2004). Additionally, in a case study of two schools' PLCs, Hipp, Huffman, Pankake, and Olivier (2008) found that schools in which teachers and administrators worked together to create a culture of shared vision and leadership were in a better position to improve student learning.

Varying levels of expertise. Effective professional collaboration should bring teachers out of isolation and allow them to collectively learn from each other's expertise and strengths (Ball and Cohen, 1999). Unfortunately, PLCs vary widely in the expertise level of their teachers and in their access to internal and external networks of knowledge resources (e.g. colleagues, university partnerships, and professional learning opportunities) (McLaughlin & Talbert, 2006; Horn & Little, 2010; Talbert, 2010). Urban schools, which educate many of the most academically vulnerable students, often have many novice teachers who are limited in their ability to contribute to PLCs because of insufficient experience, preparation, or colleague networks (Talbert, 2010). One study of an urban school found that teachers seek teaching advice predominantly from their teaching colleagues and that the teaching style in the school was primarily didactic

(Diamond, 2012). The study suggested that if teachers were to rely on each other for help in becoming more interactive instructors, the feedback and advice may be limited in their networks. This raises the important, but still unanswered question in the literature: What is the threshold of experienced and highly skilled teachers required for PLCs to be effective (Talbert, 2010)?

Reliance on leadership. There is strong consensus that collaborative learning is effective when it is a school-wide norm that is rooted in professional community and diligently nurtured by school leaders (Little, 2012; Stoll et al., 2009; McLaughlin & Talbert, 2006; Talbert, 2010; Blitz, 2013). Several studies show that school leaders can foster collaboration by 1) creating a culture of mutual accountability and trust 2) providing structural supports like time and space, 3) developing a comprehensive instructional plan and accountability system, and 4) linking teachers to internal and external knowledge resources (Talbert, 2010; Tschannen-Moran, 2001; McLaughlin & Talbert, 2006; Leonard & Leonard, 2003). Throughout the literature, school leaders are urged to strengthen and expand their role in supporting professional collaboration between teachers. In their study of over 200 teachers in 45 North Louisiana schools, Leonard and Leonard (2003) take this even further, arguing that professional collaboration should not be left to whims and impulses of individual schools, but clearly supported at the very highest levels of policy and administration.

Professional learning communities. As previously discussed, many researchers maintain that effective teacher PD involves teachers working together to improve student learning outcomes. In the last two decades, professional learning communities (PLCs)

have emerged as the most common and widely accepted mechanism for increasing student achievement through intentional, ongoing teacher collaboration (Lieberman & Mace, 2008; Little, 2003, Stoll, Bolam, McMahon, Wallace & Thomas, 2006; Dufour, 2004). Working in conjunction with school leaders, these teacher teams meet regularly to analyze student data and to collaboratively develop interventions for improving student learning. Empirical studies have shown evidence of PLCs changing teachers' practice and increasing student performance on formal assessments (Hargreaves, 2007; Dufour, 2011).

While some researchers describe PLCs as teachers driving their own PD, others argue that PLCs are too administrator-driven, overly focused on test scores, and prone to stifling dissenting teacher voices (Achinstein, 2002; McLaughlin & Talbert, 2006; Wood, 2007; Horn & Little, 2010; Talbert, 2010; Diamond, 2012; Riveros, Newton, & Burgess, 2012; O'Keeffe, 2012). Additionally, PLCs vary widely in the expertise level of their teachers and in their access to internal and external networks of knowledge resources (e.g. colleagues, university partnerships, and PD opportunities) (McLaughlin & Talbert, 2006; Horn & Little, 2010; Talbert, 2010). Urban schools, which educate many of the most academically vulnerable students, often have many novice teachers who are limited in their ability to contribute to PLCs because of insufficient experience, preparation, or colleague networks (Talbert, 2010; Diamond, 2012). Finally, PLC meetings occur within prescribed times and spaces and often have prescribed agendas. Overwhelmingly, study findings indicate that teachers greatly desire to learn from each other, but often do not have the flexibility to do so within the traditional PLC model (Gates and Watkins, 2010;

Gabriel et al., 2011, Datnow, 2011).

Based on researchers' findings of the limitations of PLCs, there have been several calls for authentic, teacher-driven PD. Hargreaves (2003) writes that teachers must constantly self-direct and advance their own PD in order to prepare students for a knowledge economy that demands creativity, innovation, and risk-taking. Wood (2007) endorses "teacher learning on teachers' terms" (p. 289) and Riveros, Newton, and Burgess (2012) advocates that teacher agency is critical for successful PD. Similarly, Gabriel, Day, and Allington (2011) encourage school leaders to "loosen the strictures of mandated practice to make room for teachers to innovate context-specific solutions that match the individual needs of their students" (p. 40). There is strong agreement in the scholarly and professional literature that giving teachers greater voice and autonomy in their PD would not only benefit teachers, but also students and schools (Semadeni, 2010; Miller, 2014).

Beyond PLCs. Outside of the research on PLCs, there are several small-scale studies of teacher-driven PD. Colbert et al. (2008) conducted a phenomenological, mixed methods study of 11 teams of teachers (37 individuals) who were awarded funding to use on subject-related PD activities. The teacher teams were given autonomy to use the funds however they deemed best to foster their professional growth. Through surveys and interviews, teachers reported that having the freedom to tailor their own plans for PD was an empowering experience that made a positive impact on their passion for teaching and on their students' motivation to learn (Colbert et al., 2008). The teachers in the study shared that they did not feel this sense of enthusiasm for the one-size-fits-all PD that is

typically offered by their administration (Colbert et al., 2008). This study of teachers' perceptions, and others like it in the literature, strongly suggests that teachers are more engaged and satisfied with teacher-driven PD (Colbert et al., 2008; Slavit & Roth, 2013). However, this does not necessarily mean that teacher-driven PD is better than traditional forms of PD in improving students' learning experiences or outcomes. Naturalistic and experimental studies comparing teacher-driven PD with traditional, top-down PD are needed to substantiate such claims.

Besides teacher engagement and enthusiasm, teacher-driven PD can contribute to increases in student achievement. In a mixed-methods longitudinal study of a middle school, Fischer & Hamer (2010) found that, when teachers were invited to drive the process of instructional reform, state standardized scores in math and reading improved by over 10 percentage points and 75% of the student body became active in the school's teacher-developed academic enrichment program. These accomplishments were the result of teacher-driven action research, teacher collaboration, and working with university partners. Relatedly, Gabriel, Day, and Allington (2011) conducted a qualitative study in which they asked thirty 4th grade teachers working in high-poverty schools to discuss the conditions and factors that led to their strong records for helping below grade-level students make significant academic gains. All of the teachers credited PD, collegial support, and engaged autonomy in their development as exemplary teachers. These aforementioned studies, along with others, also reveal that, when given a voice in their own PD, teachers voluntarily seek out colleagues to help them improve student learning outcomes (Gabriel et al., 2011; Slavit & Roth, 2013).

Teacher leadership. After reviewing twenty years of research studies, York-Barr and Duke (2004) offer a conceptual framework for teacher leadership. The scholars posit that when teacher leaders are focused on student learning and work in a supportive school culture where their work is highly valued, they are able to build productive and trusting relationships that eventually lead to improvements in student learning. However, studies of teacher leadership reveal a deficit of support for teacher leadership in schools and that there is still much to learn about the development and impact of teacher leadership (York-Barr & Duke, 2004). Other scholars also stress that teacher leadership and teacher PD is heavily reliant on administrator support (McLaughlin & Talbert, 2006; Blitz, 2013). Almost no attention is given in the literature to grassroots, teacher leadership outside of schools and its impact on improving student learning in schools. This study on Edcamp may give scholars and school leaders a greater understanding of what teacher leadership looks like in such circumstances and give insight into whether, in fact, this kind of teacher leadership affects what happens instructionally within schools even without formal administrator support.

Many scholars suggest that teachers are leaders in developing and sustaining a culture of professional learning (Lieberman & Pointer-Mace, 2009). One of the underlying core beliefs of a culture of professional learning is that collective knowledge is always greater than individual knowledge (Lieberman & Mace, 2008). Hargreaves and Dawe (1990) contend that teacher knowledge and skills are best shared in collaborative cultures. Collaborative cultures may develop spontaneously or be facilitated by school administration, but arise from a shared belief that working collaboratively is beneficial to

both teachers and students. Since teachers in collaborative cultures determine the purpose(s) and sustain their work together, the outcomes are unpredictable. In contrast, Hargreaves and Dawe coined the term *contrived collegiality* to describe teacher professional communities that are expected to implement the mandated vision and goals of others. Contrived collegiality is heavily regulated, fails to recognize teacher knowledge and input, and delivers very predictable outcomes. Through building collaborative relationships that promote experimentation and risk-taking, teachers are able to lead and influence fellow teachers in authentic and organic ways (Lieberman & Miller, 2005).

More recently, Berry, Byrd, and Weider (2013) proposed that a small number of technologically savvy teachers will redefine what it means to be a teacher leader. Berry et al. (2013) refer to these individuals as *teacherpreneurs*. A teacherpreneur is an expert teacher who leads change and innovation in education without leaving the classroom. Harnessing the power of emerging technologies, these teachers will establish and sustain a culture in which teachers and their professional work are valued by the public. Through sharing their pedagogical expertise in emerging online spaces, they will champion the personalization of PD.

Considerations. It is critical to note that, despite all of these passionate calls for teacher-driven PD from education scholars and researchers, teacher-driven PD is still not the norm within many schools. Many teachers work in a culture of bureaucracy instead of a culture of professionalism (Talbert, 2010, p. 568). In a culture of bureaucracy, teachers are told what their instructional priorities and goals are and how they are to carry

them out. In a culture of professionalism, instructional priorities are communicated (not mandated) and teachers are given access to specialists and resources to help them achieve collaboratively determined goals. While there are clear differences between these two cultures, teachers within both cultures are, all too often, not perceived as being potential drivers of organizational change (Hargreaves, 2007). Talbert (2010) urges school leaders to move toward a culture of professionalism, using institutional resources to strengthen and support teacher leadership in their PD and instructional practice.

Informal Teacher-Driven PD

The majority of the teacher PD literature is on formal, administrator-driven, school-based PD. Very little attention is given to informal, self-directed, out-of-school PD in the literature. Teacher-driven PD, however, appears to be growing and evolving most in these latter spaces. In response to the perceived inadequacies and constraints of formal PD, teachers are voluntarily seeking out ways to grow professionally outside of the PD opportunities offered by their schools.

Technology has given teachers unprecedented opportunities to lead and self-direct their own PD (Edsurge, 2014). Within the last decade, professional learning networks (PLNs) have become increasingly popular as a form of teacher-driven PD outside of the schoolhouse. A PLN is a “system of interpersonal connections and resources that support informal learning” (Trust, 2012). Teachers in a PLN voluntarily work together to improve their professional practice by sharing instructional ideas, resources, and perspectives; engaging in dialogue with colleagues outside of their school; and staying up-to-date on trends and research in education (Forte, Humphreys, & Park, 2012; Trust,

2012; Cho, Ro, & Littenberg-Tobias, 2013). Flanigan (2011) describes PLNs as "communities of practice" (Wenger, 1998), but Jones & Dexter (2014) argue that they should be distinguished from communities of practice because many participants participate anonymously through made-up usernames or through lurking on PLN sites. In this sense, PLNs are nebulous and dynamic and can be viewed as both a form of independent learning or professional community (Grossman, Wineburg, & Woolworth, 2001; Jones & Dexter, 2012).

Teachers who participate in PLNs are no longer limited by many of the constraints of traditional PD. Web 2.0 technologies such as social networking and bookmarking sites, wikis, and blogs, allow PLNs to connect with colleagues all over the world at any time and from any place (Forte et al., 2012). Couros (2006) states that these "networked teachers" are able to draw from far greater resource networks than their colleagues in the past. Moreover, these teachers participate in a culture in which information is shared freely, openly, and rapidly (Couros, 2006). The knowledge shared within these networks is radically different from traditional PD because of its highly interactive, egalitarian, and personalized nature (Couros, 2006; Forte et al., 2012; Boule, 2011).

Jones and Dexter (2012) argue that teachers should have a menu of options for professional development that includes formal PD, informal collaboration, and independent activities (Jones & Dexter, 2012). Jones and Dexter (2012) contend that schools only concerned with formal PD activities fail to recognize the role of informal and independent PD in helping teachers process and apply what they have learned in

formal PD. The scholars argue that, instead, teacher PD should be viewed as a symbiotic system of formal, informal, and independent activities (Jones & Dexter, 2012). Avoiding extremes and all-or-nothing mentalities is critical for developing a comprehensive PD plan capable of reaching the diverse needs of teachers and their students.

Twitter PLNs

Twitter has become one of the most popular platforms for teacher professional learning networks (PLNs) (Greene, 2014 Carpenter & Krutka, 2014). Founded in 2006, Twitter is an online microblogging, social networking platform (Twitter, 2015). Twitter users can "tweet" or share messages that are 140 characters or less (including links to images and videos). Hashtags ('#' symbol) are used to label messages and allow users to search for other tweets about the same topic. Using hashtags, Twitter users can engage in synchronous or asynchronous communication with users around the world.

There are few published studies about K–12 educators' use of Twitter in the research literature, with the vast majority being published within the last five years. Carpenter and Krutka (2014) conducted a large-scale international survey on how and why K–16 educators use Twitter. They found the most common use of Twitter was for PD purposes. Out of the 755 total respondents, 96% reported using Twitter to give and obtain educational resources, 86% reported that they collaborated with educator colleagues, and 79% reported that they used it network and connect with colleagues. One prominent theme from the data was that many respondents preferred Twitter to more traditional forms of professional learning because it was more tailored to their individual needs and especially effective in connecting them with other educators on issues around

professional practice. Respondents' characterizations of colleagues on Twitter were very positive in nature, with descriptors like "change agents of education" and "thought leaders" being used by respondents (p. 427). This study also revealed that 40% of the study participants have attended Edcamps, a kind of teacher-driven un-conference discussed in the following section that is, in many ways, directly tied to Twitter PLNs. While this was the largest study on educators on Twitter in the literature in terms of respondents, Carpenter and Krutka acknowledge that all responses were self-reported from a nonrandom sample of volunteer participants.

In a closed- and open-ended survey of 324, K–12 teachers who use Twitter, Visser, Evering and Barrett (2014) found that teachers use Twitter primarily for PD, with 41% of respondents reporting that they use Twitter *multiple* times each day for this purpose. Visser et al. (2014) found that K–12 teachers are voluntarily seeking out PD on Twitter because it allows them to individualize and self-direct their learning. Teachers in this survey reported that the welcoming and collaborative culture of their Twitter communities allowed them to engage in deeper relationships with colleagues. Through these online connections, teachers reported learning new and innovative instructional ideas and teaching strategies, including having their students live-chat with scientists about concepts they were learning in class and doing collaborative projects with other classrooms across the country. Additionally, teachers reported growing professionally by applying for grants, attending conferences, and leading presentations based on information they learned from Twitter. Again, the authors here note that these were K–12 teachers' self-reports and that there is no corroborative evidence to support their

claims (Visser et al., 2014).

The findings in these two aforementioned studies are very consistent with the extant research on Twitter PLNs. For example, the results of a closed- and open-ended survey of 133 educators who participate in informal, online PD networks also revealed that educators favored Twitter more significantly than other forms of social networking tools and it was used more frequently than any other online sharing tool (Fucoloro, 2013). All of the research studies cite that this is, in part, because of the immediacy, accessibility, and flexibility of Twitter. As one educator remarked in Carpenter and Krutka's (2014) study, "It's 24-7 PD which I can do from home, school, public transport–anywhere!" (p. 426). Whereas traditional PD is limited by time, location, content, resources, and colleagues, Twitter PLNs provide teachers access to a vast array of personalized learning opportunities.

The existing research on Twitter PLNs has also focused on the advantages of Twitter as reported by study participants. Many of these studies have been dissertation studies published within the last three years. Through in-depth interviews, content analyses, and other mostly qualitative methodologies, these studies have deepened and extended the understanding of Twitter PLNs, particularly on the two following themes: 1) instructional ideas and resources and 2) professional relationships.

Instructional ideas and resources. In several studies, researchers conducted interviews with Twitter PLN participants who are K–12 educators (Forte et al., 2012; Elias, 2012; Gustafson, 2014). Across these studies, participants discussed the benefit of having a common place to give and receive instructional help and resources. In the

interviews, educators shared specific ideas they gleaned from their PLN colleagues, such as participating in Edcamps or having students video-chat with national authors (Gustafson, 2014). In one study, educators reported that participating in PLNs increased their access to learning that met their own needs. According to one educator: "Social media has filled a gap in my PD between the required district pd [sic] and the individualized learning I want" (Fucoloro, 2013, p. 148). However, the sample sizes were very limited for these interviews, ranging from as few as five individuals to as many as eight individuals (Forte et al., 2012; Elias, 2012; Gustafson, 2014). Additionally, the participants who volunteered to participate in these interviews may have done so because they felt strongly positive about their experiences.

Barkley (2012) studied how a group of 29 principals built and sustained an online community of practice (CoP) through Web 2.0 tools like blogs and Twitter. In a content analysis of randomly selected blog posts created by members of this CoP, "best educational practices" was the most frequent blog topic by more than double the second topic, "leadership essentials" (61 vs. 30 entries). Comparably, Power's (2013) analysis of three archived, public Twitter chat transcripts showed evidence of educators being intellectually engaged and working together to craft and facilitate learning opportunities that would result in better student learning outcomes. Power, however, acknowledges that one assumption of the study was that the transcripts contained legitimate ideas and resources.

Professional relationships. Relatedly, teachers in each study on Twitter PLNs found for this review also discussed the value of the relationships they formed in helping

them improve as professionals (Gustafson, 2014). Forte et al. (2012) found that since teachers developed relationships with colleagues outside of their schools, they were able to become channels for ideas to flow in and out of their schools. Many teachers also discussed how these relationships would not have been possible without Twitter PLNs, but that the value of Twitter "has nothing to do with technology and everything to do with people" (Elias, 2012, p. 50).

In some cases, Twitter changed the power dynamics of their schools. In Saville's (2013) phenomenological study of 14 educators who use social media to collaborate and communicate with colleagues, individuals reported that, regardless of their position or level of power, social media gave them an equal voice in their organization. The participatory nature of Twitter allowed respondents to freely communicate with people across the organizational hierarchy (Saville, 2013). Additionally, Saville (2013) found that many relationships between colleagues started with deep, professional interactions that evolved into more lighthearted, personal interactions later, a reversal from many face-to-face relationships.

In each of the studies found for this review, there were almost no negative or discrepant cases. This may be because of the self-selecting and self-directed nature of Twitter PLN participation. Teachers, for example, must have a certain level of competency with technology and social media in order to participate in PLNs. Saville (2013) suggests future studies to be done on whether and, if so, how teachers' technological skills can help or hinder their participation in PLNs. Another limitation of the studies on Twitter PLNs is the lack of corroborative evidence for teachers' self-

reported claims. Visser et al. (2014) recommends conducting naturalistic, longitudinal studies comparing teachers who use and who do not use Twitter in order to determine whether and, if so, how teachers' instructional practice is changed. Visser and his colleagues also recommend conducting studies comparing Twitter to more traditional forms of teacher PD in terms of increasing teacher effectiveness.

Teacher testimonials. PLNs stand out from other forms of teacher professional learning because of the many positive testimonials shared by participants in the blogosphere and in professional publications (Spencer, 2012). Again, this may be because of the self-selecting nature of these groups. However, many suppose this grass-roots, teacher-driven approach to professional learning is attractive to teachers because it respects them as knowledgeable professionals and encourages them to be curious and passionate learners (Flanigan, 2011; Marcinek, 2014). To another, PLNs are "all about professional generosity, spontaneity, synergy, and synchronicity" (Flanigan, 2011, p. 41). Based on teacher testimonials, PLNs offer teachers a way to engage in informal, spontaneous learning that is often missing in schools that are focused primarily on raising student achievement on standardized tests. One teacher wrote that "Twitter is where I go when I want to talk to teacher friends who are also trying to do project-based learning in environments that are test-obsessed" (Spencer, 2012). By both broadening the discourse of learning and meeting the individual professional needs of teachers, PLNs continue to gain followers in teacher communities across the country.

Edcamps

Miles' (2014) doctoral dissertation was the inaugural research study on the Edcamp model of PD. Attendees of any Edcamp and participants in Edcamp online networks were invited to complete an online, open-ended survey. The 449 survey respondents gave Likert ratings on the perceived utility of Edcamp-style PD and of traditional PD. The results showed that Edcamps were perceived by attendees as significantly more useful than traditional teacher PD. Additionally, the survey respondents also gave one-word descriptions of Edcamp-style PD and traditional teacher PD. The results were striking, with the vast majority of participants describing Edcamp-style PD using positive terms like "innovative", "inspiring", and "enlightening" (Miles, 2015, p. 75) and traditional PD using negative terms like "boring", "irrelevant", and "ineffective" (Miles, 2015, p. 75). For the survey respondents, Edcamps are a significantly more desirable than traditional teacher PD. In terms of the growth and diffusion of Edcamp, Miles discusses the importance of Twitter PLNs, noting the increased usage of posts related to Edcamp in the weeks before and after each unconference is held.

Brown (2015) utilized Q methodology to explore teachers' perceptions of the perceived utility of Edcamps as a form of teacher PD. A Q set composed of 36 statements was sorted by 19 teacher participants. The analysis of the Q sorts revealed three factors which characterized teachers' perceptions of their Edcamp experiences: *Tweeting Edcampers*, *One-Time Edcampers*, and *Edcamp Converts*. *Tweeting Edcampers* had positive perceptions of the utility of their Edcamp experiences and were

distinguished by the value they placed on Twitter as a tool for connecting with others. *One-Time Edcampers* were indifferent about the utility of their Edcamp experiences and Twitter, and did not find either to be beneficial to their professional practice. Finally, *Edcamp Converts* found Edcamps to be refreshing and transformative experiences that either impacted or had the potential to impact their professional practice.

Carpenter (2015) published the first peer-reviewed journal article on the Edcamp model of PD. In his study, 95 participants of one Edcamp held in 2014 in the United States responded to an open-ended survey exploring participants' reasons for attending Edcamps and their perceptions of their Edcamp experiences. The results showed that individuals attended Edcamps primarily because of recommendations from colleagues, desire to learn and grow professionally, and interest in the Edcamp format. In terms of Edcamp participants' perceptions of their experiences, 85% of respondents rated their experiences as a '4' or '5', with '5' being the highest positive rating. Many of the survey respondents reported enjoying the participant-driven learning and the collegial atmosphere of Edcamps. While survey respondents also noted how their Edcamp experiences could be improved (e.g. the level of collaboration in discussions), over 90% said they would attend an Edcamp in the future.

Carpenter and Linton's (2016) study is the latest peer-reviewed empirical research conducted on Edcamps. The researchers investigated 769 Edcamp participants' motivations for attendance and their perceptions of their experiences through two online surveys featuring open- and close-ended questions and a Likert scale. In regard to participants' motivations for attending Edcamps, Carpenter and Linton found that

participants' motivations mostly fell under the theme of 'learning', with respondents making specific references to *what* and *how* they wanted to learn as well as *who* they wanted to learn with during the Edcamp. In regard to Edcamp participants' perceptions of their experiences, Carpenter and Linton found that over 90% of survey participants rated their experiences highly and expressed a desire to attend Edcamps in the future. The survey results also indicated that the participants may actually prize the open-ended, exploratory format of Edcamps more than they do the discrete knowledge and skills they gain from the experience.

Challenges for informal teacher learning. There are several challenges facing teachers who engage in self-directed learning. The first challenge is getting diverse viewpoints (Ferriter & Provenzano, 2013). While some teachers testify that their PLNs drive them to critically reflect and push back against groupthink (Spencer, 2012), Ferriter and Provenzano (2013) argue that since teachers control what they see and do online, they may intentionally or unintentionally ignore views that are contrary to their own, thereby creating their own groupthink environments. Communities that avoid conflict and differences may therefore miss opportunities to improve and challenge the status quo (Achinstein, 2002). In a self-directed learning environment, it is up to the learner to be critically reflective and to intentionally seek out new ways to challenge and deepen their understandings (Marsick & Watkins, 1990). The second challenge is getting trustworthy information (Ferriter & Provenzano, 2013). Since there is no formal form of quality control online, inaccurate information can spread quickly and negatively impact teachers' practice. On Twitter, teachers can gain thousands of followers and emerge as education

thought leaders (Ferriter & Provenzano, 2013). One risk is that teachers who participate in PLNs will view these "celebrity" teachers as more credible than others even though they have never worked directly with these individuals (Cho et al., 2013). Finally, the third challenge is having school districts recognize the legitimacy of this kind of professional learning (Ferriter & Provenzano, 2013).

Adult Learning Theory

Andragogy. Merriam (2003) writes that there is no single theory or model that can encapsulate what is known about adult learning. Adult learning was not a focus of study until the second half of the 20th century when Malcolm Knowles brought the term *andragogy*, "the art and science of helping adults learn," to American audiences from Europe (Knowles, 1980, p. 43). Prior to this, theories about and research on learning were focused on children and findings would be often inappropriately applied to adults (Merriam, 2003). Andragogy was critical in building the foundation for the field of adult learning theory.

Knowles (1980) writes that andragogy assumes that adult learners have a self-concept of themselves as independent and capable of directing their own learning. Adult learners also use their personal life experiences as resources for learning. Adult learners are internally motivated to learn and are interested in learning that is problem-centered, immediately applicable, and that can aid them in their social roles. Knowles argues that adult learning experiences should be participant-driven (vs. teacher-driven), experiential, practical and in an environment that fosters trust and respect for all learners.

Knowles, Holton, and Swanson (1998 as cited in Knowles, Holton and Swanson,

2011) developed the *andragogy in practice* model, a framework for applying andragogy to different adult learning scenarios. The model is divided into three parts with the following labels: 1) the goals and purposes for adult learning; 2) individual and situational differences for adult learners; and (3) andragogy: core principles of adult learning. The six core principles of adult learning are the learner's: 1) need to know; 2) self-concept; 3) prior experience; 4) readiness to learn; 5) orientation to learning; and 6) motivation to learn.

The *goals and purposes* are what shape the course of the learning. Knowles et al. (2011) writes that while andragogy is best applied to individual growth, the goals and purposes of adult learning may also include institutional growth, and/or societal growth. As individual growth increases so does the potential for institutional and societal growth. The model recognizes that *subject matter, individual, and situational differences* affect the style of instruction (Knowles et al., 2011). Subject matter differences refer to the content being taught. Individual differences might include the teacher's background and the learner's background. Situational differences might include the environment as well as other factors that may be outside the teacher's or learner's control. Regardless of the actual differences, the key point is that these differences affect the learning process and that addressing these differences is a critical part of providing effective instruction.

The andragogy in practice model has *six core adult learning principles* (Knowles et al., 2011):

1. *Need to know*: Adults desire to understand why learning a particular skill or subject will be useful and beneficial to them. Effective facilitators of adult learning are

able to successfully demonstrate and persuade learners of these benefits.

2. *Self-concept*: Adults perceive themselves as independent, self-directed learners. Effective facilitators of adult learning enable and encourage learners to take more responsibility and initiative for their own learning.

3. *Prior experience*: Adults bring their prior knowledge and experiences to new learning situations. Effective facilitators of adult learning provide opportunities for learners to reflect and build upon existing knowledge when learning new information.

4. *Readiness to learn*: Adults want learning to be relevant and immediately applicable to their real-life contexts. Effective facilitators of adult learning recognize the importance of this motivation and create a sense of purpose and urgency to what is being learned.

5. *Orientation to learning*: Adults approach learning from a real-world problem-solving perspective. Again, effective facilitators of adult learning are able to demonstrate how learning particular skills and subjects will help adults better tackle the issues and situations they face.

6. *Motivation to learn*: Adults are more often motivated internally by self-esteem or personal goals than externally by promotions or demands. Effective facilitators of adult learning realize this and design environments that foster internal motivation.

These aforementioned aspects of andragogy are deeply embedded in the Edcamp model of PD and help to explain why adult learners, such as teachers, have positive perceptions of Edcamps.

Connectivism. Developed by George Siemens (2004), connectivism is a learning theory that acknowledges the powerful role technology plays in accessing, processing, and creating knowledge. Connectivism also addresses the impact of technology on learning and the rise of informal learning in ill-defined environments personal learning networks and communities of practice. The focus of learning, according to this theory, is on making connections among information, ideas, and networks in a way that enables more learning. In the current digital age, information is abundant and constantly changing and/or growing. Sorting through and evaluating the relevance of new information is now a critical component of learning.

Siemens (2004) offers several principles of connectivism. For example, connectivism is based on the idea that knowledge is spread out in networks of individuals and organizations, and learning occurs as a result of connecting ideas from various places in these networks. Learning through collaborative networks is not new, but Siemens' theory acknowledges how much larger and more easily accessible these networks are now (Kop & Hill, 2008). Within the theory of connectivism, learning is the process of finding and integrating various pieces of information in order to reach a new understanding. An example of this idea is the creation of a new interdisciplinary field. The ability of learners to go through this process of seeking out and integrating ideas is more important than knowing the information itself. The goal of learning within the context of connectivism is to maintain accurate and up-to-date knowledge in a world where knowledge is constantly growing and changing. The learner must always revisit connections and build up new connections. The learner must also re-integrate existing

and new information in different ways to arrive at new knowledge.

Siemens (2004) writes that the rapid growth of the internet and Web 2.0 have created new learning environments and opportunities. Learners are able to determine what they learn and how they participate in that learning within the online and face-to-face networks they build. The role of teachers and institutions will be minimized as learning will not depend on them, but on the interests of the individual learner. Critics of connectivism argue that teachers are needed in learning because they encourage students to challenge their own thinking and to be aware of multiple perspectives (Kop & Hill, 2008). Connectivist learning environments, however, place the responsibility of learning on the learners. Since Edcamps promote self-directed, technology-supported learning, connectivism provided a useful lens for understanding public elementary classroom teachers' Edcamp experiences.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this qualitative research study was to explore U.S. public elementary teachers' perceptions of their Edcamp experiences and how, if at all, their Edcamp experiences influenced their professional practice. In order to fulfill this purpose, I carried out a descriptive, multiple case study of twelve U.S. public elementary classroom teachers who had recently attended at least one Edcamp.

In this chapter, I provide a comprehensive overview of the methodology for this research study. I begin with the rationale for selecting a descriptive, multiple case study research design which involved conducting interviews and collecting artifacts. I then describe how participants were selected and recruited for this study. I continue with a description of the data collection and analysis methods. I follow this with a discussion of the methods for ensuring validity. I close this chapter with a discussion of the study limitations and ethical considerations.

Research Questions

The following research questions guided this study:

1. What are public elementary classroom teachers' perceptions of their Edcamp experiences?

    a. If applicable, what are teachers' perceptions of their learning experiences during Edcamps?

b. If applicable, what are teachers' perceptions of their experiences sharing during Edcamps?

c. What are teachers' perceptions of the quality of their Edcamp experiences?

2. Do public elementary classroom teachers perceive that their Edcamp experiences have influenced their professional practice? If so, what are teachers' perceptions of this influence and what artifacts do they share to demonstrate this influence?

a. If applicable, what are teachers' perceptions of the influence on student instruction?

b. If applicable, what are teachers' perceptions of the influence on peer collaboration?

c. If applicable, what are teachers' perceptions of the influence on teacher leadership?

3. What are public elementary classroom teachers' perceptions of the factors that contribute to whether their Edcamp experiences actually influence their professional practice?

4. What do public elementary classroom teachers who have participated in Edcamps want from teacher professional development?

Research Design and Approach

The research questions in this study called for a qualitative research design (Creswell, 2014). According to Creswell (2014), qualitative research holistically captures the complexity of a phenomenon and focuses on the individual meanings and perspectives participants have about it. The researcher is primarily concerned about "the

meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research or that writers express in the literature" (Creswell, 2014, p. 186). In this study, I focused on the individual perspectives and meaning-making of public elementary classroom teachers who had recently attended at least one Edcamp.

The case study research method was well-suited for answering the qualitative research questions in this study. Yin (2009) defines case study as "an empirical inquiry that investigates a contemporary phenomenon in depth within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident" (p. 18). Case study research is also appropriate when researchers have limited control over the phenomenon and when researchers are asking descriptive ("how") questions. The data collected in this study was taken from teachers' real-life contexts (e.g., their classrooms and their online activities) and the questions asked during the interviews focused on how, if at all, Edcamps had influenced teachers' professional practice.

There are many types of case studies, but the descriptive, multiple case study was chosen because the findings of this study were a "rich, thick description" of teachers' perceptions of their Edcamp experiences (Merriam, 2009, p. 43). Merriam (2009) writes that the "unit of analysis, *not* the topic of investigation, characterizes a case study" (p. 41). In this study, public elementary school classroom teachers who had recently participated in at least one Edcamp served as the units of analysis. Each participant was treated as a separate case, making this study a multiple case study (Yin, 2009).

In order to answer my research questions, I conducted two, semi-structured

interviews with each of the participants. During the second of these two interviews, teachers shared and discussed artifacts that demonstrated the influence of Edcamps on their professional practice. Following both interviews, I sent a follow-up email to all of the participants, asking them to clarify any unclear responses and giving them another opportunity to share any additional information.

After the data collection process, I conducted a thematic analysis (Braun & Clarke, 2006) of all twelve cases, searching for key themes and patterns across the cases. I also created an inventory of the artifacts, categorizing them by area of influence on teachers' professional practice. The product of this study was a "rich, thick description" (Merriam, 2009, p. 43) of participants' perceptions. The data collection and analysis methods are detailed in the following sections.

Participants

The participants for this study were twelve public elementary classroom teachers in the United States. A table of all the participants, with their corresponding demographic characteristics, is presented in Chapter 4.

U.S. public elementary classroom teachers were selected for this study because of the extensive literature on the need for high-quality PD for U.S. K–12 public school teachers (Darling-Hammond et al., 2009). However, U.S. K–12 public school teachers' professional practice is very different across grade levels and subject areas. For example, it would be difficult to make meaningful comparisons between a high school science teacher and a kindergarten teacher because the context and nature of their professional practice are so different. With this in mind, I selected U.S. public elementary classroom

teachers for this study because they are a significant and distinct subset of U.S. K–12 public school teachers. The similar nature of their professional practice allowed me to make more meaningful comparisons among participants (Patton, 2015). As a former elementary school teacher myself, I also chose to study elementary teachers because I am deeply familiar with their professional responsibilities and well-positioned to ask informed questions.

Public elementary classroom teachers are the primary instructional providers for elementary students and are defined in this study as teachers who teach core academic content areas, including English Language Arts and Math. With the adoption of the Common Core State Standards in English Language Arts and Math in 42 states, public elementary classroom teachers' instructional practice is more comparable than ever before (Common Core State Standards Initiative, 2016). ELA and Math are also the two most heavily tested subject areas and often the focus of teacher PD (Dufour, 1998; Hargreaves, 2003), so it was of interest to see if and how Edcamps addressed these core academic content areas. Additionally, since public elementary classroom teachers teach multiple subjects, I may have had more opportunities to learn about the influence of Edcamps on teachers' professional practice and, in particular, their instructional practice.

Inclusion criteria.

1. Participants must be public elementary school classroom teachers.
2. Participants must have attended at least one Edcamp recently. In this study, 'recently' was defined as within twelve months prior to the participant's enrollment in the study.

3. Participants must demonstrate that they understand the requirements of the study and must consent to participate.

Exclusion criteria.

1. Participants were disqualified if they were unable or unwilling to commit to completing all of the requirements of the study.
2. Participants were disqualified if they were currently working full-time in a private school setting.
3. Participants were disqualified if they were not currently teaching both English Language Arts and Math.

Recruitment

I used five strategies to recruit participants for this study. The first strategy was conducting an online search to retrieve the publicly available names and email addresses of public elementary classroom teachers who had recently attended an Edcamp. The websites I used to conduct this search included, but were not limited to: http://edcamp.wikispaces.com and www.twitter.com. The second strategy was tweeting an advertisement for this study in different education-related chats on Twitter, including but not limited to #edchat and #elemchat (see Appendix A). The third strategy was attending Edcamps (e.g., Edcamp Boston) and asking individuals if they were interested in participating in the study. The fourth strategy was posting an advertisement on the Edcamp Foundation website (see Appendix B). Given the small number of individuals who qualified for this study, the fifth and final strategy was asking current participants to refer me to prospective participants that they knew from their own professional and

personal networks.

For each of these recruitment strategies, I emailed or direct messaged individuals to see if they met the eligibility criteria and were interested in participating in this research study (see Appendix C). This email included the informed consent form in the email for their review (see Appendix D).

Data Collection

Qualitative case study research data are collected from multiple sources in the participants' natural setting (Creswell, 2014). In order to answer the research questions, I conducted two, semi-structured interviews with each of the participants. I also collected artifacts voluntarily shared by participants and written responses to a follow-up email sent to all participants. Below is a detailed overview of the data collection procedures.

Interviews. In order to learn about teachers' perceptions of their Edcamp experiences, I conducted two, audio-recorded semi-structured interviews with each of the participants lasting approximately one hour each. Prior to their enrollment in the study, participants were given an informed consent form, which outlined what would be discussed in the two interviews.

Two interviews were conducted in order to give participants multiple opportunities to describe their perceptions of their Edcamp experiences in rich detail. The open-ended and conversational nature of these interviews provided the opportunity for participants to share things they may not have in a survey or other format. As the researcher, I was also able to pick up on participants' body language and voice inflection, which informed my questions and interpretations of participants' responses. I was also

able to follow up on participants' responses and ask them to clarify their meaning. Additionally, the time between the first and second interview allowed participants to reflect and prepare for the second interview, possibly leading to deeper insights than if I had only conducted one interview.

The interviews were conducted on Google Hangouts, a video chat platform. These approximately one-hour interviews were audio-recorded using the Voice Memo application on my iPhone. Time between the interviews was necessary for participants' reflection and my own researcher reflection so the first and second interviews took place no fewer than four days apart.

I developed an interview guide for both the first and second interview (see Appendix E). The interview guide for this study was informed by an unpublished pilot study I conducted in 2015 (no pilot study participants were enrolled in this study). All of the participants were asked questions which touched on each topic of this guide, although the phrasing may have varied interview to interview. Since the interviews were intended to elicit information about participants' unique experiences, new questions were asked based on participants' responses. Throughout the interviews, I used probes (e.g., What do you mean by that? Can you tell me more about that?) in order to elicit deeper responses (Patton, 2015). At the end of each interview, I also gave participants the opportunity to share anything else they believed would be important to understanding their Edcamp experiences.

First interview. In the first interview, I asked each participant to describe their educational and professional background, their Edcamp participation, and what they

wanted from teacher PD. I specifically asked participants to share how, if at all, their Edcamp experiences had influenced their professional practice. I also asked participants to discuss the factors that led to this influence on their practice. In the interview guide, I divided the first interview into seven topics with the following labels: "Demographic data"; "Edcamp background"; "Edcamp learning"; "Edcamp teaching"; "Edcamp influence"; "Factors affecting influence"; and "Views on teacher PD." Below, I unpack each of the topics of the first interview.

Demographic data. In order to construct demographic profiles of each participant and to gain an overall sense of how participants may be similar or different from one another, I asked participants about their personal, educational, and professional backgrounds. A table of all the participants, and their corresponding demographic characteristics, is presented in Chapter 4.

Edcamp background. Since I was interested in participants' personal Edcamp experiences, I asked them to describe how they became involved in Edcamps and their perceptions of their experiences. Since Edcamps are often praised as being an improvement from traditional PD (Miles 2014; Swanson, 2014; Carpenter, 2015), I asked participants to compare their Edcamp experiences with their other PD experiences in order to see whether their responses aligned with the extant literature. I also asked participants to define Edcamps and to describe the purpose of Edcamps so that I could gain insight into whether participants actually view Edcamps as a form of PD.

Edcamp learning. While the extant literature provides evidence that educators attend Edcamps to learn (Miles, 2014; Carpenter, 2015), there is no in-depth empirical

research about what Edcamp participants are specifically learning. As such, I asked participants to share details of their learning experiences and their perceptions of the quality of these experiences.

Edcamp sharing. The Edcamp model of PD allows participants to both learn and share. When applicable, I asked participants to describe their experiences voluntarily "teaching" or sharing with other participants during Edcamp breakout sessions. This line of questioning was intended to gain greater insight into participants' experiences and to add to the little knowledge that exists on what participants share during Edcamps.

Edcamp influence. I asked participants to share how, if at all, their Edcamp experiences have influenced their professional practice. While I encouraged participants to think about "influence" in the broadest and least restricting sense possible, I specifically asked them about the influence on student instruction, peer collaboration, and teacher leadership because these areas are often discussed in the teacher PD literature. These questions were important because they explored whether Edcamps actually makes a difference in participants' practice.

Factors affecting influence. All of the participants stated that Edcamps had influenced their professional practice. I asked teachers to describe the factors that led to this influence. These questions were key to understanding the conditions that might make this model of PD effective or ineffective. In most cases, teachers explicitly stated what the factors were (e.g., having the support of colleagues) and, in other cases, the factors could be inferred based on what teachers shared. If participants wanted more clarification about what I meant by 'factors', I gave them examples based on what

participants had already shared. For example, if teachers shared that their administrators were supportive of their Edcamp participation, I would ask whether administrator support was a factor that affected whether their Edcamp experiences influenced their professional practice.

Views on teacher PD. In order to see how teachers' views about PD compared to teachers' views in the extant literature (Sparks, 2004; Compton, 2010), I asked teachers to share what they wanted from PD; how they defined high-quality PD; and what role they thought teachers should play in their PD. Asking teachers about what they want from PD is also important to improving the design and implementation of teacher PD.

Second interview. Since all of the participants stated that their Edcamp experiences had influenced their professional practice, the focus of the second interview was on describing the nature of this influence in greater detail. To support their descriptions, teachers were asked to voluntarily share and discuss artifacts (e.g., student work, lesson plans, presentations, and blog posts) that they believed demonstrated the influence of Edcamps on their professional practice. These artifacts were important because they corroborated what teachers shared in the first interview and also offered tangible evidence of the influence of Edcamps on teachers' professional practice.

A few measures were taken to help teachers prepare for the second interview. When teachers discussed the influence of Edcamps on their professional practice during the first interview, I asked them whether they had any tangible artifacts to support what they were sharing. At the end of the first interview, I asked teachers to, if possible, gather artifacts to support what they shared during the interview. I also asked teachers to,

if applicable, take time to reflect on additional ways that Edcamps might have influenced their professional practice which were not discussed during the first interview. Again, teachers were asked to, if possible, gather supporting artifacts for these additional areas of influence as well.

Following the first interview with each participant, I sent an email to schedule or confirm the second interview date and to give detailed guidance for collecting artifacts for the second interview (see Appendix F). In this email, I invited participants to gather and share any artifacts that show (or provide evidence of) the influence of Edcamps on their professional practice, including but not limited to the areas of student instruction, peer collaboration, and teacher leadership. I explained that the artifacts may include, but are not limited to, text, image, and audiovisual data. As examples, artifacts could be classroom photos, tweets between colleagues, blog posts, published articles, meeting agendas, lesson plans, and student work. I told participants that these artifacts could be shared with me online (e.g., via video call or web link). Participants were also welcomed to email the artifacts before the second interview.

Some participants chose to send artifacts before the second interview while others chose to share them during the second interview. All the artifacts were selected by the participants and voluntarily shared. It is important to note that the artifacts participants shared do not represent the total self-perceived influence of Edcamps on their professional practice. There were several instances in which participants spoke of specific ways Edcamps had influenced their practice, but were unable to retrieve supporting artifacts. Additionally, there were instances in which participants were not

able to share tangible evidence of the influence of Edcamps on their attitude and approach toward teaching.

In order to protect participants' anonymity and the anonymity of their students and schools, copies of the artifacts are purposefully not published in this study. Since the purpose of the artifacts was to support teachers' discussion of the influence of Edcamps on their practice, what was said about the artifacts mattered more than the physical artifacts themselves. In this sense, readers of this dissertation still gain the meaning of the artifacts even if they cannot visually see them.

When possible, the second interview took place approximately two weeks after the first interview. However, due to participants' changing schedules and availability, many interviews occurred before or after the two-week mark. With the exception of one participant who felt prepared to do the second interview four days after the first interview, all others took place at least one week from the first interview. A table of the participants' first and second interview dates is provided in Appendix G.

The second interview consisted of follow-up questions from the first interview and a detailed discussion of the meaning of each artifact. Below, I unpack both topics of the second interview.

Follow-up questions from first interview. I asked participants follow-up, clarifying questions from the first interview on an as-needed basis. For example, I asked participants to clarify the number of Edcamps they had attended. Additionally, if there was a glitch in the audio recording of the first interview, I asked participants to clarify or confirm what they said.

Discussion of each artifact. After the follow-up questions were completed, participants discussed each artifact in the order that they felt was best. During this time, the participant and I often virtually shared one screen to view each artifact at the same time. Otherwise, the participant and I would simply refer to the name/label of the specific artifact on our respective screens.

Participants were asked to describe each artifact and explain how the artifact showed the connection between their Edcamp experiences and their professional practice. Again, it is important to note that the artifacts were a means of learning more about the influence of Edcamps on participants' professional practice. Each artifact was evidence of a richer story or example shared by participants. In this study, the artifacts themselves were not as important as what was shared about them by participants.

Artifacts were categorized by the area(s) of teachers' professional practice that they influenced: student instruction, peer collaboration, and teacher leadership. Each artifact represented as few as one and as many as three areas of influence on teachers' professional practice. Artifacts were categorized based on what teachers shared during the interviews. In many cases, teachers explicitly stated which area of influence the artifact represented and, in some cases, it was inferred by what teachers shared.

Artifacts. In total, 68 "unique" artifacts were shared by teachers. The term "unique" is used here to mean that if teachers shared multiple artifacts, which were supposed to illustrate exactly one point of influence, all of the artifacts were combined into one artifact. For example, several teachers provided multiple photos of one learning activity and discussed one major point about these photos. In these cases, all of the

photos were counted as one unique artifact. An inventory of the artifacts is provided in Chapter 4.

Follow-up email. Following the two interviews, I sent a follow-up email (see Appendix H) to each of the participants asking them to clarify their interview responses as needed and to offer any additional information they believed was important to understanding their Edcamp experiences. This method of ensuring the accuracy of participants' perceptions added to the internal validity of my study.

Data Analysis

Below is an overview of how I went through the iterative process of analyzing the three kinds of data collected for this study: interviews; follow-up email responses (when applicable); and artifacts voluntarily shared by participants. Below, I describe how I used Braun & Clarke's (2006) six-phase thematic analysis process as a guide for the data analysis.

"Phase 1: familiarizing yourself with the data" (Braun & Clarke, 2006, p. 87). Merriam (2009) recommends collecting and analyzing data concurrently because it allows researchers to respond to and make appropriate changes based on the emerging data. During the data collection process, I kept an ongoing memo of my reflections (e.g., observations, connections, and questions) regarding participants' responses in the interviews and to the follow-up emails. I jotted down notes on emerging themes and patterns in the interviews as well as connections to the research and professional literature. I used these memos to familiarize myself with the data as well as to inform the follow-up questions that I asked participants.

During and after the data collection process, I hired graduate students at Boston University to electronically transcribe the audio-recorded interviews. To protect participants' privacy, the interviews the graduate students transcribed did not contain participants' names. To verify the accuracy of the transcripts, I listened to the interview recordings with the electronic version of the transcripts and made any needed changes. I also read each verified transcript (and when applicable, responses to the follow-up emails) approximately four times over the course of a few months to stay familiarized with the interview data. I also continued the ongoing memo of my thoughts and observations of each transcript.

After conducting all of the interviews, I wrote brief summaries of participants' responses to each of the four research questions guiding this study. I selected direct quotes that I felt encapsulated the essence of participants' responses to each research question. I met with my peer group to ensure that my summaries of the transcripts were accurate and to also get a sense of my peers' initial thoughts and observations of the data (Creswell, 2014). Their reactions were noted in my ongoing memo.

"Phase 2: generating initial codes" (Braun & Clarke, 2006, p. 88). Once I had a good sense of each case and a general sense of all the cases together, I went through the iterative process of developing initial codes that arose from the interview data (e.g., "finding their tribe") as well as those related to the research literature (e.g., "role of Twitter"). In this study, many of the theory-driven codes were the same as those that would have emerged naturally from the interview data. As suggested by Creswell (2014), I also coded for the unusual or unexpected (e.g., "students who stood out"). It is

important to note that sections of interview text and follow-up email responses were coded multiple times when necessary. During the coding process, I met periodically with my peers to check the accuracy and consistency of my coding.

"Phase 3: searching for themes" (Braun & Clarke, 2006, p. 89). During this phase, I went through the iterative process of organizing codes into candidate themes and sub-themes. Building upon my prior work, I organized all of the relevant coded data extracts under the relevant research question. From there, I used both NVivo and physical strips of paper with coded data on them to group common codes together into candidate themes. During this process, I went back and forth from the transcripts to the coded data, adding, eliminating, merging, and redefining codes as necessary. I simultaneously developed possible themes and subthemes during this phase through reflecting on the relationships among the codes, themes, and subthemes. The majority of the data fell under an established theme, but a theme labeled "miscellaneous" was used to store all of the coded data which appeared to not be relevant to the four research questions guiding this study.

"Phase 4: reviewing themes" (Braun & Clarke, 2006, p. 91). At this point in the process, I continued the iterative process of refining the themes by reading all of the coded data under each theme to examine their goodness of fit and to assess whether they coherently addressed the corresponding research question. This stage involved rearranging coded data extracts within each theme to make the narrative more logical and clear. Some coded data extracts were also expanded or contracted for the purpose of clarity.

"Phase 5: defining and naming themes" (Braun & Clarke, 2006, p. 92). I reviewed all of the themes that were relevant to each research question and attempted to organize them into an even more coherent and logically organized narrative. This involved thinking more deeply about the individual themes and the relationships among the themes. After the order of the narrative was established, I reviewed the names of all the themes and subthemes, assessing their accuracy in describing the coded data and their relevance to the research questions.

"Phase 6: producing the report" (Braun & Clarke, 2006, p. 93). In chapter 5, I present the research findings for this study through a "rich, thick description" (Merriam, 2009, p. 43) of the major themes that emerged across the study participants' interview responses.

Validity

Creswell (2014) defines qualitative validity as the steps taken by the researcher to ensure the accuracy of the study findings. To reduce the threats to validity in this study, I triangulated the data by comparing multiple cases and using multiple data sources (interviews and artifacts).

I collected rich data from two semi-structured interviews with each of the twelve study participants. Maxwell (2013) writes that multiple interviews can help researchers "rule out spurious associations and premature theories" (p. 126). By having multiple interviews, I was able to pick up on patterns or contradictions in participants' responses and gain a fuller sense of how participants understood their own experiences.

Throughout the data collection and analysis stages, I met regularly with peers to seek their feedback on emerging trends and patterns in the interview data.

I gave teachers multiple opportunities to clarify and confirm their responses as well as provide additional information. At the end of both interviews, I explicitly asked participants if they wanted to offer I also gave sent a follow-up email to each of the participants (see Appendix H). Participants were asked to clarify and confirm their responses to make sure that I did not misinterpret their answers. Participants were also given another opportunity to share any additional information they believed was important to the study.

Throughout the implementation of the study, I continued to learn about and participate in Edcamps so that I could be well-versed in the research topic. Being familiar with different Edcamps and the model itself is important because it helped me ask well-informed questions during interviews. Additionally, it helped me better understand participants' responses and maximize our limited time together. Throughout the data collection and data analysis phases, I maintained researcher reflexivity by writing personal memos of my thoughts and reactions. I regularly reflected on the emerging themes and patterns in the data with my peers. With their help and feedback, I took great care to interpret the data with as little subjectivity as possible. Additionally, I recognized and accounted for negative or discrepant cases in the presentation of the findings of this study.

Finally, qualitative validity is demonstrated through the "rich, thick description" of the findings (Merriam, 2009, p. 43). I carefully analyzed and synthesized the collected

data over multiple stages with help from my peers in order to provide this comprehensive depiction.

Study Limitations

Edcamps are a rare form of teacher PD in that they allow everyone to participate, including teachers of all grade levels and contexts as well as those outside of the field of education. This research study, however, was limited to the experiences of twelve public elementary school classroom teachers in the United States. While the opportunity to explore the possible influence of Edcamps on teachers in different contexts was lost, the highly specific participant criteria and low number of participants may have allowed for deeper and richer comparisons.

Another limitation is that the interviews with each teacher were conducted within a brief window of time. Although teachers appeared to use the time between the interviews to reflect more deeply on their Edcamp experiences, teachers' perceptions of the influence of Edcamps on their professional practice may have been different if they had been interviewed more times over a longer period of time.

Since Edcamps can be organized by anyone, there may be variations in the structure and premise of each Edcamp. Teachers in this study made generalizations about the Edcamp model of PD based on their own Edcamp experiences. If they had attended different Edcamps, their perceptions of this model of PD may be different. Additionally, since the Edcamp model of PD is new and organically evolving, it is important to acknowledge that the findings of this study reflect teachers' experiences of Edcamps at this particular period in time.

Another limitation of this study is that Edcamp participants are members of a very small, self-selecting group (Miles, 2014). Since participation in Edcamp is completely voluntary, participants are more likely to be intrinsically motivated to attend, have positive experiences, and apply what they learned. All of the teachers in this particular study had positive perceptions of their Edcamp experiences and perceived that Edcamps had influenced their professional practice. There were no negative cases in this research study, but there have been negative cases in the extant literature (Miles, 2014; Brown, 2015; Carpenter, 2015; Carpenter & Linton, 2016).

Participant reactivity may have been a limitation of this study. Teachers in this study may have responded differently because they knew their responses were being recorded and analyzed. Additionally, participants may have felt pressure to share a particular narrative or perspective on Edcamps. As the researcher, I attempted to minimize participant reactivity by interviewing participants separately and explicitly stating that I was only interested in learning about their individual thoughts and experiences. I reminded participants that there were no right or wrong answers to the questions and that they did not have to answer any questions that made them feel uncomfortable. I also corroborated participants' self-reports with the artifacts they shared demonstrating the influence of their Edcamp experiences on their professional practice.

Finally, these teachers' responses are not necessarily common or representative of all public elementary classroom teachers in the U.S. as case studies are not meant to be generalizable to the whole population (Yin, 2009). However, this case study does provide insight into the experiences of Edcamp participants who are public elementary

classroom teachers at this particular period in time. The findings of this study may inform research, practice, and policy on Edcamps and, more generally, teacher-driven PD (Yin, 2009).

Ethical Considerations

The protection of human subjects is a critical component of any research study (Patton, 2015). All participants were given an informed consent form detailing the nature of their involvement in the study. Participants were informed that they did not have to answer any questions that made them feel uncomfortable and that there were no right or wrong answers to the questions asked in this study. Additionally, participants were informed that participating in this study was completely voluntary and that they could end their participation at any time for any reason. No participants chose to end their participation in this study, but if they had, the information they had already provided would have been destroyed. To minimize the risk that any of the data collected for this study could be traced back to participants, I replaced all proper nouns with pseudonyms. All records for this study were anonymized and stored in a password-protected Google Drive account.

CHAPTER FOUR: RESEARCH FINDINGS

Introduction

The purpose of this qualitative research study was to explore U.S. public elementary teachers' perceptions of their Edcamp experiences and how, if at all, their Edcamp experiences influenced their professional practice. To fulfill this purpose, I conducted two semi-structured interviews with each of the twelve public elementary classroom teachers who participated in this study. The first of the two interviews focused on teachers' overall perceptions of their Edcamp experiences; the influence of Edcamps on their professional practice; and what they wanted from teacher PD. The second of the two interviews focused solely on the influence of Edcamps on teachers' professional practice, with teachers also sharing and discussing artifacts which demonstrate this influence.

After conducting the interviews with teachers, I analyzed the 24 total interview transcripts using Braun and Clarke's (2006) thematic analysis process as a guide. I also created an inventory of the artifacts, categorizing them based on the following three areas of influence: student instruction, peer collaboration, and teacher leadership.

The following research questions guided this study:

1. What are public elementary classroom teachers' perceptions of their Edcamp experiences?

    a. If applicable, what are teachers' perceptions of their learning experiences during Edcamps?

b. If applicable, what are teachers' perceptions of their experiences sharing during Edcamps?

c. What are teachers' perceptions of the quality of their Edcamp experiences?

2. Do public elementary classroom teachers perceive that their Edcamp experiences have influenced their professional practice? If so, what are teachers' perceptions of this influence and what artifacts do they share to demonstrate this influence?

a. If applicable, what are teachers' perceptions of the influence on student instruction?
b. If applicable, what are teachers' perceptions of the influence on peer collaboration?
c. If applicable, what are teachers' perceptions of the influence on teacher leadership?

3. What are public elementary classroom teachers' perceptions of the factors that contribute to whether their Edcamp experiences actually influence their professional practice?

4. What do public elementary classroom teachers who have participated in Edcamps want from teacher professional development?

In this chapter, I present the research findings for this study through a "rich, thick description" (Merriam, 2009, p. 43) of the major themes that emerged from across the participants' interview responses. Before delving into the results, it is important to acknowledge that many of the research questions are interrelated and overlap one another. For example, teachers' perceptions of their Edcamp experiences (Research

Question 1) is closely related to whether their Edcamp experiences actually influence their profession practice (Research Question 2). Relatedly, there are crosscutting themes among the research questions. The themes of "choice" and "voice", for example, emerged in response to multiple research questions. Through reading the following research findings in their entirety, readers will gain an overall sense of the interconnections among the research questions and the cross-cutting themes which emerged in the findings.

I begin this chapter with a brief description of the twelve elementary classroom teachers who participated in this study. I then present the research findings, organizing them by research question (in the same order listed above). For each of the four research questions, I present the major themes that emerged from across all the participants' interviews. These themes are not discussed in any particular order, but efforts have been made to craft a coherent narrative. I conclude this chapter with a summary of the key findings of this research study.

Study Participants

Twelve public elementary classroom teachers participated in this study, each from a different state in the U.S. Teachers were also geographically spread out, with at least one teacher from the Northeast, South, Midwest, and West Coast.

The median number of Edcamps attended by teachers was 4.5 Edcamps. Eleven out of twelve teachers had attended more than one Edcamp and all teachers expressed a desire to attend Edcamps in the future.

One-third of the teachers were also Edcamp organizers. These teachers expressed

that they found the Edcamp model of PD to be so beneficial to their practice that they wanted to be part of organizing these unconferences for other educators.

Among these twelve teachers, the average number of years of teaching experience was 18 years and the median was 18.5 years. With the exception of two teachers, all had at least 13 years of teaching experience.

Based on what teachers shared in interviews and what was publicly available online, at least eight teachers had won national, state, and/or local teaching awards. All teachers expressed that they were highly passionate about teaching and wanted to continuously improve their professional practice.

All twelve teachers reported that Twitter was an important part of their Edcamp experiences. The majority of teachers first learned about Edcamps from their Twitter PLNs. All teachers used Twitter prior to, during, and/or following their Edcamp experiences to enhance and extend their Edcamp experiences.

Below is a table of all the participants of this study with their corresponding demographic background information (see Table 1).

NAME[3]	STATE	# YEARS TEACHING	GRADE LEVEL	DISTRICT	GENDER	RACE/ ETHNICITY	HIGHEST DEGREE	# of EDCAMPS
Peter[4]	New Jersey	19	3rd	Suburban	M	White	Master's	1
Laura	Missouri	24	3rd	Rural	F	White	Master's	32
Taylor	Florida	18	2nd	Rural	F	White	Master's	4
Olivia	Michigan	34	K–1st Looping	Suburban	F	White	Master's	~10
Matthew	Virginia	3	4th	Suburban	M	White	Master's	2
Angela	Vermont	13	3rd	Rural	F	White	Master's	4
Julia	Georgia	14	K	Suburban	F	African-American	Doctor of Education	4
Lucy	Massachusetts	26	3rd	Suburban	F	White	Master's	~5
Dakota	California	20	4th/5th	Rural	F	White	Master's	5
Maggie	Wisconsin	16	1st	Urban	F	White	Master's	5
Ella	Nebraska	23	5th	Suburban	F	White	Master's	5
Chelsea	Arizona	7	K	Rural; Military Base	F	African-American	Bachelor's (currently working on Master's)	4

Table 1. Demographic Characteristics of Study Participants.

[3] All names are pseudonyms.

[4] A table of the participants' first and second interview dates is provided in Appendix G.

Research Question 1

What are public elementary classroom teachers' perceptions of their Edcamp experiences?

While this entire study is about teachers' perceptions of their Edcamp experiences, Research Question 1 specifically focuses on teachers' perceptions of their learning and sharing experiences during Edcamps as well as their perceptions of the quality of their Edcamp experiences. Below are the major themes which emerged from across participants' interview responses

Research Question 1a.

If applicable, what are teachers' perceptions of their learning experiences during Edcamps?

Edcamp as PD.

New learning. All twelve teachers in this study considered their Edcamp experiences to be legitimate and high-quality teacher PD. Teachers did not attend Edcamps to simply socialize or network with colleagues, but, given the collaborative nature of Edcamps, their interactions with colleagues played a key role in their professional learning. What teachers learned during their Edcamp experiences varied, but the unifying thread was that the topics of learning were considered "new", "exciting", and "cutting edge" to teachers. Many of the topics discussed in Edcamps had only made their way into classrooms in the past few years and were still not common in the schools where these teachers worked. These topics included drones; Genius Hour; mystery

Skype; makerspaces; and Breakout EDU. The majority of the topics teachers were introduced to during Edcamp sessions encouraged them to explore, take risks, and learn alongside their students, primarily because these ideas encouraged collaboration and because teachers were not experts in what they had learned. Additionally, the majority of the topics that teachers learned about had a technology focus or component to them. Peter described why this might be the case:

> I think since [Edcamp has] mainly grown from Twitter, it's mainly tech-focused…and I think that's also because tech is one area where you can still be creative. Schools want you to use technology. They don't necessarily say how you have to use it, so once you have computers or Chromebooks or iPads, where you take it is where you want to take it whereas people feel very confined within their district curriculums [with all the] mandates for science, social studies, language arts, math.

Different from in-district PD. The quote above from Peter is reflective of the theme that the topics discussed in Edcamps were not generally the topics discussed in teachers' mandatory, in-district PD. While teachers' required PD focused more on "bread and butter" topics like curricular goals in core content areas like math and language arts, Edcamps focused on topics that could be "added on" to the existing instructional requirements in teachers' districts. This is not to say that teachers in this study did not learn about topics related to instruction in core content areas. One-fourth of teachers had attended district-held Edcamps, including one with a focus on transitioning to a new district literacy framework.

Interestingly, several teachers expressed a desire for the topics discussed at Edcamps to be more expansive, with more topics focused on "innovative" approaches to core content areas like math and language arts. Additionally, even though all twelve teachers were in different states and almost all had attended numerous Edcamps, there were several common Edcamp breakout session topics that appeared repeatedly across the interviews (e.g., makerspaces, Breakout EDU, and coding).

Perspectives beyond their school district.

New perspectives. Nearly two-third of teachers specifically stated that their Edcamp learning experiences were positive because they were able to gain new perspectives from colleagues outside of their school districts. Lucy reflected:

> I think that that's probably one of the best aspects of the Edcamp model, is being able to be outside of your classroom, be outside of your district, learning that there are people that are in your same shoes and that have similar concerns or similar passions…or learning about new things that are outside of your district, that your district wouldn't necessarily either have time for or it's not on their agenda…

For Lucy and others, the underlying assumption was that there was no way their own district could possibly have "all the answers" and that by listening to colleagues from other districts, they could find out "what else is out there" that could be used to improve their practice.

Gaining perspectives from outside of their districts was especially useful for teachers working in rural areas. Four of the five teachers who self-identified as working

in rural districts spoke specifically about how it was important for them to find free opportunities for teacher PD because they worked in districts with limited resources and fewer teachers. Not only were these teachers able to gain new perspectives and ideas, but they were also able to find supportive colleagues with whom they identified with philosophically.

Angela, like many teachers in this study, said that Edcamps reminded her that she was "not alone" and that her colleagues from other districts could give her new ways of thinking about issues in education. Angela spoke about how it is easy to get "bogged down in the trenches and the weight of [a] problem" within one's own district, but through reaching out to colleagues at Edcamps, teachers can access different perspectives and possible solutions that they had not previously considered. Through being exposed to different educators, Angela was able to recognize that "there's more than one way to solve [a] problem."

Dissatisfaction with in-district PD. The majority of teachers also felt the need to go outside of their districts because their mandatory, in-district PD was mainly "scripted", "controlled", and "very top-down", primarily focused on "rolling out" different district initiatives. Even teachers who reported attending district-held Edcamps said that the Edcamp model of professional learning was not necessarily the norm within their schools or districts. One of these teachers, Julia, talked about how even PD activities that were meant to engage teachers felt "forced." Julia discussed her thoughts about doing jigsaw activities during in-school PD, a popular cooperative learning strategy often used to make reading a larger text easier by dividing up the text:

> I'm like, if I have to do another jigsaw, you know, I'm like, oh my goodness…[laughs]. You know, we have to read an article, and then we have to split up into groups, and then we have to—one person has to be the recorder, one person has to present, and…that's like nails on a chalkboard for me. Like, if they say "jigsaw," I like cringe.

Like Julia, teachers' dissatisfaction with in-district PD offerings lead them to continue seeking out Edcamps. Several teachers expressed that it was necessary to go outside of their district to get the professional learning experiences they desired.

Connecting with like-minded colleagues.

Admiration. All twelve teachers expressed admiration and respect for the colleagues they learned with at Edcamps. All of the teachers in this study expressed that their colleagues were a critical component of their "incredibly positive" Edcamp experiences. Many teachers in this study had connected with colleagues on Twitter before actually meeting them in person at Edcamp and even reported being "star-struck" when seeing them. Dakota recalled:

> So it was kind of explained to me that Edcamp is like Twitter in person…And it was kind of surreal to me because…a lot of the people that I follow on Twitter that were local were there, and to see them in person was a little bit like [seeing] a movie star…I could probably have walked past Brad Pitt and been like, oh yeah, that's Brad Pitt. But then when I saw like [Teacher Name] or something, I'd be like, oh my gosh, that's [Teacher Name]!

Finding their tribe. Regardless of whether teachers knew colleagues beforehand or not, teachers identified deeply with their Edcamp colleagues and viewed them as people who shared their core professional beliefs and values. Three teachers specifically stated that they had found "their tribe" through participating in Edcamps. While all of the teachers spoke about being able to find "like-minded" colleagues, they were quick to clarify that this did not mean that they always agreed with each other. For these teachers, being like-minded meant "being passionate about learning and teaching", being willing to "change and grow", and being "willing to help" their colleagues. Teachers spoke about how "everyone was there because they wanted to be" and that they were all there to "learn from each other." One teacher did report two instances in which other Edcampers were being "negative", but otherwise focused on the supportive colleagues she met.

Finding like-minded, passionate colleagues was a new experience for many teachers in spite of the fact that many had attended numerous conferences and informal teacher gatherings prior to attending Edcamps. Nearly all teachers had good working relationships with colleagues in their schools, but it was through Edcamps that they finally found people who enthusiastically shared teaching resources and ideas with them and who "pushed and encouraged" them to be better teachers. Maggie shared:

> I always feel like at Edcamp, everyone is so willing to share things with you, and give their email if you have any questions on this, you know, contact me and we'll talk about it, or you know, here I'm going to share this presentation with you, or other things. And that's kind of a neat feeling at Edcamps that you don't always get elsewhere, because I think parts of education have become real

> competitive…where I've encountered colleagues that don't always want to necessarily collaborate…

Peter explained that the "thing that unites us [at Edcamp] is that we're teacher geeks." For Peter and several other teachers, finding teachers who were passionate about teaching was refreshing for them because it helped them feel less isolated professionally. Peter shared:

> [Edcamp] was passion-driven so it was people who, you know, for me…it was like my tribe…Because I, like, for me, teaching is my hobby, it's my passion…I don't think that a lot of teachers are in schools where there are other people who do it as their hobbies, who would sit around and would just talk about teaching in their free time. And I think that's a very lonely place to be sometimes…

Like Peter, several teachers reported that their Edcamp colleagues boosted their morale when they felt "down on education" because they did not see other teachers with their same level of passion or when they were frustrated by how "constrained" teaching had become. As examples, Laura stated that developing relationships with Edcamp colleagues "saved my teacher heart" while Olivia stated that learning with equally passionate teachers "feeds my soul."

Benefits of the Edcamp model of PD.

All twelve teachers stated that the actual format and underlying beliefs of the Edcamp model of PD made their learning experiences both positive and high-quality. Echoing what many teachers said, Dakota stated that the Edcamp model of PD is powerful for teachers because "choice and voice" are built into the design. She, like

other teachers in this study, felt that Edcamps were the "most kind of choice-filled and voice-filled of any educational opportunity out there for teachers to make a difference in…the lives of students."

Choice. All teachers valued the freedom to choose what they wanted to learn. One of the artifacts Ella shared was a public blog post that she published after her first Edcamp. In it, Ella stated that it was the "most powerful" and "best PD" of her nearly 20-year career as a teacher. In her second interview, Ella explained this was, in large part, because of "the power of choice."

Many teachers expressed feeling empowered by the "law of two feet" which encourages teachers to leave Edcamp sessions that do not meet their needs in order to go in search of sessions which do (Swanson, 2014). Angela explained:

> I get to choose what I want to be involved in, and what I need to see, and then I think the best part is if you get into a session and you don't like it, you stand up and you leave and you go to the next one. And there's no hurt feelings or obligation to stay. It is what you want it to be.

Over half of teachers specifically discussed how the built-in choice in Edcamps allowed them to have "personalized" and "differentiated" PD experiences in which they were able to freely explore their "passions" and other topics they were "excited about." Taylor underscored this idea when she said that Edcamps "provide so many choices that you can definitely find something you want to learn about."

Voice. One of the core beliefs of Edcamp is that there is no single expert in the room, but that the room itself is the expert (Swanson, 2014). Teachers felt that the

Edcamp model of PD acknowledged teacher expertise and encouraged them to share their voice. All teachers noted that they appreciated how "nobody was talking at you, they're there to learn with you." Teachers felt like their learning experiences were "organic and authentic" because they were "learning through conversation" and were free to voice their ideas and questions. Matthew shared:

> [T]he big power of the Edcamp is that it's just a lot of good conversation, it's not, you know, scripted. It's what people are thinking and what they're actually doing, and how you can take that back to your classroom.

Several participants noted how learning through conversation was a welcome change from more traditional forms of teacher PD. Lucy explained:

> [T]he Edcamp model is more open to a dialogue, and when you are in a conference, to me it's the dialogue piece that's not necessarily in that model. You can certainly ask questions at a conference and get answers, but I don't often…you know, if you have a disagreement, or if you want to approach something a little bit further along, they have a set thing that they're [already] talking about.

Chelsea summarized many teachers' thoughts when she shared that, through sharing their voice and expertise, Edcamps "empowered [teachers to] drive the type of professional learning that they need and want."

Research Question 1b.

If applicable, what are teachers' perceptions of their experiences sharing during Edcamps?

Because Edcamp sessions are intended to be collaborative and conversation-based, teachers have opportunities to not only learn, but to also lead, facilitate, and share their thoughts during sessions. The opportunity for teachers to contribute to and advance their colleagues' learning is one of the ways Edcamps differ from more traditional forms of teacher PD in which a single expert guides the learning (Ball & Cohen, 1999; Swanson, 2014).

Sharing during Edcamps.

Ways of sharing. All twelve teachers expressed sharing their insights and ideas in some capacity during their Edcamp experiences. The vast majority of teachers did not come with the intention of sharing anything, but spontaneously shared when they felt it was "beneficial" for their colleagues or when they had specific questions. Teachers reported several ways of sharing knowledge. Most teachers shared their experiences and ideas within breakout sessions created by other Edcamp participants. Many teachers also informally collaborated and shared with colleagues between sessions. Several teachers tweeted during their sessions, sharing out resources or responding to what other participants were saying. A few teachers created Edcamp breakout sessions and led the facilitation of the sessions.

The level of sharing by teachers varied by the session. Teachers did not always feel the need to share even though they reported feeling comfortable doing so. Three

teachers specifically expressed that they attended some sessions “for [their] own learning” and were “so absorbed” in the topic or busy “jotting down notes” that they listened more than they actually contributed to the sessions.

Safe space to share. All twelve teachers expressed that they felt “safe” and “comfortable” sharing during the Edcamp sessions. This was, in large part, because of the collaborative, informal, and voluntary nature of teachers’ learning experiences. Chelsea’s response reflected what many teachers shared:

> It wasn’t difficult because I just felt like it was a safe place. No one had the answer to it all, we were just learning from each other. And so knowing that, you didn’t feel apprehensive about sharing. Because I feel like the culture was, when you go in there, it’s meant to share and learn from each other and so, if you didn’t like my idea, that’s cool, you don’t have to use it, and if you did, kudos to you. And it was vice versa.

Teachers appreciated All teachers discussed how Edcamp participants’ positivity and encouragement made them feel comfortable sharing. Matthew recalled:

> [When] you’re with a bunch of people who have very traditional mindsets, and you share something that’s out of the box, they might come up with fourteen thousand reasons why that won’t work. Versus at like an Edcamp, if you have a new idea and you want to share it, they’re going to come up with fourteen thousand reasons why it would go well, why it might not work but here’s how we can avoid that. So it’s just a whole different mindset shift. People are there to want to get better, and you can hear about new things and kind of flesh out ideas

that you have…

While all of the teachers reported feeling safe sharing at Edcamps, a few teachers did state that they were nervous the first time they shared during a breakout session. Ella discussed being at her very first Edcamp and being asked by her school's technology coach to facilitate a session:

> The very first [Edcamp], I was super uncomfortable, very nervous, because I felt like I was supposed to be there to learn, not to teach. It was my very first Edcamp, I was like, "I don't even know what this is about, and you put me in front!" So after that first episode, where I was really nervous, otherwise I've been very relaxed and just very enthusiastic and excited to share with people.

Ella, like the other teachers in this study, became more comfortable after experiencing the positive, supportive responses she got from other Edcamp participants.

Exceptions. One teacher did note that there was another participant who was being "negative" about the feasibility of implementing a specific idea that was being discussed during a breakout session she attended. While this did "annoy" the teacher, she said that the reception from other Edcamp participants was still overwhelmingly positive. Additionally, two teachers shared that they were less inclined to orally participate when they felt a conversation was being "dominated" by a few "loud voices" in the room. However, both of these teachers emphasized that this was not the norm and that they had many opportunities to share during other breakout sessions.

Research Question 1c.

What are teachers' perceptions of the quality of their Edcamp experiences?

High-quality PD.

All twelve teachers felt that their Edcamp experiences were legitimate and high-quality professional learning experiences. In describing the quality of their Edcamp experiences, teachers used laudatory language, describing their experiences as "very inspirational", "from a 1 to 10…a 10", and the "best PD ever." The reasons teachers felt this way are detailed in the major findings for Research Question 1a. and Research Question 1b. To briefly summarize those aforementioned findings, teachers considered their Edcamp experiences to be high-quality because they were able to have choice and voice in their PD as well as informally converse and collaborate with passionate colleagues. Laura's statement touched on many of these ideas:

> I would say [Edcamps have] been better than workshops that I've paid two hundred-plus dollars for a day. Number one you get lots of different voices so it's not just one presenter saying, "This is what I do and you should do the same." [P]eople are…all sharing, they're open to others' ideas…I would say that it's been very high quality [because of] the fact that there's a variety of things that you can choose to learn about, there's a variety of things that you can talk about.

More learning needed.

A few teachers did state that while they felt their own Edcamp experiences were high-quality, they recognized that, given the spontaneous and unpredictable nature of the

Edcamp model of PD, there was no guarantee that the quality "would always be there." Some teachers also shared that even the most high-quality Edcamp sessions would not be enough to completely satisfy their learning needs. One of these teachers, Taylor, said that an Edcamp session "might be a quality hour, but then I might want to delve in more." For Taylor and several other teachers in this study, Edcamps were "a starting place" where they were introduced to new ideas, resources, and colleagues. It was up to teachers to determine whether they wanted to pursue a deeper understanding of what they learned following each Edcamp event. Teachers shared that learning more included doing independent research online and/or through connecting with colleagues on Twitter who possessed expertise in the topics they were exploring.

Research Question 2

Do public elementary classroom teachers perceive that their Edcamp experiences have influenced their professional practice? If so, what are teachers' perceptions of this influence and what artifacts do they share to demonstrate this influence?

Attitude and approach toward teaching.

All twelve teachers believed that their Edcamp experiences had influenced their professional practice in some capacity and provided artifacts that demonstrated the various areas of influence. In the following sections, these areas of influence on teachers' professional practice are explored: student instruction, peer collaboration, and teacher leadership. However, it is important to first recognize that the influence on teachers'

professional practice was not always tidy or tangible. While teachers did discuss gaining discrete knowledge or skills (e.g., learning how to use a particular app) that they were then able to implement into a particular area of their professional practice (e.g., student instruction), many teachers' descriptions of the influence on Edcamps were less linear and concrete. Several teachers expressed that Edcamps had exposed them to "new possibilities" that they had not put into practice yet, but that their awareness of these new ideas and ways of thinking had changed them as teachers. For example, a few teachers discussed how being exposed to "empowered teacher leaders" at Edcamps inspired them to think about their own possible contributions to the field of teaching.

In this vein, one of the findings of this study is that participating in Edcamps holistically changed several teachers' attitude and approach toward their professional practice. This overall change in attitude and approach, in turn, affected teachers' professional practice in the areas of student instruction, peer collaboration, and/or teacher leadership (and is described in more detail in the following sections). Lucy discussed how "processing the conversations" she had with colleagues during her Edcamp experiences changed her as a teacher:

> ...I think [what has] transferred over to my teaching [is] being able to share [my] passions, but then also being maybe being a little bit more outspoken in some of the things that I want to say and so…I don't think you can quantify it always in terms of learning a set curricular or a set thing or whatever. I think that for me, more the transformation has been around who I am as a person and who I am as a teacher.

The changes in teachers' attitude or approach toward teaching could not always be demonstrated through artifacts. One notable response came from Angela who expressed that she was "kind of glad" that artifacts did not necessarily come to mind when she thought of her Edcamp experiences:

> I think having products would mean that I was only getting a token out of Edcamp, whereas I feel like the impact of Edcamp has been more toward my professional practice, and how I go about teaching in my classroom, and sort of the manner in which I teach, the tools I use to teach, versus the products I get from my teaching. So it's more impacted my professional practice and my philosophy as a professional, more so than it has the outcomes from students.

The most common way teachers chose to demonstrate the change in their philosophy of education was through public blog posts and published articles. Taylor, for example, wrote about how her "identity as a teacher" was influenced by Edcamps in a blog post on her classroom website. She stated that she is now a teacher who is willing to "try out new ideas and methods" as well as use social media to "broaden my own perspective and the perspectives of my students."

Inventory of Artifacts

All twelve teachers shared artifacts demonstrating the influence of Edcamps on their professional practice. It is important to note that the artifacts teachers shared do not represent the total self-perceived influence of Edcamps on their professional practice. There were several instances in which teachers spoke of specific ways Edcamps had influenced their practice, but were unable to retrieve supporting artifacts. Additionally,

there were instances in which teachers were not able to share tangible evidence of the influence of Edcamps on their attitude and approach toward teaching.

In total, 68 “unique” artifacts were shared by teachers. The term “unique” is used here to mean that, if teachers shared multiple artifacts that were supposed to illustrate exactly one point of influence, then all of the artifacts were combined into one artifact. For example, several teachers provided multiple photos of one learning activity and discussed one major point about these photos. In these cases, all of the photos were counted as one unique artifact.

The artifacts teachers shared were all in digital formats with the exception of a physical book that was shown to me during an interview on Google Hangouts. In terms of formats, the artifacts included blog posts; photographs; tweets; screenshots and electronic copies of student work; Google Docs and spreadsheets; videos; and PowerPoint presentations.

The vast majority of the artifacts included teachers’ blog posts, published articles, and tweets; student work; photographs and videos featuring students; and school documents and presentations. In order to protect participants’ anonymity and the anonymity of their students and schools, copies of the artifacts are purposefully not published in this study. Since the purpose of the artifacts was to support teachers’ discussion of the influence of Edcamps on their practice, what was said about the artifacts mattered more than the physical artifacts themselves. In this sense, readers of this dissertation still gain the meaning of the artifacts even if they cannot visually see them.

Below, Table 2 shows the area(s) of influence each artifact represented. Each

artifact represented as few as one and as many as three areas of influence on teachers' professional practice. Artifacts were categorized based on what teachers shared during the interviews. In many cases, teachers explicitly stated which area of influence the artifact represented and, in some cases, it was inferred by what teachers shared.

Area of Professional Practice	# of Artifacts/ % of Total	Examples
Student Instruction	54 (79%)	-Study participant's blog post about digital citizenship class activity -Screenshot of student work on Popplet (part of Global Read Aloud activity) -Photo of students working on augmented reality iPad activity
Peer Collaboration	31 (46%)	-Tweet written by study participant to an Edcamp colleague about doing a book talk with their two classes -Photo of study participant with Edcamp "friends" who have become part of her Twitter PLN -Google Doc created by study participant to exchange ideas for Genius Hour
Teacher Leadership	17 (25%)	-Video co-created by study participant that explains what Edcamps are -Photo of study participant presenting at a state education conference -Teacher-driven faculty meeting agenda sign-up sheet created by study participant

Table 2. Inventory of Artifacts.

As shown above in Table 2, the vast majority of the artifacts demonstrated the influence of Edcamps on teachers' instruction of students. This corresponded with teachers' self-reports that they attended Edcamps to become better teachers (see findings for Research Question 3) and to bring new ideas to their classrooms (see findings for Research Question 1). Many of the artifacts in the "Student Instruction" category also overlapped with the "Peer Collaboration" category as the majority of teachers reported relying on the support of their colleagues to implement these aforementioned ideas (see findings for Research Question 3). The majority of the artifacts in the "Peer Collaboration" category were tweets sent between teachers and their Edcamp colleagues. Teachers primarily used Twitter to build and sustain collaborative relationships with their Edcamp colleagues (see findings for Research Question 3). Finally, the majority of the artifacts in the "Teacher Leadership" category related to teachers' efforts to contribute to the professional learning of their colleagues through organizing Edcamps and presenting at educator conferences. Although teachers offered the fewest artifacts related to teacher leadership, the influence of Edcamps in this area was still very strong according to many teachers (see findings for Research Question 2c.).

Research Question 2a.

If applicable, what are teachers' perceptions of the influence on student instruction?

All twelve teachers stated that Edcamps had influenced their instruction of students in some capacity. Below are the major themes that emerged from the interview data.

Increased use of technology.

Nearly all teachers discussed how their participation in Edcamps influenced them to use new technologies in their instruction of students. These technologies included but are not limited to the following: various apps (e.g., Seesaw and Padlet); coding and robotics; and blogging. Additionally, all twelve teachers offered instructional artifacts that had a technology focus or component. This may be because many of the Edcamp sessions had a technology focus or component to them (see findings for Research Question 1). The majority of teachers reported utilizing technologies that they had not heard of prior to Edcamps. Teachers became more "comfortable" using these new technologies through the guidance and support of their Edcamp colleagues.

Student engagement. Several teachers reported using technology in order to increase student engagement during instruction. As an example, one of Julia's artifacts was a photograph of a Chromville lesson. Julia's kindergarten class was learning about what plants need to survive and she had them complete an interactive augmented reality sheet from Chromville:

> When they click on an icon that helps plants grow, their plant grows right on the iPad…we can talk about plants growing, and watch videos, and grow plants in our classroom, but to see it happen right in front of you was pretty amazing for them.

According to Julia, the augmented reality aspect of the lesson deepened student engagement and understanding of the content.

Student collaboration. Several teachers also discussed how implementing technology they learned from Edcamps also led to greater opportunities for collaboration

with other classes. One of Angela's artifacts, for example, was an e-book of poetry created by her fourth grade students and their kindergarten buddies using the Book Creator app. Another teacher, Chelsea, discussed the importance of using technology to connect her kindergarten students with other classes beyond their school:

> [My students] were able to connect with a class in Canada [and] that was a very cool cultural exchange, especially for my kids who have one, very limited experiences because they're five, and two, because of where we live, so…for them to see other places and other things was great.

Three other teachers also spoke about doing video calls on a regular basis with classes in other states and other countries. Additionally, several teachers have had students participate in Twitter chats with other classes around the country and world.

Preparing for the future. In many of the interviews, teachers discussed how the world was rapidly changing. Because of this, teachers felt like it was important for them to teach students to use technology to solve problems, create products, and share their ideas. For example, Olivia discussed why she introduced coding to her kindergarten students:

> [W]ho cares if that kid can throw a picture into PowerPoint and take something that he wrote on paper and throw it into PowerPoint? It doesn't help, you know…I don't know what I'm preparing them for, you know. But I'm trying to give them the best that I have right now. And to me, being able to code and understand, you know, logical thinking might help…

Like Olivia, several teachers in this study expressed that the purpose of using technology was to help students prepare for the future.

Changing roles of teachers and students.

Teachers as co-learners, not experts. The majority of teachers felt like their Edcamp experiences influenced them to change the way they perceive their roles as teachers, moving away from being authoritative "experts" and toward being "co-learners" with their students. For several teachers, the colleagues they met at Edcamps influenced them to be "okay with not knowing everything" and to create more opportunities to learn alongside students. Ella said that she felt like she was now "in the same boat" with students, explaining:

> In the past, as a teacher, I would have to work through the app, figure all of its ins and outs, learn everything there is about it, and then teach it to my students….[Now] I would say there's a new app, it's a green screen app, I've never used it before, I don't know how to do it….[so I tell students] I need you to figure it out and teach it to me.

Through going outside of their comfort zones, teachers were able to create authentic learning experiences. One of Taylor's artifacts was a blog post discussing her purchase of an Ozobot kit. Taylor wrote about how she "purposefully didn't open it" because she wanted to be as "clueless" as the students. She wrote that this approach to teaching was new and uncomfortable for her, but as she and students tinkered with the robots, she saw how motivated students were to learn and troubleshoot problems as they arose. In describing the process, Taylor used the word "we" repeatedly in her blog,

emphasizing how she and the students were learning alongside each other. Her blog post also included pictures and she talked about the "wonder" in students' eyes, writing that the day was "perfect" even if it was unplanned.

Through being okay with presenting ideas that they were not experts on, teachers were able to implement ideas into their instruction that they would not have otherwise, especially as it related to technology. Ella, for example, shared that technology was formerly "way outside my wheelhouse" but now her class was coding drones. Teachers were also forgiving of themselves when the technology failed, with one teacher joking that technology "only works about half the time" anyway.

Greater student choice and voice. As a result of their Edcamp experiences, many teachers actively provided students with greater choice and voice in their learning, both of which are key elements of the Edcamp model of PD itself. Taylor, for example, implemented an idea that she called "Hour of Empower", her own unique spin on Genius Hour, makerspaces, and project-based learning, ideas that she learned about during Edcamps. Taylor described Hour of Empower as "basically an hour when [students are] focused on their passions, trying things out and exploring." She reported that "about 90%" of her third grade students mentioned that this was one of their favorite activities of the school year in their end-of-year blogs. According to Taylor, it was because they got a "choice on what they were learning…I think they got to explore things that aren't normally part of the classroom."

Greater student ownership of learning. Relatedly, as teachers shifted away from being the sole experts in their classrooms, they were able to give students

opportunities to take greater ownership for their learning. Peter stated that taking control of one's own learning was part of the "Edcamp philosophy" that he brought back to his students. He said, "When I took away the 'I'm in charge, you're going to learn what I tell you to learn,' the kids stepped up and took it in their own direction."

One of the ideas that Peter brought back to his classroom was makerspaces, a space for student-led creative design and production. Peter also adopted a "maker mindset" which involved encouraging and incorporating "making" whenever possible. Several of Peter's artifacts were photos and videos of student creations, many of which were voluntarily created by students in their time outside of school.

Another teacher, Dakota, recounted how she gave students responsibility over a class Twitter account. Each day, one student was chosen to independently craft a tweet about what they had learned. She discussed students' response to this task:

> I think that whole piece was like, "Wait, what? Like I have to – you're not going to tell me what to do?" That definitely I think impacted student learning, because they were more kind of conscientious, and they were more thoughtful about what that was that they were going to share.

Like Dakota, several other teachers noticed how students transformed as they took greater ownership of their learning. Lucy, for example, recounted doing a mock Caldecott competition with her third graders after learning about this idea from colleagues at an Edcamp. One artifact she shared was a photograph of students having conversations about the books, weighing the merits of each text and providing evidence

for their opinions. Lucy stated that one of the students in the photo was typically less engaged during academic activities, but was highly engaged during this activity. She recounted:

> [B]ut when we were talking about the books and the artwork, she really started coming into her own, and did a phenomenal job of talking about it. She really claimed it as her own…[T]he engagement that the kids brought was really terrific, especially being able to get her into it.

Students taking the lead for their learning often meant that they taught themselves and each other. Teachers played more of a facilitator role, stepping in as needed. This was illustrated when Matthew shared an online report of his students' progress in coding:

> The thing that I think is remarkable is that we weren't doing coding every day, but two of the kids pretty much mastered it, one kid was pretty close, and all of them advanced at least through stage 3. Before that, I hadn't realized that kids could code, and it was very self-paced, not a whole lot of explicit instructions. That's something I learned from Edcamp, to let the kids figure it out themselves and tutor each other. One of the students who made the most progress has a severe learning disability, but because his brain works differently, he was able to go help other students.

Matthew, like Lucy, was able to see one of his students thrive through incorporating more student-driven learning in his classroom. Matthew went on to share that the parent of the aforementioned student with the learning disability was "so thankful" he had introduced coding to the classroom because "she saw a huge change in

him, and she thinks that he is going to eventually go into computer programming."

Research Question 2b.

If applicable, what are teachers' perceptions of the influence on peer collaboration?

More opportunities for collaboration.

Defining collaboration. Based on their responses during interviews, teachers in this study defined "peer collaboration" as being an exchange of support among colleagues around specific topics and issues. Teachers stated that collaboration was "help" that allowed them to do things together that they could not do on their own. For many teachers, peer collaboration entailed purposeful conversations with colleagues that led to changes in their thinking and practice. When asked to distinguish between conversing with peers and collaborating with peers, Chelsea's response reflected many teachers' definitions of peer collaboration:

> Collaboration changes my practice. Or at least changes the way that I think. So when I'm collaborating with you, I'm questioning, you're questioning me. Collaboration makes me want to do something different, in my own mind, whether it's tweaking something that I already do, or trying something new that you're telling me about.

More opportunities. Ten out of twelve teachers stated that Edcamps had influenced their professional practice in the area of peer collaboration, primarily through giving them more colleagues to collaborate with and more ideas and resources to share

with their colleagues. Two teachers, however, expressed that their Edcamp experiences did not necessarily make a difference in their professional practice. Taylor, one of these teachers, explained:

> I don't know that that has affected me. I think that's what—I think that's part of me as an educator. I think that's my philosophy. I love collaborating. I love doing things like that, so, um, I think that's why Edcamps probably appeal to me so much.

Taylor did go on to say that Edcamps gave her more opportunities to collaborate with peers that she would not have met otherwise, but emphasized that actively seeking out ways to collaborate with peers was ingrained in her educational philosophy and part of what led her to Edcamps in the first place. Matthew also questioned if Edcamps "had a lot of direct change" on how he collaborates peers, but shared that it perhaps gave him "more ideas to share" with colleagues.

Taylor and Matthew's responses were noteworthy because they showed that while Edcamps did not change their attitudes or practice in regard to peer collaboration, they did provide them with more opportunities for collaboration. Interestingly, their responses aligned with the other teachers in this study who stated that Edcamps *did* influence them in the area of peer collaboration by providing them with new colleagues they would not have met otherwise and by introducing them to new ideas to share with colleagues.

Purposeful collaboration. Several teachers discussed how "purposeful" and "focused" the collaboration was during their Edcamp experiences in spite of the informal, spontaneous nature of the Edcamp sessions and the fact that they were primarily

collaborating with colleagues they did not know previously. Chelsea, for example, said:

> I feel like my experiences in the Edcamp weren't just like, "Talk about whatever you want." It was really focused collaboration and sometimes when you get comfortable with people you tend to kind of go on bunny trails or talk about other things that aren't about the topic…

Several teachers spoke about transferring this kind of "focused", but also informal and spontaneous collaboration back into their practice. These teachers reached out to colleagues they met at Edcamps to both receive and offer support as well as to work on specific projects together. Teachers' collaboration with peers was primarily centered on student instruction, which was described in the findings for Research Question 2a. To briefly summarize those findings, teachers collaborated with each other to implement new technologies into their classroom and to also connect their students with other classes. These collaborative, technology-enabled activities included Global Read-Aloud, virtual book clubs, and Twitter chats. The few teachers who were engaged in some of these activities prior to attending Edcamps stated that their Edcamp experiences connected them to more colleagues with whom to implement these activities.

Highly accessible collaborators. Nearly all teachers shared that they could "tap into" their network of Edcamp colleagues "whenever" they wanted. Unlike many of their peers in their schools and districts, the teachers they met through Edcamps embraced informal, spontaneous collaboration and were "readily available" to them whenever they needed help. The support teachers received from colleagues made it possible for Edcamps to actually influence areas of their professional practice, a theme that is further

explored in the findings for Research Question 3.

To illustrate this kind of informal and spontaneous collaboration, Laura shared a link to a published book on “connected” educators that she was featured in (to protect Laura’s anonymity, the title of the book is not revealed in this study). During the interview, Laura shared a story that was also captured in this book. Laura recounted how she learned about Kidblog through an Edcamp and decided to have her third grade students try blogging. One particular student who was “very reluctant to do any writing” surprised her by posting on the class blog using his neighbor’s wifi and Nintendo DS since his household did not have internet access. Below, she discussed what happened and how her colleagues on Twitter, some of whom she had met through Edcamps, helped her respond to his writing:

> It was a Friday evening...and I got a notification that [Student Name] had posted something. So that really surprised me, so I got my computer out and checked it out, and it wasn’t much, like two or three sentences, but he had taken his own time to write something down, and I was blown away. So I posted it right away. Please people, somebody comment on this! Several people did. On Monday I suggested that he check it out, and he was so thrilled that people had responded back, and I was really pleased but tried to play it real cool.

Laura went on to share that this same student voluntarily made a post a few months later. She reported being “tickled as punch again that he was writing and reaching out to the world because he knew that he made an impact.” Again, Laura was able to reach out to her colleagues online to get her student feedback for his post.

Collaboration beyond their schools. Teachers primarily discussed collaborating with teachers outside of their schools as a result of their Edcamp experiences. Some teachers stated that this was, in part, because they felt isolated in their schools. These teachers reported having few site-based colleagues who were willing to "change the way they teach" or "try different things." Additionally, many teachers reported that the majority of their colleagues were uninterested in attending Edcamps. Through participating in Edcamps, teachers were introduced to colleagues beyond their school sites who were willing to collaborate with them. Laura, for example, said that despite having few collaborative colleagues at her school, she knew several "people in state [and] people out of state" who could support her and that she also had "a friend at another elementary school [in the same school district], also third grade, and we'd collaborate across the two schools, with our two classes."

Even though teachers primarily spoke about collaborating with peers outside of their schools, there were teachers who did collaborate more with colleagues in their schools as a result of their Edcamp experiences. Peter, for example, learned about makerspaces at his first Edcamp and was able to spread his enthusiasm to his grade level, saying that "we've kind of taken on that we're the "maker" grade level." Peter also led the effort to make his school's faculty meetings more focused on teacher collaboration and discussion, which is described in the findings for Research Question 2c.

Twitter. All teachers spoke of the significant role Twitter played in facilitating peer collaboration. Teachers reported connecting with colleagues on Twitter prior to, during, and after Edcamps. These connections often led them to new connections and

networks. Angela talked about how one of the major changes to her practice was her participation in the education community on Twitter, saying it connected her to "different people that inspire me in new ways to change or to add to my instruction in the classroom in different ways." Many teachers reported being involved in regularly scheduled Twitter chats (e.g., #3rdchat). Teachers also actively sought out opportunities to learn from and collaborate with other educators on Twitter. Olivia, for example, took the initiative to ask her principal if she could observe a teacher 45 minutes away from her school that she connected with on Twitter. Julia and several other teachers also discussed developing relationships with teachers through Edcamps that have been sustained for over a year through their collaboration on Twitter.

Research Question 2c.

If applicable, what are teachers' perceptions of the influence on teacher leadership?

Eleven out of twelve teachers expressed that their Edcamp experiences influenced their professional practice in the area of teacher leadership. Teachers reported that they were able to critically reflect upon and broaden their understanding of teacher leadership and lead in ways that they had not previously. However, it is important to note that one teacher reported not being influenced in this area. When asked whether Edcamps influenced him in the area of teacher leadership, Matthew responded:

> Um, truth be told, probably not a whole heck of a lot. I've always been kind of a leader in just like personality, and with the ability to teach people how to use technology. And I don't know if Edcamps have necessarily helped me do better at

that. It's made me a little bit more comfortable at speaking in informal sessions but I'm normally pretty comfortable with it.

Matthew's response was the exception as the rest of the teachers felt like Edcamps had helped them to evolve and grow in teacher leadership. The following sections explore the specific ways in which Edcamps influenced teachers in this area of their professional practice.

Collaborative definition of teacher leadership.

Collaborators, not experts. Teachers broadly defined 'teacher leadership' as actions that could help their students, schools, and colleagues in the field. Over half of teachers, at the time of the interviews, held what they felt would be considered "teacher leader" roles. These include being involved in school and district committees, leading district PD workshops, and presenting at conferences for educators. However, it is important to note that a few teachers were initially reluctant to identify themselves as "teacher leaders" even though others might perceive them as such. These teachers shared that the traditional view of "teacher leader" sometimes carried negative connotation. For example, Julia, who went through her school district's teacher leader academy and is recognized as a teacher leader in her school, prefers to be seen as more of a "collaborator than a leader" because the term "teacher leader" might connote a "separation" between her and colleagues. She elaborated:

> Like, oh she's the leader, and I'm the follower. You know, I'm supposed to do what she says. But, I think for me, I don't tell people what to do. I just kind of

> share, and I ask for their ideas about it, and I think maybe that sort of offsets that, you know, teacher leader label that has been put on me.

Julia explained that, through her Edcamp experiences and Twitter participation, she was able to reconsider and evolve her view of teacher leadership. She shared:

> I kind of want to take that Edcamp mentality and be like, okay, well, yeah, I presented on that, but I'm not the expert on it. So, you know, more of like a discussion because I don't like that attention of people thinking that I know everything. You know, because I don't know everything. …I think Edcamp has taught me that I'm not the expert on everything, and I don't want to be seen as the expert on everything…I want to discuss and create with people and not, you know, just tell them everything.

Many teachers, like Olivia here, echoed this idea when she shared how Edcamps influenced her to change her vision for what "ideal" teacher leadership would look like: "It's a coaching, collaborative kind of model [of teacher leadership] not an expert model, but somebody that's willing to, you know, get in the trenches with you…"

Peter also discussed a shift in his thinking about teacher leadership, saying:

> I always previously thought of teacher leadership in terms of what can I share with other people and I've completely flipped that around because now I feel like, how can I influence the school so that other people will share with one another?... I realized that I can be a leader just by giving other people in the building a voice

> to share what they're passionate about…And that's what the Edcamp format is so good at...It gives you the platform to share or discuss whatever gets you excited. Say you're a principal. I think it's very daunting to be someone who's always supposed to have the answers. When you turn that on the heels and invite people to share their concerns and knowledge, the diversity of information that comes forward, and the ideas, it's intoxicating.

As shown above, teachers were able to reconsider and evolve their definitions of teacher leadership. In summary, teachers' Edcamp experiences influenced them to view teacher leadership in collaborative and not "top-down" terms. For many teachers, being a teacher leader now meant exchanging ideas with colleagues and encouraging them to share their voice.

Leadership in teacher PD.

Taking ownership of their PD. Over half of the teachers discussed how Edcamps influenced them in the area of teacher leadership through inspiring them to take ownership of and initiative for their own professional learning. Julia explained:

> I think what I've learned overall is…I don't have to wait for my school to offer something for me to get trained on something. I can build my own professional development…I'm not going wait for my principal to offer it or for a conference to come up.

Teachers, including Julia, did not feel as "empowered" or as "confident" in their

ability to actually direct their own learning prior to attending Edcamps. Feeling "capable" of driving the "professional learning they need and want" was a significant shift for many teachers. Laura, for example, shared how Edcamps helped change her from a "reserved" person to someone who actively seeks out ways to grow professionally: "I've learned how to be more outgoing, to ask more questions, I guess to be a little bit more of a critical thinker, to be able to reach out more when I have a question."

Not only were teachers influenced to take control of their professional learning, teachers took the initiative to apply and implement what they learned in Edcamps. Several teachers reported writing grants for materials (e.g., robot kits) to implement ideas they learned from Edcamps. Teachers also found ways to integrate required state learning standards while implementing what they learned at Edcamps.

Leading PD for colleagues. In addition to taking the lead in their own PD, the majority of teachers also reported taking leadership in providing PD for their colleagues. Again, teachers reported feeling "empowered" to do this because their Edcamp experiences taught them, as Chelsea put it, that "teachers have a certain expertise and it's okay to show that and share that with others." One common way teachers took leadership was through becoming a "resource" for colleagues at their schools through informally sharing what they learned from Edcamps. Maggie explained:

> I think it gives me kind of the edge over the people in my building that don't go [to Edcamps], and I'm usually the only one from my building that does go, so

> then when I can connect to all the other people [at Edcamp and on Twitter], I definitely gain knowledge that I can bring back to them that they didn't necessarily have.

Another teacher, Taylor discussed how she was "one of the more connected educators" at her school in terms of Edcamp and Twitter participation and "rose up as a model" for other colleagues. Taylor told her administrators about how Edcamps renewed her enthusiasm for teaching:

> I [told my administrators that] I felt like a new teacher again and, um, that excitement that you feel when you just start teaching with all these ideas coming at you, and one door would open another door, and I think [my administrators] heard that in me and, um, wanted to see that spread.

After seeing the difference participating in Edcamps and being a "connected educator" made in Taylor's professional practice, her school administrators made "Get Connected" the schoolwide professional development theme for the 2015–16 school year. The teachers at Taylor's school participated in a schoolwide book study on connected educators and discussed the book in small groups as well as on Twitter. Throughout the school year, administrators encouraged teachers to attend Edcamps and Taylor reported that several of her colleagues attended Edcamps, including ones that she was not able to attend herself. Through sharing the benefits of Edcamps on her practice with her administrators, Taylor felt she was able to impact and change the culture professional learning at her school.

Presenting their ideas. Several teachers reported that sharing their ideas at Edcamps gave them the confidence and desire to present their ideas at local and state conferences for educators. One of these teachers, Ella, stated that prior to Edcamps, she had "never presented anything at all…ever" in her two-decade career in teaching. Ella described her journey to becoming a teacher who confidently leads and facilitates teacher PD:

> Being pushed into that first facilitation role [at my first Edcamp] gave me the confidence that was the beginning of my presentations. I don't know if it validated that what I have to say is important enough for people to want to listen, but it walked me through [presenting]. Because it was so informal, I gained skills and confidence, and I've been presenting ever since…Usually I present between 3 and 4 times a year. Some are very small things, like our district PD, and I've presented at an early childhood conference in the middle of Nebraska. I presented in Missouri, in Iowa, at different PDs that different districts have had.

Among Ella's artifacts that she shared were photos of her leading a session at a state technology conference. There, she presented on BreakoutEDU, a topic she learned about through Edcamp, for an audience of about 300 teachers.

In addition to presenting their ideas at traditional conferences, teachers also said that their Edcamp experiences inspired them to take leadership in creating and facilitating Edcamp sessions. Olivia, for example, facilitated Edcamp sessions on "game changers" in early education, Seesaw, ESGI, and formative assessment.

Blog posts and articles. Teachers also discussed contributing to their colleagues' PD through writing public blog entries on their personal websites and publishing articles on websites for educators (e.g., Edutopia). Blog posts ranged from personal reflections on Edcamp experiences to blogs discussing specific topics discussed at Edcamps (e.g., agile classrooms). Many teachers expressed being "so excited" about what they learned at Edcamps that they wanted to share their thoughts and experiences with other teachers so they could "give back." Peter shared why he felt the need to immediately publish articles after he attended his first Edcamp:

> I got into a few weeks a row where I was wildly writing stuff, then life got in the way and I haven't been productive at all in that regard since. But I came back from Edcamp like, oh my god, I've been teaching for 19 years and I've been consuming other people's knowledge and I haven't been contributing. So I felt like I had to spit out something quickly so I could contribute something.

For Peter and others, writing for a public audience was an act of teacher leadership that allowed them to contribute to their colleagues' PD.

Spreading the Edcamp model. One-third of teachers also took a leadership role in their colleagues' PD by organizing Edcamps. Dakota, one of these organizers, shared an artifact of a PowerPoint presentation she created for teachers who were unfamiliar with this model of PD. During the first Edcamp she co-organized, Dakota led teachers through the PowerPoint and helped teachers brainstorm ideas for session topics. Other teachers also expressed wanting to play a leadership role in bringing the Edcamp model

to their districts. Chelsea, at the time of our interview, planned to pitch the idea of having an Edcamp if her school district decides to implement a site-based PD day.

Teacher voice.

Advocates for change. Over half of teachers expressed that their Edcamp participation gave them the confidence to use their voice to advocate for change at their schools. Chelsea explained:

> [Edcamp has] let me know that my story is valuable…because I know my voice is valuable and what I do for my students is important, I feel more confident in taking those risks…There's been times where the administration has said like, "This is how we're going to do something," and I've spoken up and, like, provided research and the idea is saying like, no, this is not what's good for kids…I feel confident in doing that now, because of Edcamp.

The confidence to advocate for change was not necessarily tied to the total number of Edcamps teachers attended. Ella, who had attended five Edcamps and was in the process of organizing an Edcamp, and Peter, who had only attended one Edcamp, were both able to act as leaders to propose and implement new ideas in their schools. Below are two instances in which these teachers acted as agents of change.

During her second interview, Ella shared that she was advocating for a new project-based learning school in her district. Ella had attended an Edcamp at an elementary school that did "100% project-based learning and problem-based learning" and considered it to be a "dream school" for her. When Ella returned from this particular Edcamp, she "boldly push[ed] the boundaries" and went to the Board of Education to

advocate for a project-based learning school in their district. She explained the influence of Edcamps on these leadership efforts:

> I think Edcamp has made me a bolder person. Ten years ago if I had seen this [school], I would've said, this is a really cool thing, I wish someday I could teach at a place like that, and then left it. I don't know if I would have been brave enough to go to the Board of Education.

As part of her efforts, Ella "handpicked" teachers in her district to do a study of a book on project-based learning. While showing me a physical copy of this book during our interview on Google Hangouts, she explained:

> We have a book study going with 22 teachers from kindergarten through sixth on project-based learning. [These are teachers] that I've talked with, who have said in the past that they're tired of teaching the way it is, in a rut, always testing. They're open-minded, and teachers who I would want to teach at this new school with me.

While Ella was still in the very beginning stages of making a case for a school focused on project-based learning, she was proud of the progress that had been made and of her own transformation into a teacher leader.

As a different example, Peter was able to successfully advocate for more collaborative, teacher-driven faculty meetings. Prior to attending his first Edcamp, Peter had spoken to his principal on multiple occasions about having more faculty meetings driven by teachers' self-identified needs. However, Peter said that it was only after going

to his first Edcamp that he was able to "really refine that idea and "sell it" to his principal:

> Edcamp gave me…like a track record of saying hey, [teacher-driven faculty meetings] have been done somewhere and the results were really positive, it jazzed people up and it turns teachers into teacher-leaders. And I said, my pitch was if you let us do this, we're going have an empowered staff of people who are going to really embrace their talents, their interests, cutting-edge things, and have discussions that we haven't been able to have.

According to Peter, his principal was already on board with this idea philosophically but was moved to actually implement the idea after seeing Peter's heightened enthusiasm and learning of its successful implementation elsewhere. Peter described how these teacher-led discussions began as just "one part of one faculty meeting" with the principal still in the room to now being part of every faculty meeting, often without the principal in the room. Peter said his principal embraced this way of conducting faculty meetings because he saw the "power" of letting teachers "explore" and "share" instead of "just telling them what to do" or "disseminating information...coming down from the district."

Peter shared that, before each faculty meeting, he sends out an online sign–up sheet which he developed and which he also shared as an artifact for this study. Teachers are free to post what they would like to discuss on this Google Doc (using a Google Doc for this purpose was also inspired by his Edcamp participation). Peter reported that his

colleagues have enjoyed these new, teacher-driven faculty meetings, with the only negative feedback being that teachers want even more time and opportunities to share their thoughts.

Research Question 3

What are public elementary classroom teachers' perceptions of the factors which contribute to whether their Edcamp experiences actually influence their professional practice?

Based on teachers' responses, three major factors contributed to whether Edcamps influenced teachers' professional practice: teachers' motivations; colleague support; and administrator support. These factors are unpacked below.

Teachers' motivations.

Desire to grow. Teachers' inherent desire to grow and improve professionally was a contributing factor in their Edcamp experiences actually influencing their professional practice. All twelve teachers described being highly motivated to continuously learn in order to better serve their students. According to their responses, this desire to "challenge" and "push" themselves as professionals existed before any of them participated in their first Edcamp and is one of the major reasons these teachers attended and continue to seek out Edcamps. Chelsea encapsulated this idea, sharing:

> [M]y students deserve a teacher who wants to be better. And in order for me to be better I have to kind of spread my wings and look for things to get better, and I've just, I don't know, that's always been something that I've prided myself on, even

> as a first-year teacher, and now going into my eighth year. I don't want to be a stagnant person.

Even though the desire to continuously learn was preexisting, all the teachers in the study were quick to recognize the ways in which their Edcamp experiences continue to inspire and fuel their efforts to grow professionally. All twelve teachers believed that attending and applying what they learned from Edcamps made them "better" teachers. These teachers' desire to grow motivated them to apply what they learned from their Edcamp experiences in their professional practice. Maggie explained this connection between wanting to be a better teacher and applying what she learned from Edcamps:

> I mean, I've tried different strategies that have worked for other people that I've learned from Edcamps, and I've brought that back. And I think every little piece of information will make you a better teacher and you might try some and it doesn't work, and a lot of times you'll try something and it does work, and it does kind of improve your practice. So I think whenever we continue to learn about our profession, it makes us a better teacher.

Nearly all the teachers in this study noted that the desire to be a "lifelong learner" was not a universal trait among teachers. According to the participants, teachers who were "not willing to change" would not be interested in attending Edcamps, much less allowing Edcamps to influence their professional practice. Ella, along with nearly half the teachers in this study, made distinctions between teachers who were growth-oriented and those who were not:

> I think there are kind of two groups of teachers. I think there are teachers that are

> in this because they love it, and it's their career, and I think there are some people that are in this because it's their job…So the people that are in it as a career are interested in continuing to further that. They want to keep learning, keep growing, continue to inspire kids to do the same. People who are in it as a job quite literally just follow the constraints of the job. You know, I'm supposed to impart this information and test kids over it, and it doesn't matter if I do a good job or not, it doesn't matter if the kids are excited about learning or not, my job is to show up from 7:45 to 3:45.

Ella's response above also showed the centrality of student learning in teachers' motivations to grow professionally. Ella and several other participants emphasized that they were continuously learning so they could create better learning experiences for their students. Additionally, all teachers in this study believed it was not only important to be lifelong learners but to pass on this mindset to their students as well.

Excitement. Teachers overwhelmingly chose to incorporate ideas into their professional practice that they deemed to be "exciting." Ten of the twelve teachers used a variation of the word 'excite' to refer to what they incorporated from Edcamps into their professional practice. Although teachers also used descriptors like "new", "useful", "meaningful", "engaging", and "student-centered", the interview data suggest that teachers' excitement was a key factor—even a tipping point—in whether an idea was incorporated into their professional practice. As Chelsea described it, the learning that actually influenced her professional practice were ideas she "couldn't wait to take back" to school.

Student learning. As a whole, teachers were excited about ideas they believed would benefit their students, giving them opportunities for meaningful and engaging learning. For example, several teachers discussed implementing coding into their classrooms in order meet the demands of a rapidly changing world. Matthew reported that coding was the practice he learned from Edcamp that had "the most direct impact" on his classroom. When he learned about coding during an Edcamp session, he became "really excited" about it to the point of missing part of the conversation because he was so engrossed with the online resources that were being discussed. He attended Edcamp on a Saturday, and by Monday, his class was beginning to code. When asked to describe what motivated him to implement coding, James responded:

> [M]y students are going to graduate from high school in 2024, I think, and college in 2028. So that's a long time away. Just the way tech has advanced in the last 10 years, that's another 12 years. Coding is going to be something they're going to need…It's preparing them for the future, and I think that's a heck of a lot more important than preparing them for rote memorization of some random standards that's more or less not going to affect their life in the long run. (Interview, date)

James' response is reflective of many of the responses of other teachers in the study. Although teachers' enthusiasm and high interest led them to implement certain ideas in their professional practice, this excitement existed within the context of what teachers felt was best for students.

Colleague support.

Making connections. Through Edcamps, teachers formed new connections or strengthened existing connections with colleagues from different schools, districts, states, and even countries. Additionally, many teachers formed new connections or strengthened existing connections with colleagues within their own school and district. Twitter played a critical role in facilitating and maintaining these connections. "Twitter" was specifically mentioned by participants in each of the 24 total interviews as a tool for building collegial relationships and getting professional support. All twelve teachers discussed using Twitter to connect with Edcamp colleagues prior to, during, and/or following the Edcamp events.

Implementing ideas. Every teacher noted that the colleagues they connected with through Edcamps played a key role in their Edcamp experiences actually influencing their practice. The networks and relationships teachers formed through their Edcamp experiences helped them to further explore and implement what they learned in Edcamps. Lucy, along with over half the teachers, also noted how these connections with colleagues held her accountable for her learning:

> So for me, the networking has really been big on…I don't want to say "keeping me honest," but seeing if I'm following through with what I've learned and if it's not working, where do I go from there, and being able to continue the conversations that I've had.

Teachers often described the colleagues they connected with as being "passionate" about or having "expertise" in specific areas of practice (e.g., gamification,

makerspaces, or project-based learning). The vast majority of teachers explicitly stated that they could reach out to specific colleagues based on the specific questions they had. Dakota, for example, discussed the role one colleague played in helping her implement Google Apps for Education:

> I just wasn't kind of savvy enough [about Google Apps for Education], so I had attended a[n] [Edcamp] session on that, and was totally blown away by the different things. And then I connected with that teacher who, that teacher wasn't on my site but was in a different district. And I would, you know if I had any questions, I would you know DM her or tweet her and she would be right back helping. So it was like I felt like I kind of found people that were really good at what they did and really excited about what they did, and then they became not only colleagues, but they became like my go-to person if I had questions.

Some of the ideas teachers learned at Edcamps required collaborating with colleagues in order to implement them in their classrooms. For example, four of the teachers learned about Global Read Aloud, an informal program that involves teachers reading a book aloud to their class during a specified window of time and then virtually connecting with other classrooms around the world to share their thoughts about the text. In one interview, Lucy discussed how a teacher she met at an Edcamp connected her to another teacher to do a Global Read Aloud Skype session. Lucy's class now regularly Skypes with this teacher's class "two to three times a month" to do other book talks.

Lasting connections. Ten of the twelve teachers reported that they were able to make lasting connections with colleagues they referred to as "collaborators", "go-to"

people, “friends” and “family.” One of Maggie’s artifacts was a tweet in which she called an Edcamp colleague a “sister.” During the second interview, Maggie described the context of that tweet:

> So that’s another teacher in our district that I wouldn’t have known except that we met at Edcamp, and we clicked. So it’s neat to see when you’re connected at Edcamp and then you feel like you know those people so well even though you’ve met three or four times face-to-face. But there’s that continued connection. I feel like if I had a question, we have that connection that she could help me out if I needed it.

Several teachers, like Maggie, reported that the relationships they made were strong not because of the amount of time they spent together, but because of their continued willingness to help one another.

Administrator support.

Supporting teacher growth. All twelve teachers reported that they were in schools that allowed them to implement at least some of what they learned from Edcamps. The majority of teachers said that they felt their administrators actively supported their efforts to grow as teachers, including but not limited to their involvement in Edcamps. These teachers shared that their principals allowed them to “take risks” and were “very grateful” to teachers who were willing to “go above and beyond.” In contrast, two teachers also shared that they worked with administrators who “tolerated” or were “more or less indifferent” to their applying what they learned from Edcamps. Notably, of these two teachers, one was moving to a new school in upcoming school year, and the

other was hoping to do the same in the future.

Promoting Edcamps. Several teachers shared that their administrators specifically supported teachers' participation in Edcamps. Nearly half of teachers had principals who encouraged them to attend Edcamps through emails and other announcements. Three teachers shared that their principals actually attended Edcamps with them. Four teachers and their respective principals also often communicated on Twitter, tagging each other about matters related to Edcamps. As previously discussed (see Research Question 2), Taylor's administrators initiated a school-wide book study on connected educators after seeing the influence of Edcamps on Taylor's professional practice. As another example, Dakota shared how her principal actually made it possible for her host a district-wide Edcamp at their school:

> I had thrown out the idea of an Edcamp. I met with the superintendent and things, and then nothing really happened to it, so my principal at the time, who's very innovative, very cutting-edge, was like, "Dakota, don't wait for the district to do it. We'll house it here, let's just get it done.

Implementing ideas. Many teachers acknowledged that having administrators who were supportive of Edcamps made it easier for them to apply what they learned at Edcamps to their professional practice. In Taylor's and Julia's cases, their principals made their classes 1:1 iPads because they recognized how these teachers were already utilizing this technology to positively impact student learning. As a result, Taylor and Julia were able to implement more of the ideas they learned at Edcamps.

Taylor discussed how her administrators' support of ideas from Edcamps was

based on their observations of the positive impact they had on student learning. When asked whether she received any pushback from administrators for conducting Genius Hour, a designated time for students to freely explore their passions and interests, she responded:

> I wondered if there would be. But I, I think [my administrators] saw how many standards are still being addressed in that hour, and even though it's more student-guided than teacher-directed, I think they—I think they see, um, what it's doing for them. So, in that hour, they, they're doing everything from building houses out of Legos that would stand in a storm to coding with robots and researching and making Google Slide presentations, and they're doing all kinds of things.

Critical feedback. Having supportive administrators was especially critical for teachers who reported that their Edcamp experiences gave them greater confidence to share their voice. Over half the teachers discussed having administrators who were receptive to critical feedback. Chelsea shared:

> Um, my current administrator is very good about it, like she's willing to work with you. She really believes in…a partnership…It's not her and us, and she doesn't want it to be that way. She wants us to challenge her understanding and be willing to be challenged. Um, I can't say that would have been the same for our previous administrator who…yeah, we weren't allowed to disagree, so. [laughs] It's been a welcome change.

Several teachers shared that having the support of administrators or being able to give critical feedback to administrators did not always mean that they always got what

they wanted. Instead, it meant that there were open channels of communication between the teachers and their administrators to discuss what was "good for kids."

Research Question 4

What do public elementary classroom teachers who have participated in Edcamps want from teacher professional development?

Before delving into the findings, it is important first to note that all teachers referred to their Edcamp experiences when asked to discuss what they wanted in teacher PD. This is likely because teachers' Edcamp experiences were the subject of this study and teachers were generally asked about their views at the very end of the first interview or, in rare cases, at the very beginning of the second interview.

The majority of teachers specifically referred back to how their first Edcamp experiences impacted their views about what they wanted in teacher PD. Most teachers arrived at their first Edcamp "[not knowing] what to expect" or only knowing about this model of PD in theory. After actually experiencing the Edcamp model of PD, all teachers continued (or expressed a desire to continue) attending Edcamps because they found the content and format of the learning experience to be valuable (see findings for Research Question 1). In essence, it appears that teachers' Edcamp experiences influenced their views about teacher PD and that teachers did not necessarily have these views prior to attending Edcamps.

More choice.

Differentiation. All twelve teachers wanted to have more choice in terms of the content and format of their PD. Specifically, teachers wanted to be able to choose PD opportunities that were personalized to their self-identified needs and interests. Four teachers specifically used the term "differentiated" to describe the relevant PD they wanted. Angela, one of these teachers, said:

> I want choice…just like we need to give kids choice. I think it needs to be differentiated. I think we need to have more professional development like Edcamp where we can pick and choose because I—we're professionals. So I think we kind of know what we want to do and what we need in order to grow as educators...

The current lack of "differentiation" in their mandatory, in-district PD was disappointing for teachers. Julia shared:

> We preach all the time that that's what we need to be doing to our kids, is differentiating, reaching them where they're at, and yet what we get for professional development as teachers is never differentiated. It's always a one-size fits all, this is what you get.

Chelsea, too, spoke of how she was expected to differentiate instruction "to the most minute detail" but had yet to experience any differentiation in her own professional learning within her district.

Nearly all teachers referred back to their Edcamp experiences when discussing why choice and personalized learning mattered to them. Teachers stated that the Edcamp

model of PD was "special" and "important" because it offered teachers choice in what they learned. While speaking about Edcamps, many teachers referred to the "law of two feet" which encourages teachers to leave sessions that are not meeting their needs (Swanson, 2014). Teachers felt "liberated" by this rule because it took away the "awkward[ness]" and social stigma of leaving a PD session. In contrast, teachers said they noticed their colleagues "tuning out, having side conversations, or being on their phone" during mandatory, in-district PD because their colleagues did not find the sessions helpful, but were required to stay anyway. Teachers expressed that they wanted the Edcamp element of 'choice' to be incorporated into mandatory, in-district PD, and believed this would their learning experiences more engaging and effective.

More teacher voice.

Closely related to teachers' desire for greater choice was their desire for greater teacher voice. All twelve teachers stated that teachers should have greater input in the development and implementation of their PD. A few teachers specifically noted that "[w]hen you have more of a teacher voice…it makes for a much stronger implementation of professional development."

Angela's comments, in particular, touched on many of the ideas expressed by other participants:

> I think we should have a lot more say in our professional development, whether that be as experts leading our colleagues, or in designing our own professional development programs. I think as individuals, it would push us all further if we

> had the opportunity to design it ourselves, but it would also I think…help us to be more engaged in PD.

Teacher expertise. Angela, like many of the teachers in this study, believed that when schools and districts give teachers greater voice in their PD, they recognize teachers as independent learners with valuable expertise. Unfortunately, teacher input is not always genuinely sought out. Lucy explained:

> Sometimes you get pulled in and told that they're looking for your input, but they already know that they're going to be purchasing the program. That kind of superficial stuff has a harder time coming into the school and getting used by teachers.

Several teachers echoed Lucy's comments, saying that administrators often tried to "steer" teachers into a "specific outcome." Teachers were "tired" of this because it undermined their ability to contribute to their own PD. As Olivia said, "people are in administration because they're experts, and I, I think they…lose track of the fact that teachers are in those classrooms every day, and they're experts too."

During PD. Teachers also wanted to have greater voice during the actual professional learning. Several teachers expressed a desire for more participant-driven learning and more time for discussions with colleagues about the content of their learning. Through increasing teacher voice during PD, teachers could "figure out" how to apply what they learned to their specific contexts. As Dakota shared, "what works for our students at this site is totally different from what could work at somebody else." Julia, too, emphasized the importance of conversations with colleagues, sharing, "I think

high-quality professional development is definitely being able to collaborate with other teachers, um, not necessarily being talked to, but having the conversation, being able to discuss…[and] build ideas together."

Nearly all teachers referred back to their Edcamp experiences when discussing their thoughts on teacher voice in PD because they felt that the Edcamp model of PD effectively fostered teacher voice. Teachers valued their own voice and the voices of their colleagues and wanted more of both in their mandatory, in-district PD.

Application.

Feeling capable. Along with wanting greater choice and voice in their PD, teachers wanted to feel excited and capable of actually implementing what they learned. Nearly all teachers asserted that PD could not be considered high-quality or effective unless it could be applied to their professional practice. Taylor, for example, said that having "great knowledge" but "no idea" of how to implement it in her classroom is "not going to do me any good." Additionally, Matthew said he wanted to learn things that he could "more or less implement tomorrow, or down the road." The majority of teachers expressed that they felt most capable of applying what they learned when they were given proper support. Specifically, teachers spoke of the importance of having a network of colleagues to help them, an idea that is further unpacked in the findings for Research Question 3.

Feeling excited. Many teachers expressed that it was not enough to feel capable of implementing what they learned in PD, they also wanted to feel motivated and, specifically, excited. Teachers wanted to bring back ideas that they were eager to share

with students and colleagues. Laura, for example, wanted PD that makes her say, "Wow, I'm going to go back and do this with my class now." Similarly, Chelsea stated that high-quality teacher PD is when "you learn it, you apply it, and you want to talk to someone else about it."

Summary of Key Findings

Research Question 1. All twelve teachers believed that their Edcamp experiences were legitimate and high-quality teacher PD. There were several reasons why teachers had positive perceptions of their Edcamp experiences. Teachers found the format and beliefs of the Edcamp model of PD to be highly beneficial because it offered teachers choice and voice in their professional learning. Teachers also appreciated being able to gain perspectives outside of their districts and learn with colleagues who, like them, were growth-oriented and passionate about teaching. All teachers found their Edcamp sessions to be "safe" spaces to share their thoughts because of their colleagues' positive and supportive responses. All teachers considered Twitter to be an important part of their Edcamp experiences and reported using Twitter prior to, during, and/or following their Edcamp experiences.

Research Question 2. All twelve teachers believed that their Edcamp experiences had influenced their professional practice in some capacity and provided artifacts which demonstrated the the various areas of influence. The influence on teachers' professional practice was not always easily tangible, with several teachers reporting that Edcamps had holistically changed their attitude and approach toward their professional practice. This study specifically explored the influence of Edcamps on three

areas of professional practice: student instruction, peer collaboration, and teacher leadership.

Student Instruction. All twelve teachers stated that Edcamps influenced their instruction of students in some capacity. The major themes which emerged included the increased use of technology, including but not limited to using video-chat platforms to connect with other classrooms; incorporating time for students to work on coding and robotics; and using various online apps to enhance student learning. Teachers also reported how their Edcamp participation changed the dynamics of their classrooms. Specifically, teachers shared that they became more like co-learners with their students, providing more opportunities for student choice and voice in their classrooms. As a result, students displayed greater ownership of their learning.

Peer collaboration. Ten out of twelve teachers stated that Edcamps had influenced their professional practice in the area of peer collaboration, even though all teachers stated that their Edcamp experiences provided them with more opportunities for collaboration. Teachers expressed feeling like they had a network of colleagues which they could reach out to when needed. Despite the informal and spontaneous nature of their collaboration with colleagues, teachers still felt their collaboration was focused and purposeful. The primary focus of teachers' collaboration was on ideas for student instruction. All teachers spoke of the role Twitter played in facilitating their collaboration with Edcamp colleagues.

Teacher Leadership. Eleven out of twelve teachers expressed that their Edcamp experiences influenced them in the area of teacher leadership. Teachers shared how their

Edcamp experiences helped them re-conceptualize the term 'teacher leader' to mean someone who collaborates with colleagues and empowers colleagues to share their voice. The majority of teachers also discussed how Edcamps influenced them to take control of their own professional learning through actively seeking out appropriate PD for themselves and taking the initiative to implement what they learned into their classrooms. Teachers also discussed leading professional learning through facilitating Edcamp sessions, presenting at conferences, writing public blog posts and articles, and spreading the Edcamp model through proposing and organizing Edcamps in their communities. Finally, teachers reported how Edcamps gave them the confidence to share their voice to advocate for and implement change in their schools and districts.

Research Question 3. According to teachers in this study, three major factors contributed to whether Edcamps influenced teachers' professional practice: teachers' motivations; colleague support; and administrator support. 'Teachers' motivations' refers to teachers' intrinsic desire to grow professionally and their belief that attending and implementing ideas from Edcamps made them "better" teachers. 'Colleague support' refers to the supportive networks and relationships teachers formed which helped them further explore and implement what they learned in Edcamps. 'Administrator support' refers to how school administrators helped teachers implement the ideas they learned from Edcamps by giving them the freedom and/or the resources to do so.

Research Question 4. All twelve teachers expressed that they wanted to experience more teacher PD that reflected the elements of Edcamps they found beneficial to their learning. Specifically, teachers wanted to have more choice in the content and

format of their PD as well as more voice in its development and implementation. Teachers also wanted to feel capable of and excited about applying what they learned to their professional practice. The teachers in this study expressed that what they want from teacher PD is not what they typically receive in their mandatory, in-district PD.

CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS

Introduction

The purpose of this qualitative research study was to explore U.S. public elementary teachers' perceptions of their Edcamp experiences and how, if at all, their Edcamp experiences influenced their professional practice. To fulfill this purpose, I conducted two semi-structured interviews with each of the twelve public elementary school teacher participants. During the second of these two interviews, teachers shared and discussed artifacts that demonstrated the influence of Edcamps on their professional practice. In Chapter 4, I presented the research findings for this study through a "rich, thick description" (Merriam, 2009, p. 43) of the major themes that emerged across the participants' interview responses. A summary of the key research findings can be found at the end of Chapter 4.

In this chapter, I present the discussion and implications of this research study. I begin this chapter with a discussion of this study's research findings and limitations; then move into recommendations for practice and research; and close with a conclusion highlighting the significance of this study in the budding literature on informal, teacher-driven PD.

Discussion

This was the first research study to investigate the influence of Edcamps on teachers' professional practice and to explore the factors which contributed to this

influence. The conceptual framework undergirding this research study was drawn from the theoretical and empirical literature on teacher professional development, Edcamps, and adult learning theories. In this section, the ways in which the research findings confirm, contradict, and contribute to the extant literature are discussed.

The research findings indicate that all twelve study participants found Edcamps to be professionally meaningful and impactful experiences. All twelve public elementary classroom teachers viewed Edcamps as high-quality teacher PD and enthusiastically shared their positive perceptions of their Edcamp experiences. All of the teachers reported that their Edcamp experiences influenced their professional practice in at least one of the following areas: student instruction, peer collaboration, and teacher leadership. When discussing the factors that contributed to their Edcamp experiences influencing their professional practice, all teachers pointed to their own internal desire to grow professionally and to the support of their Edcamp and Twitter PLN colleagues. Finally, all teachers expressed wanting more Edcamp-like PD opportunities, particularly in terms of having greater choice in PD content and greater voice in the development and implementation of PD.

Teachers' perceptions of their Edcamp experiences, as summarized above, were strikingly similar in spite of the fact that participants had attended different Edcamps in different states and at different points in time. Their highly positive perceptions of the utility of Edcamps reflect the same findings in the extant Edcamp literature (Miles, 2014; Brown, 2015; Carpenter, 2015; Carpenter & Linton, 2016). However, unlike previous research studies, this study did not contain any negative cases. One possible explanation

for the uniformity in teachers' perceptions of their Edcamp experiences is that these twelve teachers shared many common characteristics from the outset of this study. Unlike previous research on Edcamps, this study specifically examined the experiences of U.S. public elementary classroom teachers who had recently attended an Edcamp. Within this very specific set of eligibility criteria, all or nearly all members of this sample incidentally shared other characteristics that, while not intentionally sought out in the eligibility criteria, made this sample even more homogeneous. Below are the additional characteristics teachers had in common and their impact on teachers' perceptions.

Desire to grow. All twelve teachers expressed that they were passionate about teaching and had an internal desire to continuously grow professionally, qualities that teachers felt were not shared by many of their school colleagues. It was clear from teachers' interview responses that their Edcamp experiences fed their passion for learning and connected them to other growth-oriented, passionate teachers in a way that many teachers had not previously experienced.

Professional accomplishments. The majority of teachers in this study had received teaching awards and other professional recognitions at the local, state, and/or national levels. Teachers did not attend Edcamps because they were struggling to teach content or meet students' needs. Instead, these professionally accomplished teachers continued to attend Edcamps to learn about new and creative ideas that they could try in their classrooms. Teachers reported that the colleagues they met at Edcamps challenged and supported them to grow in their professional practice.

Years taught. Among these twelve teachers, the average number of years of teaching experience was 18 years and the median was 18.5 years. With the exception of two teachers, all had at least 13 years of teaching experience. As a point of comparison, 59% of the 769 educators in the latest peer-reviewed study of Edcamps had 11 or more years of teaching experience (Carpenter & Linton, 2016). It appears that highly experienced teachers gravitate toward Edcamps. Based on teachers' responses, this may be because Edcamps offer experienced teachers the differentiated PD and collegial support they felt they needed at their current career stages.

Twitter PLNs. All twelve teachers reported that Twitter was an important part of their Edcamp experiences. The majority of teachers first learned about Edcamps from their Twitter PLNs. Teachers used Twitter prior to, during, and/or following their Edcamp experiences to enhance and extend their Edcamp experiences. On Twitter, teachers were able to maximize and extend their Edcamp learning by connecting with colleagues; learning more about Edcamp topics, and sharing questions, ideas, and resources. Teachers' usage of Twitter and their positive perceptions of Edcamps correspond with Brown's (2015) finding that "Tweeting Edcampers", more so than other groups of participants, considered Edcamps to be "energizing and meaningful PD" (p. 82).

Edcamp attendance. Eleven out of twelve teachers had attended more than one Edcamp and all teachers expressed a desire to attend Edcamps in the future. Since attending Edcamps is voluntary, teachers who continue to participate in this model of PD may have more positive perceptions of Edcamps than teachers who only choose to attend

one Edcamp.

As described, the teachers in this study shared many of the aforementioned characteristics and all had strongly positive perceptions of their Edcamp experiences. The findings of this study suggest that teachers who are experienced, accomplished, growth-oriented, and tech-savvy may find Edcamps to be particularly meaningful and impactful PD experiences. With this profile as a general guide, school leaders may be able to identify the educators who might enjoy and benefit from the Edcamp model of PD. For example, a school principal searching for PD opportunities for their highly experienced and growth-oriented teachers may refer them to Edcamps. Similarly, teachers who want to share their passion for teaching but feel isolated within their schools may consider attending Edcamps. More broadly, given teachers' enthusiastic testimonials about the benefits of Edcamps to their practice, education leaders might explore ways to leverage the Edcamp model of PD in teacher retention and professional growth efforts.

It is significant that all twelve teachers in this study considered their Edcamp experiences to be legitimate and high-quality teacher PD because Edcamps do not necessarily possess "all of the elements of effective PD" that are widely recognized in the research literature (Carpenter & Linton, 2016, p. 104). For example, it is generally agreed upon that effective PD should be site-based and ongoing (Ball and Cohen, 1999; Darling-Hammond et al., 2009), but Edcamps can be viewed as one of the offsite, one-time PD events that are commonly criticized in the teacher PD literature as ineffective. Interestingly, there were several teachers in this study who explicitly countered the notion

that Edcamps are one-time PD events. These teachers saw their Edcamp experiences as an extension of their professional learning in Twitter PLNs and conversely, that their Twitter PLN participation was an extension of their Edcamp experiences. George Siemens' (2004) theory of connectivism provides a lens for teachers' usage of Twitter PLNs because it acknowledges the powerful role technology plays in accessing, processing, and creating knowledge, particularly in ill-defined environments. According to this theory, the focus of learning is on making connections among information, ideas, and networks in a way that enables more learning. Through using Twitter, teachers were able to maximize their Edcamp learning and enable more learning through the connections they made online.

All twelve teachers in this study and the vast majority of participants in previous studies of Edcamps (Miles, 2014; Brown, 2015; Carpenter & Linton, 2016) did not find the lack of certain elements of "effective" PD (e.g., clear learning goals) to affect the quality of their Edcamp experiences. Instead, the majority of teachers in this study considered their Edcamp experiences to be a welcome contrast to the one-size-fits-all PD they typically receive in their districts. Teachers' positive perceptions of their Edcamp experiences reflected other elements of high-quality PD endorsed in the research literature. These include being able to have a voice in the structure and content of their PD and being able to learn from and build collegial relationships with fellow teachers (Ball & Cohen, 1999; Colbert et al., 2008; Little, 2012).

Teachers in this study found the Edcamp model of PD to be highly beneficial because it offered teachers choice and voice. Teachers unanimously expressed that being

able to choose what they wanted to learn was a critical component of what made the Edcamp model of PD so valuable and that they wanted to see more choice in their mandatory, in-district PD. All teachers in this study appreciated how Edcamps valued and promoted teacher voice, both during the planning of Edcamps and during the actual Edcamp breakout sessions. For many teachers, Edcamps helped them to embrace the power of their own voice and professional expertise. Knowles' (1980) theory of andragogy support why 'choice' and 'voice' mattered so deeply to these teachers. This adult learning theory recognizes that adults can self-direct their learning and that effective learning environments give individuals the autonomy to address their self-perceived needs and interests. According to the theory, effective adult learning experiences are participant-driven, experiential, practical, and foster trust and respect for all learners.

The teachers in this study attended Edcamps for professional learning and not to simply socialize or network with colleagues. However, given the collaborative nature of Edcamps, teachers' interactions with colleagues played a key role in their professional learning. Teachers appreciated being able to gain perspectives outside of their districts and to learn with colleagues who, like them, were growth-oriented and passionate about teaching. The supportive networks and relationships teachers formed with their Edcamp colleagues helped them further explore and implement what they learned in Edcamps. These relationships reflect the consensus in the literature that ongoing teacher collaboration is instrumental in improving teachers' practice (Ball & Cohen, 1999; DuFour, 2004; Little, 2012). However, this does raise the issue brought up by Ferriter and Provenzano (2013) about the difficulty of attaining diverse viewpoints when "like-

minded" individuals (as teachers in this study described themselves) are engaged in self-directed learning. Teacher collaboration produces conflict that is crucial to ongoing inquiry and improvement (Achinstein, 2002), but it is unclear whether teachers actually seek out opposing viewpoints or if/how they navigate conflicts with colleagues during Edcamps. Future research in these areas would provide greater insights into teachers' learning experiences during Edcamps.

It is significant that all teachers in this study reported that Edcamps had influenced their professional practice. In the research literature, there is consensus that effective PD "increases teachers' knowledge and skills, changes their attitudes and beliefs, or both" (Desimone, 2009, p. 184). Teachers in this study provided detailed responses and supporting artifacts that demonstrated their increased knowledge and changed attitudes. Not only did teachers learn about and apply discrete ideas from their Edcamp sessions, teachers also learned about the Edcamp model of PD itself and applied this format of professional learning and the beliefs which guide it into their professional practice. In the area of student instruction, teachers' classrooms often mirrored Edcamp sessions in that there was no single authoritative expert, but instead, teachers and students were exploring and learning alongside each other. In the area of peer collaboration, teachers' collaboration with colleagues after Edcamps also mirrored their collaboration during Edcamps in that it was informal, spontaneous, and with supportive, growth-oriented colleagues. Finally, in the area of teacher leadership, teachers embraced their expertise and used their voice to share ideas and advocate for change. As previously discussed, teacher voice is core to the Edcamp model of PD.

Teachers' application of the format and beliefs of the Edcamp model PD itself is interesting because it is not considered to be an intended purpose of Edcamps, either according to the teachers in this study or formally by the Edcamp Foundation. Previous studies on Edcamps have recognized the importance of the format and beliefs of the Edcamp model of PD in teachers' positive perceptions of their Edcamp experiences (Miles, 2014; Brown, 2015; Carpenter, 2015; Carpenter & Linton, 2016), but this study also provides evidence that the format and beliefs of the Edcamp model resonated so well with teachers that they incorporated elements of this model into their professional practice. Future research on Edcamps might further investigate the ways in which the Edcamp model of PD is being spread as teachers apply what they learn from Edcamps.

Based on teachers' interview responses in this study, three main factors contributed to whether teachers' Edcamp experiences actually influenced their professional practice: teachers' motivations, colleague support, and administrator support. Teachers' intrinsic motivations to improve their professional practice are supported by adult learning theories like connectivism (Siemens, 2004) and andragogy (Knowles, 1980). Additionally, the importance of colleague and administrator support is highlighted in the literature on effective teacher PD (Leonard & Leonard, 2003; DuFour, 2004). The findings of this study contribute to the literature by giving evidence of the importance of colleague and administrator support in applying learning from informal, voluntary teacher PD like Edcamps.

In conclusion, the twelve public elementary classroom teachers in this study provided rich accounts of their Edcamp experiences and the ways in which these

experiences influenced their professional practice. For all twelve teachers, Edcamps were valuable—and, in many cases, powerful and transformative—professional learning experiences. Many teachers spoke about how Edcamps were the "best" PD they've experienced in their teaching careers, praise which seems especially meaningful given that teachers in this study had been teaching for an average of 18 years. Teachers' positive perceptions of Edcamps were not solely based on the knowledge, skills, and attitudes teachers took away from their Edcamp sessions, but also on the choice and voice embedded in the Edcamp model of PD itself. Even so, it is important to recognize that no teacher in this study stated that Edcamps alone could sufficiently satisfy all of their PD needs or even replace other forms of PD (e.g., professional learning communities). Instead, teachers saw Edcamps as a valuable addition to their PD offerings and wanted to see more Edcamp-like elements in their mandatory, in-district PD. The findings of this study offer insights that can be used to guide teacher PD practice and research. Following the discussion of the study limitations, implications for practice and research are discussed.

Study Limitations

Edcamps are a rare form of teacher PD in that they allow everyone to participate, including teachers of all grade levels and contexts as well as those outside of the field of education. This research study, however, was limited to the experiences of twelve public elementary school classroom teachers in the United States. While the opportunity to explore the possible influence of Edcamps on teachers in different contexts was lost, the highly specific participant criteria and low number of participants may have allowed for

deeper and richer comparisons.

Another limitation is that the interviews with each teacher were conducted within a brief window of time. Although teachers appeared to use the time between the interviews to reflect more deeply on their Edcamp experiences, teachers' perceptions of the influence of Edcamps on their professional practice may have been different if they had been interviewed more times over a longer period of time.

Since Edcamps can be organized by anyone, there may be variations in the structure and premise of each Edcamp. Teachers in this study made generalizations about the Edcamp model of PD based on their own Edcamp experiences. If they had attended different Edcamps, their perceptions of this model of PD may be different. Additionally, since the Edcamp model of PD is new and organically evolving, it is important to acknowledge that the findings of this study reflect teachers' experiences of Edcamps at this particular period in time.

Another limitation of this study is that Edcamp participants are members of a very small, self-selecting group (Miles, 2014). Since participation in Edcamp is completely voluntary, participants are more likely to be intrinsically motivated to attend, have positive experiences, and apply what they learned. All of the teachers in this particular study had positive perceptions of their Edcamp experiences and perceived that Edcamps had influenced their professional practice. There were no negative cases in this research study, but there have been negative cases in the extant literature (Miles, 2014; Brown, 2015; Carpenter, 2015; Carpenter & Linton, 2016).

Participant reactivity may have been a limitation of this study. Teachers in this

study may have responded differently because they knew their responses were being recorded and analyzed. Additionally, participants may have felt pressure to share a particular narrative or perspective on Edcamps. As the researcher, I attempted to minimize participant reactivity by interviewing participants separately and explicitly stating that I was only interested in learning about their individual thoughts and experiences. I reminded participants that there were no right or wrong answers to the questions and that they did not have to answer any questions that made them feel uncomfortable. I also corroborated participants' self-reports with the artifacts they shared demonstrating the influence of their Edcamp experiences on their professional practice.

Finally, these teachers' responses are not necessarily common or representative of all public elementary classroom teachers in the U.S. as case studies are not meant to be generalizable to the whole population (Yin, 2009). However, this case study does provide insight into the experiences of Edcamp participants who are public elementary classroom teachers at this particular period in time. The findings of this study may inform research, practice, and policy on Edcamps and, more generally, teacher-driven PD (Yin, 2009).

Recommendations for Practice

Recognize Edcamps as legitimate PD. As recommended by Carpenter and Linton (2016), it is time for school district leaders to consider having "more inclusive definitions of professional learning that encompass participant-driven, voluntary PD such as Edcamps" (p. 106). In this study, the majority of teachers shared how their school administrators actively encouraged and supported their Edcamp participation. A few

teachers also shared that their schools and districts even held Edcamps. However, Edcamps are still not widely recognized as legitimate professional learning despite many teachers' perceptions that they are a valuable form of PD (Carpenter and Linton, 2016). Broadening the definition and purposes of PD will allow teachers to get what they perceive to be meaningful and effective PD without excluding what school leaders perceive to be valuable PD. Teachers would have more opportunities to grow professionally and, with administrator support, earn PD credits for their participation.

Promote Edcamps and other forms of teacher-driven PD. All teachers in this study described the benefits of Edcamps to their practice. While other teachers may not find their Edcamp experiences to be beneficial, there is very little risk involved for school leaders to promote Edcamps since they are free, voluntary, and participant-driven (i.e., teachers can create the experience they believe will be most useful for them). For schools struggling with teacher retention and morale, teachers' positive Edcamp experiences may contribute to their professional growth and satisfaction, impacting their decision to remain in the field of education.

Additionally, school leaders should consider ways of applying elements of Edcamps to mandatory, in-district PD (Carpenter & Linton, 2016). For example, outside of having choice and voice, teachers in this study found collaborating with peers outside of their districts to be a particularly beneficial aspect of their Edcamp experiences. Increasing opportunities for inter-district collaboration during mandatory PD may help teachers gain outside perspectives on common issues (e.g., implementing Common Core State Standards or preparing students for common state assessments).

Give teachers more choice in PD. It is important to recognize that the Edcamp model of PD is not a silver bullet meant to replace more traditional forms of PD. Edcamps should be part of a menu of options for teachers that includes formal PD, informal collaboration, and independent activities (Jones & Dexter, 2012). Jones and Dexter (2012) contend that schools only concerned with formal PD activities fail to recognize the role of informal and independent PD in helping teachers process and apply what they have learned in formal PD. The scholars advocate that teacher PD should instead be viewed as a symbiotic system of formal, informal, and independent activities (Jones & Dexter, 2012). Avoiding extremes and all-or-nothing approaches is critical for developing a comprehensive PD plan capable of reaching the diverse needs of teachers and their students.

Recognize teacher expertise and leadership. Edcamps were not popularized by school leaders or policymakers, but by groups of teachers who wanted to drive their own PD. Few scholars and school leaders have recognized teachers' capacities to take ownership of their professional learning and create change not only at their school site, but at a systemic, professional level (Hargreaves, 2000; Hargreaves, 2007). With the meteoric rise of Edcamps, and relatedly, Twitter PLNs, this is changing. It would behoove school leaders to embrace these emerging teacher leadership roles and regard teachers as true co-collaborators when designing and implementing PD. Schools are now highly complex organizations that cannot be led by administrators alone (Hargreaves, 2003). Teacher leaders are needed to shape and implement school learning goals and high-quality and relevant PD plays a critical role in this ongoing effort.

Recommendations for Future Research

Edcamps' influence on professional practice. This study was the first to explore the influence of Edcamps on teachers' professional practice and found that, for all twelve teachers in this study, Edcamps did influence their professional practice. However, future research on this topic is needed to establish a deeper understanding of the role of Edcamps on teachers' professional practice and to also explore potential negative cases (Carpenter & Linton, 2016). This study drew its findings from semi-structured interviews with twelve teachers and artifacts voluntarily shared by these teachers. Future studies might focus on teachers at different grade levels (e.g., high school teachers) and in different school contexts (e.g., private schools). These studies might also be longitudinal in nature and also include additional data sources like classroom observations and student, administrator, and/or parent feedback. Future observational and experimental case studies comparing the professional practice of teachers who have attended Edcamps and those who have not attended Edcamps would also be valuable.

Relationship between Twitter and Edcamps. In many ways, this study was just as much about Twitter as it was about Edcamps. Every participant shared that their participation on Twitter was an important part of their Edcamp experiences. While teachers did report using other social media platforms (e.g., Facebook and Voxer) in relation to their Edcamp experiences, Twitter was mentioned over 250 times by the teachers in this study across the 24 total interviews. The vast majority of teachers even first learned about Edcamps on Twitter (which is unsurprising given that the Edcamp

model of PD was developed by teachers in a Twitter PLN). Future research should explore the close relationship between Edcamps and Twitter. Specifically, researchers can build upon Brown's (2015) study findings by exploring whether Twitter participation affects teachers' Edcamp experiences by conducting a comparative study of Edcamp participants who are active on Twitter and those who are not.

Learning during Edcamps. What is currently known about the learning that occurs during Edcamps is known through teachers' self-reports following their Edcamp experiences. Little is currently known in the research literature about what occurs during Edcamp sessions or about the content that is learned during Edcamps (even though session topics are generally available publicly online). To gain more insight into what actually occurs during sessions and the factors that may contribute to or hinder teachers' learning, future research might include discourse analyses of Edcamp sessions. Content analyses of session topics from multiple Edcamps may also be useful in gaining a better sense of the possible themes and patterns across different Edcamps.

Edcamp organizers. To gain greater insight into the development and implementation of teacher-driven PD, future research should be conducted on Edcamp organizers who are teachers. It might be useful to explore teachers' motivations and goals as well as how their organizing experiences may shape their understandings of teacher leadership. Greater knowledge of the process of organizing Edcamps, including the specific opportunities and challenges, will be a valuable addition to the research literature on teacher leadership.

What teachers want from PD. As the world continues to change with social media and other technologies and as public school teachers' responsibilities become greater, it is important to listen to what teachers need and want from PD. Teachers' needs and wants may be different now that technology has made it possible for teachers to participate in free, teacher-driven forms of PD like Edcamps and Twitter PLNs. Future research into what teachers want from PD will be valuable in updating and evolving theories about effective teacher PD. A better understanding of teachers' experiences of PD will also help designers of PD be more responsive to teachers' professional growth needs, which, in turn, may contribute to higher teacher retention and satisfaction.

Conclusion

This was the first research study to investigate the influence of Edcamps on teachers' professional practice and to explore the factors that contribute to this influence. A thematic analysis (Braun & Clarke, 2006) of the interview data revealed that all twelve teachers perceived that their Edcamp experiences were legitimate, high-quality PD. All teachers also perceived that their Edcamp experiences had influenced their professional practice in the areas of student instruction, peer collaboration, and/or teacher leadership. Teachers spoke of applying the discrete knowledge and skills that they had learned during Edcamp sessions as well as applying the format and beliefs of the Edcamp model of PD itself to their professional practice. Based on teachers' interview responses, three major factors contributed to whether Edcamps influenced their professional practice: teachers' motivations; colleague support; and administrator support. Finally, all twelve participants stated that teachers should have greater choice and voice in PD. Given the

extensive literature on the need for high-quality PD for U.S. public school teachers, this study of teachers' Edcamp experiences gives scholars, policymakers, and school leaders a deeper understanding of the value of Edcamps and may inform future investigations of this model of PD and other forms of teacher-driven PD.

APPENDIX A: RECRUITMENT TWEET

I will post this message on my Twitter page and in various Twitter chats:

EDCAMP research study ($35 gift card) - seeking elementary classroom teachers who've attended at least one Edcamp! DM me! [insert hashtag here, e.g. #edchat; #elemchat]

APPENDIX B: ONLINE ADVERTISEMENT

Subject: EDCAMP Research Study – Seeking Elementary Teachers! ($35 Amazon Gift Card)

Hello, Edcampers! My name is Dinh Phan and I am a former elementary school teacher and a doctoral candidate at the Boston University School of Education.

I am currently recruiting participants for a qualitative, multiple-case research study of public elementary classroom teachers who have recently participated in at least one Edcamp. My research is focused on teachers' perceptions of how, if at all, their Edcamp experience influences their professional practice. This study would involve two, approximately one-hour interviews and a response to a brief, follow-up email. The study will take place between May and November 2016. After completing the study, participants will be emailed a $35 Amazon e-gift card. The data collected in this study will be used for my doctoral dissertation.

If you are interested in participating, HERE is the link to the informed consent form detailing what would be expected of participants.

Please feel free to contact me any time by email at dinh@bu.edu if you are interested in participating or if you have any questions. Please keep in mind that space is limited for this study!

APPENDIX C: RECRUITMENT EMAIL/DIRECT MESSAGE

Email Subject Line: Subject: EDCAMP Research Study – Seeking Elementary Teachers! ($35 Amazon Gift Card)

Dear [Name of Public Elementary Classroom Teacher/Edcamp Participant],

I hope this message finds you well! My name is Dinh Phan and I am a former elementary school teacher and a doctoral candidate at the Boston University School of Education.

I am currently recruiting participants for a qualitative, multiple-case research study of public elementary classroom teachers who have recently participated in at least one Edcamp. My research is focused on teachers' perceptions of their Edcamp experience(s) and how, if at all, their Edcamp experience(s) influences their professional practice. This study would involve two, approximately one-hour interviews and a response to a brief, follow-up email between May and November 2016. After completing the study, participants will be emailed a $35 Amazon e-gift card. The data collected in this study will be used for my doctoral dissertation.

Attached is an informed consent form detailing what would be expected of you if you choose to participate. I would greatly appreciate the opportunity to answer any questions you may have. Please feel free to contact me any time by email.

Thank you so much for taking the time to read this message. I hope you have a wonderful [week or day]!

Gratefully,

Dinh Phan
Doctoral Candidate
Educational Leadership & Policy Studies
Boston University School of Education
dinh@bu.edu

APPENDIX D: INFORMED CONSENT FORM

Elementary Teachers' Perceptions of their Edcamp Experience(s) and its Influence on their Professional Practice

Principal Investigator:
Dinh Phan
Doctoral Candidate
Boston University School of Education
dinh@bu.edu

Co-Investigator/Faculty Advisor:
Donald Beaudette, Ed.D.
Associate Professor of the Practice
Boston University School of Education
djb@bu.edu

Purpose:
The purpose of this research study is to learn about the individual thoughts and experiences of public elementary classroom teachers who have recently participated in at least one Edcamp. You will be asked to describe your Edcamp experience(s) and how, if at all, your Edcamp experience(s) influences your professional practice. The Principal Investigator of this study is a student and the data collected in this study will be used for her doctoral dissertation.

Procedures:
This research study will take place between May and November 2016. Your participation in this research study will last approximately five weeks. You will be asked to complete two audio-recorded, semi-structured interviews lasting approximately one hour each. You will also be asked to respond to a brief, follow-up email sent by the researcher. The interviews will take place at a location that is mutually agreed upon between you and the researcher. Interviews may also take place online (e.g., Google Hangouts), depending on what works best for you.

In the first interview, you will be asked to give an overview of your educational and professional background; to describe, in detail, your participation in Edcamp(s); and to describe your views and experiences with teacher professional development. You will also be asked to share how, if at all, your Edcamp experience(s) has influenced your professional practice and to discuss the factors that influence why or why not.

The second interview will take place approximately two weeks after the first interview. In the second interview, the researcher will ask you to share and discuss artifacts that you believe demonstrate how your Edcamp experience(s) have influenced your professional practice (e.g. student work, lesson plans, presentations, blog posts, meeting notes). Any copies of artifacts given to the researcher will be anonymized and may be published in written reports of this study. If your Edcamp experience(s) has not influenced your professional practice, you will be asked follow-up questions from the first interview.

Approximately one after the second interview, you will be asked to respond to a brief, follow-up email. The researcher will ask you to clarify our interview responses as

needed. The researcher will also give you the opportunity to provide any additional information that you believe is important to the study. You will have approximately two weeks to respond to the follow-up email. Once you respond to the follow-up email, the researcher will email you a $35 Amazon e-gift card for your completion of the study.

Protection of Privacy:
To keep the records of this study confidential, a code name will be used in place of your name on all documents and audio recording file labels used during this research study. A key to the code that links your name to your study data will be created by the researcher. Both the key and the records will be kept in a password-protected Google Drive account owned by the researcher. Only the researcher and Co-Investigator will have access to this Google Drive account. All audio recordings will be stored on this Google Drive account until they are transcribed. The audio recordings will be destroyed at the end of the study. Records from this research study will be stored for seven years and may be used in the researcher's future research on Edcamp.

Your real name will be replaced with a pseudonym in all written reports of this research study. Any of your responses may be used in any reports of this research study, but no information that may reveal your identity or the identity of the people you mention will ever be shared.

Participant Rights:
Participating in this study is entirely your choice. You do not have to answer any questions that make you uncomfortable and you are free to end your participation at any time for any reason. There is no penalty for ending your participation. If you stop participating, the information that you have already provided will be destroyed.

Risks and Benefits:
There is a risk of a breach of confidentiality when you allow researchers to use and store your information. The researchers in this study will reduce this risk by labeling your information with a code name and keeping the key to the code in a password-protected Google Drive account. There is also risk that you may be uncomfortable with some of the questions and topics the researcher asks about. You do not have to answer any questions that make you feel uncomfortable. Please be aware that there are also no right or wrong answers for the questions asked in this study. There are no direct benefits from participating in this research study. Your participation may help public education stakeholders learn more about Edcamps and their influence, if any at all, on public elementary classroom teachers' professional practice. This study may also provide public education stakeholders with insight on how to improve teacher professional development.

Compensation:
After you complete the study, the researcher will email you a $35 Amazon e-gift card.

Questions and Concerns:
If you have any questions or concerns about this research study or your participation in it, please contact Principal Investigator Dinh Phan any time at dinh@bu.edu. You may also contact Co-Investigator and Faculty Advisor Dr. Donald Beaudette any time at djb@bu.edu. You may obtain further information about your rights as a research subject by calling the Boston University Charles River Campus Institutional Review Board Office at (617) 358-6115.

Statement of Consent:
I (the participant) acknowledge that I have read and understand the above information. I am aware that my participation in this study is voluntary and that I can end my participation at any time. I have been given the chance to ask questions about this research study and my participation in it. My questions have been answered to my satisfaction, and I agree to participate in the study. My signature is NOT required for this study.

APPENDIX E: INTERVIEW GUIDE

The following questions served as a general guide for the two interviews. All of the participants were asked questions that touch on each topic of this guide, although the phrasing may have varied interview to interview. Since the interviews were intended to elicit information about participants' unique experiences, new questions were asked based on participants' responses.

Interview #1
Demographic Data • Highest Degree Earned • Number of Years Teaching • Current Position • Content Areas • School Name and District (from this, I can search whether the school is urban, suburban, or rural, the size of the student population, the number of students on free/reduced lunch, etc.) • Gender • Race/Ethnicity
Edcamp Background • Which specific Edcamps have you attended? • How did you become involved with Edcamp? • In your own words, what is an Edcamp? What is the purpose of Edcamps and do you think they serve their purpose? Why or why not? • What has your Edcamp experience(s) been like? • What have your other PD experiences (formal and informal; teacher-driven and administrator-driven) and how do they compare with your Edcamp experience(s)? Is your Edcamp experience typical of your other PD experiences? Similarities? Differences?
Edcamp Learning • Have you learned anything at Edcamp(s) (e.g., knowledge and skills, thoughts and attitudes)? If so, what? • How would you describe your Edcamp learning experience(s)? • In terms of professional development, how would you describe the quality of the learning?

Edcamp Teaching

- Have you shared knowledge or ideas with others during Edcamp(s)? If so, what?
- How would you describe your experience(s) sharing your ideas during Edcamp(s)?
- In terms of professional development, how would you describe the quality of what you had to share?

Edcamp Influence

- Have you used, applied, or shared anything you've learned in Edcamp? If so, what?
- Has being involved Edcamp influenced your professional practice as a teacher in any way? If so, how? If not, why not?
- In particular, has your Edcamp experience influenced the following areas of your professional practice?
    - Student Instruction
    - Peer Collaboration
    - Teacher Leadership (e.g., grade level, school, district, state, nation)
- If applicable – what are some artifacts that you could share next time that would demonstrate how your Edcamp experience(s) influences your professional practice?

Factors Affecting Influence

- Does technology play a role in your experience with Edcamp? If so, how? Do you participate in Edcamp(s) through Twitter or other Personal Learning Networks (PLNs)? What has that experience been like?
- Do your school administrators and colleagues play a role in your experience with Edcamp? If so, how? If not, why not?
- What role do other Edcamp participants play in your experience with Edcamp? If so, how? If not, why not?

Views on Teacher PD

- What do you want from teacher PD?
- How do you define high quality teacher PD?
- What role do you think teachers should play in their PD?

Conclusion

- Is there anything else you'd like to share that would be important in understanding your Edcamp experience(s)?

For any of the above questions and any others asked during the interview, the researcher may use probes (e.g., What do you mean by that? Can you tell me more about that?) to elicit deeper responses (Patton, 2015).

Interview #2
If teachers report that their Edcamp experience(s) **DOES** influence their practice, I will ask the following questions. For each voluntarily shared artifact, ask the participant: • What is this artifact? How does this artifact show the connection between your participation in Edcamp(s) and your professional practice? • From your perspective, what does this say about the influence your Edcamp experience(s) has made on your professional practice? • Is there anything else you'd like to share that would be important in understanding your Edcamp experience(s)? If applicable, the researcher may ask participants to answer or clarify their responses to questions from Interview #1. For any of the above questions and any others asked during the interview, the researcher may use probes (Patton, 2015) to elicit deeper responses (e.g., What do you mean by that? Can you tell me more about that?). If teachers report that their Edcamp experience(s) **DOES NOT** influence their practice, I will asking the follow-up questions from the first interview, particularly focusing on the following: • From your perspective, why has your Edcamp experience(s) not influenced your professional practice? • Have you ever had PD that has influenced your professional practice? If so, can you describe this PD and why it influenced you? If not, can you share why not? • How do you define high-quality PD?
Follow-up Email Exchange
The researcher will review the recordings and notes from Interview #1 and Interview #2 and ask participants to clarify and/or confirm their responses as necessary. The researcher will also ask the participants to share any additional information they believe is important in understanding their Edcamp experience(s).

APPENDIX F: SECOND INTERVIEW/ARTIFACT COLLECTION EMAIL

Dear [Name of Study Participant],

Thank you so much for taking the time to share your Edcamp experience(s) with me today! I greatly appreciate your time and insights.

I look forward to our final GHO interview on [Date and Time].

If applicable, I invite you to gather and share any artifacts that show (or provide evidence of) the influence of Edcamps on your professional practice, including but not limited to student instruction, peer collaboration, and teacher leadership.

The artifacts may include but are not limited to text, image, and audiovisual data. Artifacts may include photos from your classroom, tweets between you and other educators, blog posts, published articles, meeting agendas, lesson plans, student work, etc.

These artifacts can be shared with me online (e.g., video chat or web link). If you have time, feel free to send the artifacts before the second interview.

Thank you again!

Dinh

APPENDIX G: Participant Interview Dates

Participant Name	First Interview Date	Second Interview Date
Peter	5/10/16	5/18/16
Laura	5/11/16	7/01/16
Taylor	5/13/16	6/09/16
Olivia	5/17/16	5/31/16
Matthew	6/14/16	6/27/16
Angela	6/20/16	7/07/16
Julia	6/17/16	6/21/16
Lucy	6/28/16	7/07/16
Dakota	6/24/16	7/14/16
Maggie	6/30/16	7/20/16
Ella	6/29/16	7/26/16
Chelsea	6/23/16	7/20/16

APPENDIX H: FOLLOW-UP EMAIL

Email Subject Line: Edcamp Study Follow-Up

Dear [Name of Public Elementary Classroom Teacher/Edcamp Participant],

First, thank you so very much for your time and insights during both of the interviews for this study!

To complete your participation in this study, will you please respond to the following numbered items? I just want to make sure that I understood and/or accurately interpreted your responses.

Once I receive your responses, I will email you a $35 Amazon e-gift card.

[Example:

1. You stated in the second interview that since you began attending Edcamps, other teachers at your school have begun attending them as well. Did you encourage these teachers to attend?]

Please feel free to also share anything else you believe is important to understanding your thoughts and experiences with Edcamp(s).

Thank you so much again! I look forward to hearing from you!

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