

EXAMINING THE ROLE OF SOCIAL MEDIA AS AN EDUCATIONAL  
TOOL AMONG PRE-SERVICE TEACHERS

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ABSTRACT

EXAMINING THE ROLE OF SOCIAL MEDIA AS AN EDUCATIONAL  
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University of Houston-Clear Lake, 2020

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The purpose of this mixed-methods study was to examine the role of social media as an educational tool for teacher development among pre-service teachers. One hundred twenty-five pre-service teachers, from a four-year medium sized, suburban public university located in southeast Texas, participated in an online survey. Data collected with the *Teachers' Use of Social Media Survey* and interviews revealed the social media tools used most often by Texas pre-service teachers, the perceived effectiveness, and how social media is being used for teacher development. Overall, participants reported social media as being an effective tool to assist with preparing them for their future classrooms. Findings indicated that Facebook, Pinterest, and YouTube were the most popular tools and were frequently used to find resources and lesson ideas.

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## CHAPTER I: INTRODUCTON

As a new crop of students, known as the iGeneration, are preparing to flood college campuses, they will be bringing with them numerous smart devices keeping them consistently connected to the outside world. Author Jean Twinge identifies children born in 1995, the year the Internet was introduced, through 2012 as the iGeneration (2018). This generation was born into a world where social media is the norm and have become known as digital natives because digital communication has always surrounded them (Prensky, 2001). These digital natives are not only preparing for what awaits them immediately following graduation, but also the immense technology changes that await them in their lifetimes (Prensky, 2010). Therefore, this generation has been dubbed the iGens, and they are changing the trajectory of college classrooms, which is quickly filtering down to the workplace (Montealegre & Cascio, 2017).

This is not a new phenomenon for colleges and universities. Technology connected students began appearing several years ago, and now they are exerting their presence. “They are driving shifts, subtle and not, in how colleges serve, guide and educate them, sending presidents and deans to Instagram and Twitter” (Pappano, 2018, p. 6). These students are more aware of their options, know how to find information quickly, and are in constant communication with others. This is the social media generation and it is prevalent in college classrooms, creating an instant cyber community (Martínez-Alemán, 2014).

College classrooms have evolved over the years in the same manner as public-school classrooms. Teachers and professors are facilitating learning while students are investigating, inquiring, and discussing (Winarno, Sonai, & Sook, 2018). Students of the iGeneration are inclined to communicate through social media and many times their first

instinct in classroom group work is to connect with group members on social media (Tucker, 2015). This creates immediate collaboration and builds a supportive network as students are navigating their college programs. Another group that seems to be benefitting from social media as a means for building knowledge and growth development is pre-service teachers (Acarli & Saglam, 2015). Pre-service teachers are reaching out on social media for instructional resources, collaboration with other educators, and professional training since it is a convenient way to collect and share information (Reilly, 2017).

While there is a significant amount of educational literature on social media, there are gaps in the research examining it through the lens of education and collaboration for the purpose of teacher development. This research will provide a deeper understanding of the intent of pre-service teachers' social media use as an educational tool to best prepare for successfully operating their own classroom. By understanding how pre-service teachers are utilizing social media for instructional resources, collaboration with other educators, and professional training, universities and school districts could benefit from information regarding how social media could assist in teacher development. This chapter presents the research problem, significance of the study, research purpose and questions, and definitions of key terms.

### **Research Problem**

In the last 10 years, social media has transformed the way people connect and gather information (Leonardi, 2014). As people become progressively dependent on swift communication, they are demanding technological advances to achieve progress (Landsbergen, 2011). Educators are one of the groups that are actively exploring social media's potential to enhance their profession (Krutka, Carpenter, & Trust, 2017). As social media has found its way into many households, it has also found a place in

education, shifting how pre-service teachers are finding instructional resources, collaborating with other educators, and obtaining professional training. These advances have changed how pre-service teachers view teacher preparation, lesson design, and classroom management. They have discovered that social media presents an excellent opportunity to share instructional ideas, communicate with other professionals, and participate in discussions about educational issues (Hur & Brush, 2014). Social media, such as Facebook, Pinterest, Twitter, Instagram, and YouTube, have advantages for educators who are limited by time and by distance from traditional sources of professional development (Donelan, 2016). Social media can reduce these barriers and opens new paths to learning and collaborating for pre-service teachers.

Education is consistently evolving, and educators are expected not only to understand the content they are going to teach, but also to plan engaging rigorous lessons, while collaborating with peers and participating in ongoing professional development. The expectations are high and demanding (Khan, Yusoff, & Khan, 2014). This demand has pre-service teachers turning to social media as a virtual professional community to search for concepts such as lesson plans and classroom management techniques, collaborate with other educators, and increase their professional development options (Reich, Levinson, & Johnston, 2011).

Whether it is Facebook, Pinterest, Twitter, Instagram, or YouTube, pre-service teachers are connected and seeking information. From collaborating and networking with children's book authors on Facebook to searching Pinterest for classroom management ideas, pre-service teachers have more information at their fingertips than veteran teachers have had throughout their years of teaching (Orlando, 2014). Prior to social media, pre-service teachers attended classes, may or may not have completed a student teaching program, and hoped for a qualified mentor teacher when securing their first job (Koehler,

1985). Using social media, today's pre-service teachers are ahead of the curve, creating a community of educators that are working together and learning from each other through a cyber professional learning community (PLC) that is accessible to everyone (Donelan, 2016).

As the new generation of educators prepares to enter this field of teaching, they are quickly becoming aware of the expectations and demands on teachers and are utilizing their smart devices for support (Redman & Trapani, 2012). Social media is not only providing a new avenue for planning, collaboration, and professional development, it is helping to ease the time constraints of educators (Reich, Levinson, & Johnston, 2011). The iGeneration is redesigning how, when, and where PLCs arise and have expanded their classrooms exponentially to include peers, teachers, and professionals in the field.

Social media has power, and pre-service teachers are harnessing this power, changing how they learn, which will ultimately trickle down to their students. Educators now have the ability to access new practices and theories immediately. They are no longer teaching in isolation and can communicate directly with colleagues and experts in education to compare notes on education techniques, curriculum, and more.

Pre-service teachers are using social media sites to explore innovative concepts like "flipped classrooms" or to share the latest iPad apps for high schools.

Educators routinely use social media tools, such as blogs, to write about the world of education and to invite comments from colleagues all over the world. This allows educators to expand the conversation to social media outposts and to use techniques like Twitter chats to engage a global audience in real time (Ross, Maninger, LaPrairie, & Sullivan, 2015, p. 64).

While pre-service teachers have readily embraced the social media craze, they are entering a workplace where districts and administrators are slow to catch on to using social media as a means for teacher development. The use of social media for resources, collaboration, and professional training has yet to reach its full potential and remains an elusive target for improving teacher knowledge and growth (Powers & Green, 2016). When pre-service teachers secure their first job, the human resources department typically warns them about social media use and adhering to district guidelines (Blazer, 2012). These guidelines usually involve student interactions, posting of inappropriate pictures, or derogatory remarks about the district. However, they do not allow for professional benefits of social media. This is an area that has administrators nervous, navigating a path they may not use themselves, trying to understand the scope of content of which they have no control (Powers & Green, 2016). The fear of this unknown pushes districts and administrators toward policies limiting social media use and therefore, missing prospects for expansive PLC opportunities.

This dissertation will examine what social media tools pre-service teachers are using for professional use; as well as, the relationship between those tools and their professional activities. Much of a pre-service teacher's preparation is structured around educational philosophy, pedagogical practice, lesson design, and classroom management. Effective teachers, including pre-service teachers, use a variety of resources to supplement ideas and techniques used in the classroom. Social media has made the task of accessing new concepts, fresh ideas, and best practice models easy. No longer limited to just print sources, which often confine a pre-service teacher's scope of information as well as the time available to explore, pre-service teachers with Internet access can use social media to explore an endless variety of current ideas and novel practices.

### **Significance of Study**

With the increase in accountability and mounting pressure on teachers to perform, there is a need for amplified teacher development beyond what colleges and districts can provide. A surge in the use of the Internet changed the scope of education and how learning occurs (Mancabelli, 2012). Social media is a major component of Internet use (Perrin, 2015). Social networks contribute to the growth of “collaboration, communication, and critical thinking” (da Rocha, Conradie, & Lombard, 2014, p. 243). It is important to recognize how endorsing social networks to develop professional learning communities can support teachers and impact student success. These networks, however, are often not recognized as an adequate form of teacher development (Ferriter & Provenzano, 2013). When using social media, it is sometimes considered difficult to confirm that the information is aligned to the standards at a rigorous level and that they include measurable goals. By understanding how pre-service teachers are utilizing social media as an educational tool, universities and school districts could benefit from information regarding how social media can assist in teacher development.

### **Research Purpose and Questions**

The purpose of this mixed method’s study is to examine the role of social media as an educational tool for teacher development among pre-service teachers. This study will address the following research questions:

#### **Quantitative Research Questions**

1. What social media tools are pre-service teachers using for teacher development?
2. To what degree do pre-service teachers perceive social media can be used as an educational tool for teacher development?

3. Is there a statistically significant relationship between the social media used most often by pre-service teachers and their professional activities?
4. What professional activities are pre-service teachers utilizing social media for to assist with teacher development?

### **Qualitative Research Question**

1. How do pre-service teachers use different forms of social media for teacher development?

### **Definitions of Key Terms**

The technical terms used in this study relevant to pre-service teachers and social media regarding teacher development are defined below.

*Facebook* - A social networking site where users can create a personal profile, add other users as friends, and exchange messages. It can also generate automatic notifications when friends update their profiles or post new material (Boyd & Ellison, 2010).

*iGeneration (iGens)* – A group ages 6 to 23 who are the first generation to be born into a constantly connected world where social media and screens are the norm (Geiger, 2018).

*Instagram* – A social networking site that facilitates social structure, tagging, and sharing of various media types such as pictures. Users can like and comment on other individual's media posts (Ferrara, Interdonato, & Tagarelli, 2014).

*Pinterest* - A social photo sharing website that allows users to create and manage theme-based image collections for events, interests, hobbies, and more. Users can browse other pin boards for inspiration, re-pin images to their own collections, and/or “like” photos (Desai, 2012).



*Professional Activities* – Lesson planning, sharing resources, collaborating with educators, and professional development that helps teachers prepare, teach, and professionally grow.

*Social Media* - Online communication tool that encourages the exchange of information, sharing of content and collaboration between users (Go & You, 2016).

*Social Network Sites (SNS)* - Web-based services that allow individuals to (a) construct a public or semi-public profile within a bounded system, (b) articulate a list of other users with whom they share a connection, and (c) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site (Boyd & Ellison, 2010).

*Teacher Development* – The process of becoming the best kind of teacher one can be (Underhill, 1986).

*Twitter* - An online social network that allows users to post short messages that can be read by any other Twitter user. It allows users around the world to stay connected to their friends, family members, and coworkers through their computers and mobile phones. Users declare the people they are interested in following (Huberman, Romero, & Wu, 2008).

*YouTube* – A video sharing service that allows users to watch videos posted by other users and upload videos of their own. Users from all over the world post a wide range of videos, including instructional videos (Courtois, Merchant, Ostyn, & De Marez, 2011).

## **Conclusion**

This study will explore how social media is utilized by elementary and secondary level pre-service teachers and its relationship to their teacher development. While pre-service teachers possess various levels of proficiency using social media in their personal

lives, little is known about their use of social media for educational purposes. These purposes include but are not limited to finding instructional resources, collaborating with other educators, and obtaining professional training.

This research will follow a mixed-methods model and will employ a survey designed to explore pre-service teachers' use of social media, as well as semi structured interviews of selected survey participants. The survey, which focuses primarily on applications such as Facebook, Pinterest, Twitter, Instagram, and YouTube, will measure pre-service teachers' use of social media and their perceptions of how it is used as an educational tool. Results will contribute to a greater understanding of the application of social media in pre-service teacher education. Chapter II will examine the current literature on the constructs of this study and will look in more depth at social media use.

## CHAPTER II: LITERATURE REVIEW

The advancement of technology has altered the traditional approach of teaching and learning in education (Ghavifekr & Rosdy, 2015). This chapter examines current literature as it relates to the use of social media and its influence on teacher development among pre-service teachers. In an effort to establish a fundamental understanding and define the purpose of this research, this chapter begins by reviewing literature related to teacher development including professional learning communities and professional training, preparation of pre-service teachers in teacher education programs, social media, and social media sites including Facebook, Pinterest, Twitter, Instagram, and YouTube. The chapter also reviews literature related to social media for teacher development, as well as school districts' perspectives on social media. It concludes with a summary of the findings, the theoretical framework, and conclusion.

### **Teacher Development**

Teaching is a continuous professional activity rather than something that is mastered once through the achievement of a controlled set of competencies (Asghar, 2014). Teaching needs to be rejuvenated and cultivated over time as new ideas and approaches toward teaching and learning are found. This emphasizes the necessity of ongoing or continuous development activities for teachers to update and enhance their professional skills. This review explores the concept of teacher development in terms of professional learning communities and professional training involving teacher preparation.

### **Professional Learning Communities**

The concept of advancing schools by developing professional learning communities (PLCs) has been in place for several years. The term is used to describe a

community of colleagues, within a particular work environment or field, working and learning together to improve the organization (Harris & Jones, 2010). Within education, PLCs are a group of educators with a goal of improving student achievement (Dufour, 2004). Teachers have been participating in PLCs with the hope of improving their own teaching practices through this collaboration of educators. However, time has consistently been a barrier to productive and ongoing PLCs (Dufour & Reeves, 2016). Teachers are challenged daily with carving out time for planning, professional development, and collaboration; they are consistently falling short.

Teacher collaboration is an avenue to support significant teacher development (Stanley, 2011).

Imagine a system in which teachers have time to come together to resolve student issues, share lesson plans, analyze student work, discuss successes and failures, and learn through high-quality professional development. Imagine a system in which students can't fall through the cracks—because they're backed by a team of teachers, not just the one at the front of the room (Weingarten, 2010, p. 37).

Professional learning communities call for a school organization that features common standards, mutual accountability, an inquiry-minded direction, and a culture that promotes reflection, collaboration, and dialogue (DeMatthews, 2014). This requires time carved out for the sole purpose of teacher collaboration. A study conducted by Luhan and Day (2010) examined roadblocks to professional learning communities among public school teachers. Several roadblocks emerged in the data analysis with one focusing on the lack of time for learning. Thirty-seven elementary teachers from one state school in the southeastern United States participated in this quantitative study. Results from an open-ended survey, one-on-one interviews, and direct observations of PLC meetings indicated a lack of time for learning as the most common roadblock to informal learning. Teachers

stated that they require greater amounts of time for their own development because the demands of their jobs had grown in several aspects. An increasing number of students with special needs being integrated into their classrooms required spending a great deal of time learning about the different types of needs. In addition, teachers reported the amount of time required by nonteaching responsibilities, such as walking students to class, making parent phone calls, and responding to emails, left little time for personal teacher development (Luhan & Day, 2010).

A similar study completed by Zhang, Yuan, and Yu (2017), explored barriers to professional learning communities from the school leaders and teachers' viewpoints. Participants in this qualitative study consisted of 12 high school English teachers and six school leaders. Results of the semi-structured individual interviews recognized four barriers identified in PLC development: insufficient collaborative time, ineffective school leadership, unfavorable accountability policy, and lack of collaborative professional culture as barriers to PLC development (Zhang, Yuan & Yu, 2017). In addition to providing time for teachers to collaborate, there also needs to be time built in for professional training.

### **Professional Training**

If students are to meet the high standards set forth by states and districts, teachers will need to support them in order to reach these levels. Therefore, teacher qualifications and preparedness become crucial to student success, and teacher professional training is a must for districts (Vangrieken, Meredith, Packer, & Kyndt, 2017). Although teachers largely favor high standards, many of them feel they are not properly trained to implement practices based on these high standards (Skehan, 2018). Continuously improving on one's understanding of the essential knowledge and skills, based on the

state standards, is a basic element to teaching. Unfortunately, professional training does not typically result in changes to teaching practice or student learning (Gore et al., 2017).

In a study conducted by Carla Johnson (2006), barriers to effective professional training and change in practices were explored. The study focused on two middle schools in the central United States who participated in collaborative, sustained, whole-school professional development. Qualitative data, teacher interviews and classroom observations, explored barriers affecting implementing quality instruction following effective professional training. Findings indicated that even when the training was deemed effective, teachers encountered technical, political, and cultural barriers to implementation, which included resources and time, as well as administrative buy-in and support (Johnson, 2006).

With administrator buy-in identified as a barrier, it is clear that this group sets the tone as to the type and quality of training for their teachers. A study completed by Zimmerman and May (2003) examined professional training practices of principals. This study addressed issues of challenges to effective training that surfaced during the analysis of qualitative data gathered from a sample of principals. Results of the semi-structured interviews indicated the majority of the participants reported time constraints as one of the major barriers to effective professional training for their teachers (Zimmerman & May, 2003). With time not being on the side of educators, properly preparing teachers with a solid foundation in educational philosophy, pedagogical practice, lesson design, and classroom management before they enter the classroom becomes essential (Hollins, 2011).

### **Preparation of Pre-Service Teachers**

As pre-service teachers plan to enter the teaching profession, they must prepare to manage the classroom pressures and challenges, which are continuing to evolve each

year. Mergler and Spooner-Lane (2012) stated, “The role of the teacher in the classroom has been found to be the single most important factor in student learning” (p. 68).

Supporting new teachers through preparation opportunities is allowing school districts to try to meet the needs of their students (Darling-Hammond, 2006). Furthermore, colleges understand that education is changing at a rapid pace and their approaches must change as well in order to better prepare teachers for the classroom (Goodwin & Kosnik, 2013). However, while considerable advancements have been made to teacher preparation programs by establishing stronger field work opportunities and improving coursework, there are still more improvements to be made (Darling-Hammond, 2012). Although most teacher preparation programs now include several field work opportunities, previously, there had been a gap between what pre-service teachers were learning in the classroom, and the opportunity to apply what they have learned with students (Zeichner, 2010).

A study completed by Sadler (2016) explored student teaching with 13 secondary pre-service teachers. The purpose of this qualitative study was to explore pre-service teachers’ reflections on their own student teaching experiences. The results of the individual interviews, group seminar sessions, and written reflections identified five overarching themes as well as challenges. Two of the challenges discussed included job complexity and university requirements. Many participants found their responsibilities to be challenging. They found it difficult to complete all that was asked of them, such as maintaining accurate records, organizing student assignments, recording absences, and performing administrative responsibilities. In addition to administrative responsibilities, pre-service teachers are juggling professional activities such as preparing lesson plans, learning subject area content, and keeping abreast of research based best practices (Sadler, 2016).

In a similar study conducted by Gorgoretti and Pilli (2012), 50 pre-service teachers participated in a qualitative study focused on the effectiveness of the teaching practice course. The open-ended questions sought to learn the perceptions of pre-service teachers in four categories: self-deficiencies, self-acquisition, self-awareness, and suggestion. Results indicated all pre-service teachers felt they had insufficient knowledge and skills in the areas of classroom management and time management. Recommendations included increasing formal teaching hours, increasing the practice teaching course to an additional semester, and building a strong cooperation between the university and the schools (Gorgoretti & Pilli, 2012).

Moreover, a mixed method's study focusing on the relationship between teacher preparation and teacher retention revealed teachers who enter the field not prepared for their first teaching assignment are less likely to stay in the teaching profession (Zhang & Zeller, 2016). In addition, anywhere between 40% and 50% of teachers will leave the classroom within their first 5 years with 9.5% leaving before the end of their first year (Riggs, 2013). Therefore, it is evident that many pre-service teachers undertake their first professional experience with insufficient knowledge and confidence to handle teaching situations. These scenarios have many pre-service teachers turning to social media for help with teacher development, so they feel better prepared to enter their own classrooms.

### **Social Media**

Social media allows users to interact and exchange information by communicating with other people or connecting with businesses and organizations (Kaplan & Haenlein, 2010, p. 61). Throughout this study, the term social media will be used to reference those tools that facilitate social interaction using the Internet through applications such as Facebook, Pinterest, Twitter, Instagram, and YouTube. The



versatility of these applications led them to quickly find a place in education (Donelan, 2016).

A national survey of 1,520 adults (Greenwood, Perrin, & Duggan, 2016) found that Facebook continues to be the most popular social networking platform by a substantial margin. Nearly eight-in-ten online Americans (79%) now use Facebook, more than double the share that uses Twitter (24%), Pinterest (31%), or Instagram (32%). On a total population basis (accounting for Americans who do not use the Internet at all), this means 68% of all U.S. adults are Facebook users, while 28% use Instagram, 26% use Pinterest, and 21% use Twitter.

Social media's increasing popularity in education is a direct result of this rising use of digital media in society at large. In 2010, reports showed 40% of sixth graders used a social network (Reich, 2010). Experts expect this number to increase over time as more students become digital natives, using computers from the time they are toddlers (Wankel, 2009). The evolution of social media has shaped the ways in which students communicate with each other and their educators (Kimmons & Veletsianos, 2014). Young adults spend almost as much time on social networking websites as they do watching television (Vockley, 2007).

Adult educators are joining the social media craze as well, with 60% having joined a social network as of 2010 (Pilgrim & Bledsoe, 2011). The increasing use of social media quickly had an impact with classroom teachers using social media in their search for information and collaboration. This movement includes pre-service teachers who have discovered that social media is helpful for finding resources and ideas, communicating with colleagues, and informing themselves about current practices and content (Ghavifekr & Rosdy, 2015).

In addition, educators are broadening their learning by developing virtual PLCs with the help of social media (Trust, 2012). These PLCs, becoming known as Professional Learning Networks (PLNs), allow pre-service teachers to learn the latest teaching techniques, pedagogies, and updates in the field of education (Trust, 2012). Time constraints are also driving pre-service teachers to social media where they can locate lesson plans, teaching strategies, sample student work, as well as collaboration across grade levels and departments from the comfort of their home (Flanagan, 2012). There are several social media sites that are assisting pre-service teachers with becoming more informed and better prepared to enter the education profession.

### **Social Media Sites**

The number of social media sites has been growing at a fast pace over the past decade (Sponcil & Gitimu, 2013). These tools allow for sharing of content, which includes many forms such as text, pictures, and videos (Mamaqi, 2015). As the selection of social media has become more diverse, so has educators' use of social media. This next section will specifically look at five popular social media sites including Facebook, Pinterest, Twitter, Instagram, and YouTube, including how each social media site can be utilized in education for teacher development.

#### **Facebook**

Worldwide there are over 2.41 billion Facebook users and on average, 1.59 billion logs onto Facebook daily (Zephoria, 2019). With such widespread use of Facebook, it is valuable to think about how Facebook can be used for teacher development. While most studies examine the use of Facebook by college level students, there is limited research related to the use of Facebook specifically by pre-service teachers for teacher development.

Facebook is popular among college students and can be an effective tool for learners since it is opened multiple times a day (da Rocha et al., 2014; Chugh & Ruhi, 2018). Users share content through Facebook by way of file sharing, photo sharing, and video sharing (da Rocha et al., 2014). Results of a study completed by da Rocha et al. (2014) found Facebook was utilized mostly for collaboration, which included communication and resources sharing. Additionally, research showed the creation of groups on Facebook encouraged collaboration (Mazman & Usluel, 2010).

In a mixed method's study conducted by Daniels and Billingsley (2014), Facebook was utilized to write down opinions, ideas, and reflections focused on the subject matter. Results found students preferred the use of Facebook for class collaboration rather than traditional methods, such as Blackboard (Daniels & Billingsley, 2014; Suwannatthachote & Tantrarungroj, 2012). This sentiment was echoed in another study that suggested Facebook is a strong educational tool because it allows for peer feedback and autonomous growth of learning communities (da Rocha et al., 2014). Helping others become aware of the potential benefits of Facebook, such as communication, teamwork, and focused attention, can be extremely effective for teacher development (da Rocha et al., 2014) and should be considered for teacher education programs in the 21st century (Goktalay, 2015).

Furthermore, a mixed-methods study, completed by Kabilan (2016), looked at 91 pre-service teachers and how Facebook contributed to their teaching experience. Findings indicated that Facebook was a crucial element for finding resources (Kabilan, 2016). In addition, a study completed by Goktalay (2015) examined Facebook as a tool for teacher trainees in a teaching practicum analyzing how its feedback and informal learning components supported the trainees. Results found teacher trainees benefited from Facebook in receiving prompt feedback; communicating with their peers, supervisors and

cooperative teachers; sharing knowledge; collaborating with their peers; and improving their professional performance (Goktalay, 2015).

For several years, Facebook has remained popular with pre-service teachers as many of them might have used Facebook as undergraduate students themselves (Suwannatthachote & Tantrarungroj, 2012). Suwannatthachote and Tantrarungroi (2012) found that all 205 pre-service teachers in their study had used Facebook before enrolling in a teacher preparation course and were comfortable using it as a collaborative tool in their professional environment. Facebook can be used in many different ways but was most often used to give or receive feedback from others or as a way to make information available to a large number of followers simultaneously (Phillips et al., 2011). As Facebook continues to grow in popularity, its use for educational purposes will likely change and expand, as well.

### **Pinterest**

Whereas most social media involve text, there is growing interest in other forms of digital communication, such as image-based communication. Pinterest is a popular image-based form of social media that has quickly gained popularity due to its ease of use (Desai, 2012). Pinterest is a content site that assists in the compilation and organization of topical information. Users can gather information from a variety of places and then organize it in a central location (Vu et al., 2015). Pinterest has 250 million users every month with 34% between the ages 18 and 49 (Cooper, 2019). These users average 97.3 minutes each visit, which is much more time per visit than users accessing Facebook or Twitter (Price, 2013). Pinterest is the fourth most popular social media platform in America outranking Twitter (Cooper, 2019).

There are many social components of Pinterest, including the repining of items from others (adding an image you find while browsing Pinterest to your own board),

adding boards to various subjects, liking and commenting, and following boards of other users (Zarro & Hall, 2012). Furthermore, multiple individuals can contribute to a shared board, which tends to help build a culture of collaboration (Baker, 2013) and helps with locating others with similar interests (McLean, 2014). Another aspect of using Pinterest is one can not only collect ideas but also share ideas with others (Price, 2013). Personal boards allow others to view your ideas, which builds in collaboration opportunities (Price, 2013). This collaboration is beneficial for educators when it is difficult to meet face-to-face (Price, 2013).

Educators are constantly using Pinterest to assemble their ideas (Rayburn, 2014). A large quantity of education ideas are added to Pinterest daily and it is even suggested Pinterest is one of the top sites for professional development (Rayburn, 2014). This tool also allows educators to stay up-to-date and learn about new projects and ideas (Price, 2013). Many items can be pinned including training ideas, lesson activities, online field trips, icebreakers, and video tutorials (Price, 2013). Furthermore, educators can share ideas, ask for feedback, and then use the feedback to adjust their practices (Price, 2013).

A qualitative study, conducted by Carpenter, Cassaday, and Monti (2018), focused on eight participants and their use of Pinterest for professional purposes. Interview data revealed that the among the activities participants were utilizing Pinterest for, finding lesson ideas and collaborating were the most noted activities (Carpenter, Cassaday & Monti, 2018). Another qualitative study (Schroeder, Curcio, & Lundgren, 2019) explored how 117 pre-service teachers used Pinterest. Findings indicated pre-service teachers at all levels tended to use Pinterest to search for educational resources and adapt resources to suit their classroom needs. Lastly, a case study completed by Pearce and Learmonth (2013), utilized focus groups to evaluate Pinterest as a useful tool for learning. Findings suggested online resources were shared across a variety of social

networks, including but not limited to Pinterest. The resources shared were used both in and beyond the classroom (Pearce & Learmonth, 2013).

## **Instagram**

While Instagram is one of the newer social media tools, it includes over one billion monthly users with 71% of them under the age of 35 (Clarke, 2019). Instagram is a social network that enables users to take pictures and videos and share them publicly or privately on the application (Handayani, 2016). Since students might spend most of their time using social media via their laptops or mobile devices, teachers are using this tool to keep in touch with students or organize activities online (Zhang, 2013). According to Spencer (2012), there are many activities teachers can use Instagram for such as digital storytelling, photojournalism, sharing art, and much more.

Instagram is being explored in several content areas in education. A study completed by Handayani (2017) investigated first grade students' attitudes towards the use of Instagram in teaching writing. Participants completed a questionnaire and interview with results indicating students had a very positive attitude toward the use of Instagram being used as a writing activity in the classroom. In addition to writing, Instagram is being used for showing student work, creating projects, and encouraging classroom discussion (Lynch, 2018).

Instagram is also being utilized by pre-service teachers. A qualitative study conducted by (Billen, 2015) investigated the reflective practice of 14 pre-service teachers who utilized visual information through photos on Instagram. The purpose of this study was to understand the practices of beginning teachers with the hope of having a better idea how to best prepare individuals who play such a vital role in educating children. Results indicated Instagram seemed to positively influence the reflective process of the pre-service teachers. Findings showed they enjoyed the process, were influenced by the

visual aspect of photographs, and noticed a lot of their surroundings that later became catalysts for further reflection. While limited research is centered on the use of Instagram for teacher development, it can be concluded that it is a useful education tool, giving students and teachers an effortless way to connect that reaches beyond the classroom.

## **Twitter**

In 2018, there were 260 million Twitter users with 46% on the platform daily. In addition, Twitter users between the ages of 18 and 29 composed 37% of the users (Clement, 2019). Twitter is a microblogging and social networking service on which users post and interact with messages known as "tweets". These "tweets" allow people to blog in short bursts, a practice also known as microblogging (Krutka & Carpenter, 2015). Twitter chats encourage collaboration while individuals connect with people who have similar interests and concerns (Hansen & Zumpano, 2016).

Educators have been more apt to use Twitter for college courses (Shane-Simpson, Manago, Gaggi, & Gillespie-Lynch, 2018). This might be because the microblogging platform is more agreeable to continuing discussion compared to Facebook (Junco et al., 2013). With Twitter being rated as one of the most significant e-learning sites (Balakrishnan & Loo, 2012), it is not surprising that its use is increasing in popularity among educators (Carpenter & Krutka, 2014).

As many schools cope with cuts in funding, teachers are finding Twitter is an acceptable replacement for formal learning opportunities through conversations, as well as for sharing ideas and resources (Greenhalgh & Koehler, 2017). Individuals can find professional information by visiting educational hashtags and by connecting with other educators through comments, direct-messages, or participating in chats (Ferriter & Provenzano, 2013). Twitter encourages individuals to seek feedback and get advice from

other educators (McLean, 2014). Additionally, individuals can virtually attend conferences via Twitter (McLean, 2014).

According to Forte, Humphreys, and Park (2012), of all the forms of social media used by teachers, Twitter is one of the most popular for professional use. It offers “a forum for teachers to not only talk about their professional practice and share practical information and news, but also find like-minded educators and give a voice to their ideological commitments” (Forte et al., 2012, p. 106). Teachers use Twitter to communicate easily with other educators at a distance. They share ideas and expand each other’s pedagogy. Traditionally, a closed classroom door isolates a teacher, who is also limited by the time available to collaborate with colleagues. Social media presents an alternative solution to both of those situations. In addition to concrete ideas, “tweeting” offers teachers camaraderie, confidence, and the push to creativity.

Pre-service teachers are finding Twitter useful as well. Sixty-seven pre-service teachers participated in a qualitative study (Lemon, 2016) evaluating how pre-service teachers connect to a variety of resources that assist them in the writing of curriculum and professional development. Findings indicated integrating Twitter into Teacher Education studies benefits pre-service teachers by strengthening peer support, reflective practices, and professional networking (Lemon, 2016).

## **YouTube**

YouTube is a video sharing service where users can watch, like, share, comment, and upload their videos. The modern Internet has changed how learning occurs (Forsyth, 2014) in such a significant manner that students are growing up with video lessons in schools (Alwehaibi, 2015). Educators are learning how to teach this new generation with the assistance of YouTube videos for classroom lectures, institutional promos, bulletins and newsletters, and professional training. YouTube has become the most useful method



for distributing video content in the classroom (Alwehaibi, 2015). “It is now the second most visited website worldwide, and its rise to one of the most relevant mass communication media of the past decade calls for significant attention from academia” (Bärtl, 2018, p. 17).

A survey conducted by a global market research firm, The Harris Poll, on behalf of education company Pearson, shared results that among people ages 14 to 23, YouTube ranked the highest as a preferred learning tool (Genota, 2018) with 59% picking YouTube as a learning preference. The study examined the differences between iGens and Millennials, defined as ages 24-40, when it comes to their outlooks, values, and experiences in education and the use of technology.

In the classroom, YouTube fulfills many functions, which include teacher communication and managing experiences, allowing for the development of students’ abilities to find, choose, and evaluate audio-visual presentations. Researchers suggest that YouTube use in the classroom is beneficial to students who access content via their mobile phones in order to gain a better grasp of what is taught in the classroom (June, Yaacob, & Kheng, 2014). A qualitative study completed by Jackman (2019), focused on the use of YouTube videos in lecture delivery. Participants included three university classes of 25 students. The videos matched the content to be covered in the traditional lecture and were used as a follow-up to the lecture. Results of the study found that students who interacted with YouTube videos in order to improve comprehension of the course content performed better academically than those who did not interact with YouTube.

Pre-service teachers are also utilizing YouTube. A study completed by Szeto and Cheng (2014), examined the use of YouTube by pre-service teachers during their teaching practicums. Data sources include interviews, observation of class sessions, a

questionnaire, and relevant materials. A total of 33 pre-service teachers participated and results indicated that YouTube use was high at all school levels. In addition, they indicated they use YouTube as a form of pedagogy to enhance students' subject knowledge. Overall, the results provide evidence to support the use of YouTube as an important and essential pedagogical tool. The use of social media for teacher development will be discussed in the next section.

### **Social Media for Teacher Development**

Recruiting and retaining high-quality teachers has been a long-standing policy issue as states work to reduce chronic teacher shortages, as well as close achievement gaps (Dee & Goldhaber, 2017). Importantly, evidence points to teacher quality as the most important school-based factor affecting student achievement (Araujo et al., 2016). Unfortunately, it is often difficult for school and district leadership to identify high-quality teachers who will remain in the classroom, especially among those who are just entering the profession and during the first years of employment. While most teachers in the U.S. who enter the profession are receiving roughly four years of traditional university-based training, they are graduating feeling unprepared to begin teaching in their own classroom (Gorgetti & Pilli, 2012; Flower, McKenna & Haring, 2017). Today's pre-service "digital native" teachers are working on closing those gaps by navigating through the university education programs with several devices and turning to social media for assistance with teacher development (Ghavifekr & Rosdy, 2015). Studies indicate that pre-service teachers are finding social media to be an effective tool for closing the gaps.

Krutka et al. (2014), studied 77 preservice teachers and found that social media successfully decreased student teachers' perceived isolation and enhanced their social connections with one another. This study supports the premise of social media being an

effective tool for pre-service teachers. In addition, a study of pre-service teachers enrolled in a technology course (O'Bannon et al., 2013) examined their use of Facebook. These pre-service teachers reported that Facebook was helpful in preparing for course-related assessments and enhanced their learning, thus agreeing that social media has potential to be an effective tool for teacher development. Hutchison and Wang (2012) conducted a qualitative study to explore how 15 preservice teachers used social media in a children's literature course. These findings suggest that written posts on social media sites influenced choices pre-service teachers were making, as well as were a complement to more in-depth class discussions (Hutchison and Wang, 2012).

Social media is becoming a virtual professional learning community for pre-service teachers assisting these new educators with instructional resources, best practices, collaboration between educators, and professional training (Ghavifekr & Rosdy, 2015).

Instead of enduring long hours in a professional development workshop, where everyone learns the same thing at the same time, teachers participate in individualized professional development in real time via social media. It can immediately and at the convenience of the teacher, address the demand for ideas regarding lesson planning, classroom management issues, or student motivation, in particular students with special needs from high achievers to students with disabilities. (Ghavifekr & Rosdy, 2015, p. 181)

Pre-service teachers are taking the lead in using social media to grow their own learning and preparation by communicating with other educators. Through social media, they find professional "communities" that are based on interest and expertise, as opposed to those involving only colleagues in the immediate vicinity (Vockley & Lang, 2009). Social media in this form is especially advantageous for pre-service teachers who are attempting to learn and gather as much information as possible before entering the profession

(Vockley & Lang, 2009). Furthermore, social media supports pre-service teachers by broadening their knowledge about both content and delivery. Social media offers more opportunities for pre-service teachers to gain confidence in meeting new challenges (Valazza, 2011), by helping them develop their understanding of subject matter and improving their instructional delivery and classroom management skills. A benefit to supplementing pre-service teacher education using social media is that it allows flexibility, as well as the opportunity to target specific areas of individual interest and need. In addition, pre-service teachers also benefit from increased interaction with other professionals (Trust, 2012).

The goal in education continues to focus on creating a model for ongoing growth and learning of educators. Pre-service teachers participate in professional growth models to “develop, implement, and share practices, knowledge, and values that address the needs of all students” (Schlager & Fusco, 2003, p. 211). Pre-service teachers are increasingly relying on social media for information about their own professional development (Vockley & Lang, 2009). They collaborate, share and refine ideas, and provide support and feedback to each other. In this way, they enrich their lessons and learn to teach more effectively. While research is lacking on how specifically pre-service teachers are utilizing social media as an educational tool, social media is becoming a medium that is helping to prepare educators for their first year of employment. However, school districts are not prepared for overseeing new teachers that are assembling their information concerning teaching through social media.

### **District Perspectives of Social Media**

While pre-service teachers are growing exponentially in their preparedness for entering the classroom using social media, school districts are scrambling to keep abreast of what they consider uncontrollable content (Powers & Green, 2016). Differing degrees

of support for social media between district administrators and teachers can sometimes lead to counterintuitive outcomes (Lee, Leary, Sellers & Recker, 2014). A qualitative study examined the role of the district science coordinator in five school districts that participated in the implementation of an online resource discovery and sharing tool for Earth science teachers. Through interviews with the teachers and coordinators, it was discovered that the district that had high support for online resource use from its coordinator appeared to have the lowest level of tool use, and the district with much less visible support from its coordinator had the highest level of tool use. These results were explained in that the district with high support was a larger district with access to many resources and the district with low support was smaller with limited resources available for teachers. Thus, the teachers in this district were searching for online tools to assist them (Lee, Leary, Sellers & Recker, 2013).

A study conducted by Forte, Humphries, and Park (2012) identified barriers educators are facing regarding social media use. Internet policies and district mindsets induced frustration by participants.

Social sites are not allowed in my district in school for teachers nor students. In fact, the restrictions on websites that we have often prohibit accessing even many informational and what would be helpful sites. It can be pretty frustrating at times (Forte, Humphries, and Park, 2012, p. 112).

In contrast, a quantitative study completed by Powers and Green (2016) examined current uses of social media in the schools, principals' perceptions of the educational value of social media, the need for digital citizenship, the potential barriers to using social media, and device use. To explore school principals' attitudes toward and perceptions of the use of social media in classroom instruction, surveys were administered through an online survey program. Participants included 25 principals and 18 assistant principals. A

substantial majority of participants surveyed indicated that social media was allowed and encouraged on their campus for both instruction (90%) and disseminating information (83%). However, while social media was supported, it was also noted that administrators needed to examine ongoing barriers to the challenges in implementing social media platforms such as Acceptable Use Plans, disciplinary policies, and district filters (Powers & Green, 2016). These items may be contributing to missed learning opportunities for teachers to collaborate with educators, participate in training, and become a part of a virtual professional learning community. In the next section, a summary of the findings will be presented.

### **Summary of the Findings**

Prior research has provided a foundation for future studies on the use of social media as an educational tool among pre-service teachers. The advancement of technology has changed the approach for teaching and learning in education (Ghavifekr & Rosdy, 2015). Teaching is a continuous professional activity rather than something that can be mastered once (Asghar, 2014). Therefore, educators are seeking opportunities for developing professional knowledge and skills through ongoing PLCs. A study completed by Luhan and Day (2010) identified time as a consistent barrier to productive PLCs. While teachers generally support high standards for teaching and learning, the lack of teacher development and time for PLCs leaves them not feeling prepared to implement teaching practices based on high standards (Skehan, 2018). The lack of preparation begins before teachers take over their own classroom as studies indicate that many pre-service teachers undertake their professional experience with insufficient knowledge and confidence to handle teaching situations (Gorgoretti & Pilli, 2012). This lack of knowledge has pre-service teachers turning to social media for assistance with knowledge

building and professional growth, so they are prepared to enter their own classrooms (Ghavifekr & Rosdy, 2015).

### **Theoretical Framework**

Technological progression has generated new methods of communication, acquiring knowledge, and growth development, thus impacting how educators interact and learn from each other (Mouza et al, 2014). Information is now a shared commodity; therefore, universities must change how they prepare future teachers to meet the needs of a constantly connected learning community (Serdyukov, 2017). Traditional lectures, textbooks, and professional development have given way to the new generation's demands for easier and more convenient access, as well as a wider scope of collaboration between educators at the national and international levels (John, Main, & Cooper, 2014). Therefore, in this study, two theoretical frameworks were utilized as a basis to further analyze the findings of this study.

The first theoretical framework to be used in this study will focus on learning communities and the Connectivism Theory, which was created by George Siemens (2005). Connectivism is a learning theory that explains how Internet technologies have created new opportunities for people to learn and share information across the World Wide Web and among themselves (Goldie, 2016). In Connectivism the starting point for learning occurs when knowledge is set in motion by learners connecting to and participating in a learning community. Learning communities are defined as “the clustering of similar areas of interest that allows for interaction, sharing, dialoguing and thinking together” (Siemens, 2005, p. 7). A key feature of connectivism is that much learning can happen across peer networks that take place online. Social media has provided an avenue for educators to collaborate in an online PLC, providing opportunity for learning and growing in the profession.

The second theoretical framework to be utilized in this study is Distributed Cognition Theory developed by Edwin Hutchins. Distributed cognition is a branch of cognitive science that proposes cognition and knowledge are not confined to an individual; rather, it is distributed across objects, individuals, artifacts, and tools in the environment (Hollan, Hutchins, & Kirsh, 2000). This theory focuses on pursuing goals and collaboration with the social and material world. It can involve systems and devices such as smart phones, tablets, and laptops and using an environment such as the Internet. Social media allows pre-service teachers to be cognitively connected to other educators ultimately creating a social production of knowledge instead of relying solely on the university and school district training.

As social media use continues to increase, the Connectivism Theory and Distributed Cognition Theory will provide a solid framework for this study. To prepare future educators to teach in 21<sup>st</sup> century classrooms, teacher preparation programs must become more collaborative, utilizing the technological means most pre-service teachers regularly access (Banas & York, 2014). These theories address this area and support this study by offering a context for collaboration between social media, pre-service teachers, the universities, and school districts.

### **Conclusion**

The review of literature has revealed social media has the potential to be an effective educational tool for pre-service teachers. It is evident that with the rigorous accountability system, the instructional demands, and the changing student backgrounds, pre-service teachers need increased support to ensure they are prepared to teach the new generation of students (Diana, 2013). However, what is absent from the literature and research are the perceptions and reported behavior related to the use of social media as an educational tool for pre-service teachers regarding teacher development. Therefore, the



research-base would benefit from a study focused on examining the use of social media by pre-service teachers, as a means for developing their knowledge and professional understanding of the educational field. The next chapter describes how the study will be conducted

### CHAPTER III: METHODOLOGY

The purpose of this study is to examine the role of social media as an educational tool for teacher development among pre-service teachers. The researcher collected survey and interview data from a purposeful sample of elementary and secondary level pre-service teachers within a medium sized, four-year suburban public university located in southeast Texas. The quantitative data were analyzed using percentages and frequencies, and a Chi-Square Test of Independence, while an inductive coding process was used to analyze the qualitative data obtained from interviews. This chapter presents an overview of the research problem, operationalization of theoretical constructs, research purpose and questions, research design, population and sampling selection, instrumentation used, data collection procedures, data analysis, privacy and ethical considerations, and the research design limitations of the study.

#### **Overview of the Research Problem**

Education is consistently evolving (Thomas & Brady, 2005). Educators are expected not only to understand the content they are going to teach, but also to plan engaging rigorous lessons, while collaborating with peers and participating in ongoing professional development. The expectations for educators are high and demanding. Therefore, some pre-service teachers are turning to social media to assist with knowledge building and professional growth development (Reich, Levinson, & Johnston, 2011). While social media use has taken off in recent years, especially with the younger generations, the research is lacking on how pre-service teachers are harnessing its power to network with fellow educators for assistance with filling the gaps in their educational foundation (Go & You, 2016). By understanding how pre-service teachers are utilizing

social media for educational purposes, universities and school districts could benefit from information regarding how these tools can assist in teacher development.

### **Operationalization of Theoretical Constructs**

This proposed study consists of the following constructs: (a) social media, (b) professional activities, and (c) teacher development. Social media is an online communication tool that encourages the exchange of information, sharing of content, and collaboration between users (Go & You, 2016). Among the social media tools considered are Facebook, Pinterest, Twitter, Instagram, and YouTube. Professional activities are defined as lesson planning, sharing resources, collaborating with educators, and professional development that helps teachers prepare, teach, and professionally grow, allowing more time to focus on student success. Teacher development is defined as the process of becoming the best kind of teacher one can be (Underhill, 1986). These constructs will be measured using the *Teacher's Use of Social Media* Survey and semi-structured interviews.

### **Research Purpose and Questions**

The purpose of this study was to examine the role of social media as an educational tool for teacher development among pre-service teachers. This study investigated the following questions:

1. What social media tools are pre-service teachers using for teacher development?
2. To what degree do pre-service teachers perceive social media can be used as an educational tool for teacher development?
3. Is there a statistically significant relationship between the social media used most often by pre-service teachers and their professional activities?

Ha: There is a statistically significant relationship between the social media used most often by pre-service teachers and their professional activities.

4. What professional activities are pre-service teachers utilizing social media for to assist with teacher development?
5. How do pre-service teachers use different forms of social media for teacher development?

### **Research Design**

The research design used for this study is a sequential mixed-methods approach. This approach allowed for more thorough investigation by following up the quantitative portion of the study with a qualitative phase that looked for emergent themes that may have otherwise been overlooked. A purposeful sample of elementary and secondary level pre-service teachers within a medium sized, four-year suburban public university located in southeast Texas were solicited to provide responses to the *Teachers' Use of Social Media Survey* to measure the use of social media as an educational tool for teacher development. Quantitative data were analyzed using descriptive statistics, consisting of percentages and frequencies, and a Chi-Square of Independence Test, while qualitative data gathered from pre-service teacher interviews was analyzed using an inductive coding process.

### **Population and Sample**

For this study, the target population is pre-service teachers enrolled in a four-year medium sized, suburban public university located in southeast Texas. According to the U.S. Department of Education (2018), the total undergraduate student population for this university is 6,064 students for the 2018-2019 school year with 36% male and 64% female. The race breakdown is 41% white, 39% Hispanic, 8% black, 7% Asian, 3% two or more races, and 2% other. Students receiving an income based federal Pell grant

intended for low-income students based on their socio-economic status is 40%. Table 3.1 provides the demographic information for undergraduate students enrolled in this university.

Table 3.1

*University Undergraduate Student Demographics based on 2018-2019 U. S. Department of Education College Scorecard*

	Frequency (n)	Percentage (%)
1. Gender	6,064	100
Male	2,184	36
Female	3,880	64
2. Race/Ethnicity	6,064	100
Asian	402	7
African American	468	8
Hispanic	2,333	39
White	2,498	41
Two or More Races	177	3
Other	186	2
3. Socio-Economic Diversity*	2,425	40

\*Factors include employment, education, and income

Students asked to participate in the survey were currently participating in required technology courses for pre-service teachers. The study included students in year one through year four who were participating in elementary or secondary level programs. According to the U.S. Department of Education (2018), 23% of the 2018-2019

undergraduate student body at this university are studying multi/interdisciplinary studies which includes education. Table 3.2 provides the academic program information for undergraduate students enrolled in the most popular degree plans at this institution, including education.

Table 3.2

*University Undergraduate Most Popular Academic Program Frequencies based on 2018-2019 U. S. Department of Education College Scorecard*

	Frequency (n)	Percentage (%)
1. Business, Management, Marketing, and Related Support Services	1389	25
2. Multi/Interdisciplinary Studies	1278	23
3. Psychology	555	10
4. Social Sciences	277	5
5. Health Professions and Related Programs	277	5

The total undergraduate student population for the College of Education at this university is 1,011 students for the 2018-2019 school year. The race/ethnicity breakdown is 41% white, 48% Hispanic, 6% black, 2% Asian, 2% two or more races, and 1% other. Table 3.3 provides the demographic information for undergraduate students enrolled in the College of Education at this university.

Table 3.3

*University Undergraduate College of Education Student Demographic Frequencies  
based on 2018-2019 U. S. Department of Education College Scorecard*

	Frequency (n)	Percentage (%)
1. Gender	1011	100
Male	60	6
Female	951	94
2. Race/Ethnicity	1011	100
African American	61	6
Hispanic	483	48
White	412	41
Asian	18	2
Two or More Races	23	2
Other	14	1

### **Participant Selection**

After survey data results were analyzed, a purposeful sample of pre-service teachers were solicited to participate in semi-structured interviews. Participants who were selected were registered as an undergraduate at the participating university, currently enrolled in a required technology course for pre-service teachers, and indicated social media was used for professional use in the initial survey responses. Additional data were sought using supplementary survey items and interviews to determine the different forms of social media the participants were using and if there was a relationship between the social media medium used most often and the professional activities.

### **Instrumentation**

The research instrument, *Teachers' Use of Twitter*, is a validated survey developed by Forte (2012) and modified by the researcher to collect information related to the use of all social media as a learning tool for knowledge building and professional growth development. Five experts in technology and survey development were beneficial in establishing validity of the original survey (Forte et al., 2012). These experts served on a panel to provide feedback about the survey instrument before it was administered. The survey includes two sections, each with a specific purpose. Section A includes nine questions and collects demographic information. Section B collects information pertaining to Twitter basics, Twitter use, and educational technology using 29 questions. Permission was granted to modify, reproduce, and use parts of the survey instrument (see Appendix E). Several changes, which will be discussed below, were made to best meet the needs of this study, which includes the addition of Twitter as well as other social media platforms. With the changes made, the modified survey titled *Teachers' Use of Social Media*, includes 18 questions.

The original survey was both quantitative and qualitative in nature. Individuals responded to the quantitative questions using a Likert scale and to the qualitative questions through open-ended questions. Most of the quantitative questions utilized a 5-point Likert scale (1 = Always, 2 = Most of the time, 3 = Half of the time, 4 = Sometimes, 5 = Never). A 4-point Likert scale (1 = No Opinion, 2 = Low Potential, 3 = Some Potential, 4 = High Potential) was used to measure the individual's belief that Twitter can be used as a learning tool. One item included a Likert scale (1 = I have continuous feed, 2 = several times a day, 3 = once or twice a day, 4 = several times a week, 5 = less than once a week) to understand how often the participants post to social



media. Each of the sections, along with modifications that were made, are discussed in greater detail in the following subsections.

Section A of the survey, which collects demographic information, did not include any qualitative questions. The nine questions within Section A of the original survey included grade and subject preparing to teach, age, gender, location desired to teach, number of students and teachers at school where you teach, years teaching, and highest degree earned. Some changes were made to the demographic section based on the focus of the current study. First, the question pertaining to location desiring to teach in was not necessary. Furthermore, the questions related to the individual's current primary assignment were omitted since the current study only focused on pre-service teachers. Two questions were added pertaining to ethnicity and number of hours working with children in a practicum situation. When seeking data about the subject area most closely identified with individuals' primary assignment, the options included Art/Music, Computer Science/IT, Language/Literature, Mathematics, Physical Education, Sciences, Social Studies, and Other. The choices were changed to include self-contained so that elementary teachers' information could be included. Section B of the original survey included 29 questions related to Twitter basics, Twitter use, and educational technology. Given that the current study was not focused strictly on Twitter social media, 10 questions were pulled from the survey and changed to address all social media involved in this study. The 10 questions were more directly aligned and would address the research questions for this study best.

This instrument was piloted by the researcher with 25 study participants from a four-year suburban public university located in southeast Texas. The participants were elementary and secondary level pre-service teachers enrolled in a required technology course. Content validity was examined by having the instrument reviewed by a panel of

content experts that included a university professor, a school administrator, and a schoolteacher; feedback was provided before the instrument was administered. To ensure that the survey results produced reliable measures, internal consistency reliability of scores was investigated using Cronbach's Alpha. Data from questions 13 and 16 were analyzed using averages and Cronbach's alpha test to measure the instrument's reliability. Question 13 measured benefits of sharing information on social media and had high reliability with a Cronbach's alpha of .89. Question 16 measured the potential of social media and had high reliability with a Cronbach's alpha of .78.

### **Data Collection Procedures**

The researcher gained approval from the Committee for the Protection of Human Subjects (CPHS) before any data was collected. The study was conducted in a four-year suburban public university in southeastern Texas. Participants were emailed a message that included a survey cover letter, which described the study and its potential benefits, explained how anonymity would be fostered for the survey and pseudonyms utilized for interviews, described what participants would be requested to do, and encouraged participation in the study. If at any point individuals did not wish to participate, they were able to discontinue participation in the study. The letter explained that the researcher was looking for participants who utilize social media sites as an education tool. The email template of the cover letter can be found in Appendix A.

### **Quantitative**

If potential participants used social media as an educational tool and agreed to participate in the study, they completed an online questionnaire. The questionnaire was based on the research questions that the study sought to answer. Through the questionnaire, quantitative data related to social media use as an educational tool was collected. The survey was administered through Google Forms and a link to the survey

was included in the email sent to possible participants. This allowed for participants to easily access the survey without having to return it via the mail. This format also allowed for increased anonymity. The anonymity encouraged more candid responses to be given. Participation was completely voluntary. If individuals chose to participate, they were able to click on the link to complete the survey.

### **Qualitative**

In addition to teacher surveys, interviews were used to gain additional information about the pre-service teachers' use of social media. The researcher contacted each participant to set up a convenient time and place to conduct the interview. Each interview session took place at a quiet and private location of the participant's choice. It was explained that each interview would take about 30 minutes. Upon arrival at the designated interview location, the researcher introduced herself and talked with the participant to make the interviewee feel more comfortable and to build rapport. Next, the interviewer asked if it was acceptable to record the conversation. If the interviewee agreed, the recording began. The researcher reviewed the Informed Consent forms and then obtained participant signatures. It was explained that two recordings would be made to ensure no technical issues would diminish the accuracy of the data. Additionally, the researcher told the participants that they were welcome to stop the interview or recording at any point if they felt uncomfortable. Interview protocols consisted of 16 questions focusing on background information, professional growth, and social networking. When clarification or additional information were needed, follow up statements or questions were utilized. The interviews were transcribed to ensure accuracy of the qualitative data. All data is stored on the researcher's computer and flash drive where it will be retained for five years and then destroyed.

## **Data Analysis**

### **Quantitative**

Following data collection, the data were viewed in a spreadsheet form through Google Forms and imported into IBM SPSS. To answer research questions one, two, and three, data were analyzed using percentages and frequencies to identify pre-service teachers' practices and perceptions regarding social media tool use and potential for social media to be used as an educational tool. To answer question three, a Chi-Square of Independence was conducted to determine if there was a relationship between the type of social media medium used and professional activities. Variables are categorical in measurement and a significance value of 0.05 was used for this study.

### **Qualitative**

To answer research question five, an inductive coding process was used to analyze the data that were collected during interviews. The interviews were transcribed as soon as possible after data collection. The data were coded based on exact statements from the interviews. Throughout the coding process, a mix of both a priori codes and emergent codes were used; some codes were identified based on the literature review and some codes emerged through the coding process. These codes were then categorized into relevant specific categories or themes according to content. Additionally, the codes were used to identify larger themes and subthemes related to the perceived relationship between social media and professional activities. Subsequently, the researcher used quotes from the interviews to support the themes that were identified.

### **Validity**

Qualitative validity was enhanced through a variety of steps. The interview questions were peer reviewed by experts to ensure that the questions would gather the necessary data to answer the research questions. The peer review of the questions allowed

for feedback to the researcher and modifications to be made to the questions. Furthermore, to promote validity, the researcher constantly reflected on personal bias and worked to minimize the possible bias through discussion with peers. Feedback was solicited from professors and experts to aid in the process and limit bias. The data collected through interviews was viewed multiple times by the researcher to ensure it was coded accurately. Furthermore, triangulation of data sources aided in alignment and strengthened validity.

### **Privacy and Ethical Considerations**

The researcher gained approval from CPHS before collecting data. Once CPHS approval was granted, the researcher emailed the participants the cover letter (see Appendix A), which included a link to the survey. Included in the cover letter was the stipulation that by choosing to respond to the survey instrument, they were giving their consent to participate in the study. Furthermore, the letter outlined the guidelines of the study, the purpose of the study, instructions about how to complete the instrument, a statement that participation was voluntary, and how participants would be protected (see Appendix A). The data from the questionnaire was transferred to an Excel spreadsheet. Individuals who participated in the qualitative portion through interviews were provided an informed consent form. The informed consent form was reviewed and signed by participants prior to their participation. Pseudonyms were used throughout the qualitative portion to protect participants' identities. The data from the interviews were transcribed in NVivo 12 for analysis and stored on the researcher's password protected computer hard drive and memory stick. The data will be maintained in a confidential manner for five years after the study and then destroyed.

### **Research Design Limitations**

This research design has a few limitations that should be considered for this study. First, participants of this study were not randomly selected. Instead, they included individuals from the participating university who used social media as an educational tool and were enrolled in a required technology course for pre-service teachers. Despite the range of practices experienced by these pre-service teachers, there may be a lack of generalizability of the study's results to pre-service teachers in larger or smaller university settings. Second, a self-reported instrument was used to conduct the quantitative portion of the research. This potentially may impact the results of the study because the data will be limited to the accuracy and scope of measurement. Third, the voluntary nature of the study may have prevented participation, resulting in a low response rate. This may have limited the representation of who participated and thus the sample size. To try and overcome this limitation, the benefits of researching the study's topic were clearly communicated in hopes of increasing the participation rate. Lastly, interview participants might not have felt comfortable being completely honest since they did not know the interviewer. To lessen this limitation and ensure validity of interview data, cover letters encouraged participants to provide truthful answers and ensured all participant identities would remain confidential.

### **Conclusion**

Limited research has been conducted to investigate the role of social media in education. This mixed-methods study explored pre-service educators' use of social media as an educational tool to assist with teacher development. This chapter examined how the study was conducted. Chapter IV provides the results of the study.

## CHAPTER IV:

### RESULTS

The purpose of this study was to examine the role of social media as an educational tool among pre-service teachers. This chapter presents the results of the quantitative and qualitative data analysis of this study. The quantitative data is illustrated in Research Questions One, Two, Three, and Four. The qualitative data is presented in Research Question Five. The chapter concludes with a summary of the study findings.

#### **Participant Demographics**

One hundred twenty-five students, enrolled in an undergraduate technology course required for pre-service teachers, consented to participate and fully completed the survey (100% response rate). Based on data obtained from the survey, most indicated they were female (85.6%,  $n = 107$ ) as opposed to male (14.4%,  $n = 18$ ). Most respondents indicated they were Hispanic (47.2%,  $n = 59$ ) with White, non-Hispanic (41.6%,  $n = 52$ ), being the second highest race/ethnicity. Over half of the respondents (62.4%,  $n = 78$ ) indicated they were currently in Year 3 of their undergraduate program with Year 4 being the second highest reported category (20.8%,  $n = 26$ ). Table 4.1 provides specific demographics for each participant by the year of enrollment in the Education program at the university.

Table 4.1

*Demographics of All Participants by Year of School Enrollment*

	All	Year 1	Year 2	Year 3	Year 4
	(%)	(%)	(%)	(%)	(%)
Total Students	100.0 (n = 125)	9.6 (n = 12)	7.2 (n = 9)	62.4 (n = 78)	20.8 (n = 26)
Female	85.6 (n = 107)	83.3 (n = 10)	100.0 (n = 9)	85.9 (n = 67)	96.2 (n = 25)
Male	14.4 (n = 18)	16.7 (n = 2)	0.0 (n = 0)	14.1 (n = 11)	3.8 (n = 1)
Black, African American	4.0 (n = 5)	0.0 (n = 0)	11.1 (n = 1)	2.6 (n = 2)	7.7 (n = 2)
American Indian	1.6 (n = 2)	0.0 (n = 0)	11.1 (n = 1)	1.3 (n = 1)	0.0 (n = 0)
Hispanic	47.2 (n = 59)	9.6 (n = 12)	11.1 (n = 1)	48.7 (n = 38)	30.8 (n = 8)
Asian or Pacific Islander	3.2 (n = 4)	0.0 (n = 0)	22.2 (n = 2)	2.6 (n = 2)	0.0 (n = 0)
White, non-Hispanic	41.6 (n = 52)	0.0 (n = 0)	44.5 (n = 4)	41.0 (n = 32)	61.5 (n = 16)
Multiethnic	2.4 (n = 3)	0.0 (n = 0)	0.0 (n = 0)	3.8 (n = 3)	0.0 (n = 0)



Survey participants included a wide range of ages, as well as practical time in the public-school classrooms. Practicum field experience is an opportunity to apply knowledge gained in the classroom with supervised practice in the field (Lawson, Çakmak, Gündüz, & Busher, 2015). Table 4.2 shows the mean and standard deviation of all participants' age and hours of practicum field experience. The mean age of the participant was 26.03 years (SD = 8.42) and the average hours of practicum field experience was 27.06 hours (SD = 16.04).

Table 4.2

*Participants' Age and Hours of Practicum Field Experience*

	Mean	SD
1. Age	26.03	8.42
2. Hours of Practicum Field Experience	27.06	16.04

Table 4.3 provides information regarding the school level and subject areas the participants are preparing to teach. Most respondents indicated they will teach at the elementary level (62.4%, n = 78) with high school being the second highest reported category (23.2%, n = 29). When considering the subject areas individuals who responded to the survey are preparing to teach, half of the participants (51.2%, n = 64) indicated they will teach in a self-contained classroom, which includes teaching all subjects. Respondents preparing to teach Humanities subjects (Reading and Language Arts, Social Studies, Art) was the second highest reported category (27.2%, n = 34). STEM subjects (Science, Math) ranked third by a small margin (21.6%, n = 27).

Table 4.3

*School Level and Subject Areas Preparing to Teach of All Participants*

	Frequency (n)	Percentage (%)
1. School Level		
Elementary (K-5)	78	62.4
Middle (6-8)	18	14.4
High (9-12)	29	23.2
2. Subject Area		
Reading and Language Arts	18	14.4
Mathematics	5	4.0
Social Studies	11	8.8
Science	22	17.6
Self-Contained	64	51.2
Art	5	4.0

Of the 125 participants that completed the survey, 11 consented to participate in interviews. Based on data obtained from the survey for the interview participants, the majority indicated they were female (72.7%,  $n = 8$ ) as opposed to male (27.3%,  $n = 3$ ). Most of the interview participants indicated they were Hispanic (45.5%,  $n = 5$ ) with both White, non-Hispanic, and Black, African American being the second highest reported category (27.3%,  $n = 3$ ). Table 4.4 provides specific demographics for each interview participant by the year of enrollment in the Education program at the university.

Table 4.4

*Demographics of Interview Participants by Year of School Enrollment*

	All	Year 1	Year 2	Year 3	Year 4
	(%)	(%)	(%)	(%)	(%)
Total Students	100.0	8.3	8.3	54.5	27.3
	(n = 11)	(n = 1)	(n = 1)	(n = 6)	(n = 3)
Female	72.7	100.0	12.5	66.7	66.7
	(n = 8)	(n = 1)	(n = 1)	(n = 4)	(n = 2)
Male	27.3	0.0	0.0	33.3	33.3
	(n = 3)	(n = 0)	(n = 0)	(n = 2)	(n = 1)
Black, African American	27.3	0.0	0.0	33.3	33.3
	(n = 3)	(n = 0)	(n = 0)	(n = 2)	(n = 1)
American Indian	0.0	0.0	0.0	0.0	0.0
	(n = 0)	(n = 0)	(n = 0)	(n = 0)	(n = 0)
Hispanic	45.5	100.0	0.0	66.7	0.0
	(n = 5)	(n = 1)	(n = 0)	(n = 4)	(n = 0)
Asian or Pacific Islander	0.0	0.0	0.0	0.0	0.0
	(n = 0)	(n = 0)	(n = 0)	(n = 0)	(n = 0)
White, non-Hispanic	27.3	0.0	100.0	0.0	66.7
	(n = 3)	(n = 0)	(n = 1)	(n = 0)	(n = 2)
Multiethnic	0.0	0.0	0.0	0.0	0.0
	(n = 0)	(n = 0)	(n = 0)	(n = 0)	(n = 0)

Interview participants also included a wide range of ages, as well as practical time in the public-school classrooms. Table 4.5 shows the mean and standard deviation of the interview participants' age and hours of practicum field experience. The mean age of the

interview participant was 23.64 years (SD = 4.70) and the average hours of practicum field experience was 32.73 hours (SD = 12.52).

Table 4.5

*Interview Participants' Age and Hours of Practicum Field Experience*

	Mean	SD
1. Age	23.64	4.70
2. Hours of Practicum Field Experience	32.73	12.52

Table 4.6 provides information regarding the school level and subject areas the interview participants are preparing to teach. Most respondents indicated they will teach at the elementary level (54.5%, n = 6) with high school being the second highest reported category (27.3%, n = 3). When considering the subject areas individuals who responded to the survey are preparing to teach, half of the participants (54.5%, n = 6) indicated they will teach in a self-contained classroom. Respondents preparing to teach Humanities subjects was the second highest reported category (27.3%, n = 3); however, STEM subjects once again ranked third by just a small margin (18.2%, n = 2).

Table 4.6

*School Level and Subject Areas Preparing to Teach of Interview Participants*

	Frequency (n)	Percentage (%)
1. School Level		
Elementary (K-5)	6	54.5
Middle (6-8)	2	18.2
High (9-12)	3	27.3
2. Subject Area		
Reading and Language Arts	0	0.0
Mathematics	1	9.1
Social Studies	2	18.2
Science	1	9.1
Self-Contained	6	54.5
Art	1	9.1

The interview participant profiles in Table 4.7 provide a contextual element to the interview findings. The data were compiled from the demographic information provided by participants during the first phase of this research study, the online survey. To protect the participants' identities, pseudonyms were used in the presentation of the research results.

Table 4.7

*Interview Participant Profiles*

Pseudonym	Gender	Age	Race	School Year	School Level	Subject Area
1. Mary	Female	18	Hispanic	Year 1	Elementary	All subjects
2. Tracy	Female	19	White	Year 2	Elementary	All subjects
3. Sally	Female	28	Hispanic	Year 3	Elementary	All subjects
4. Tina	Female	25	Hispanic	Year 3	Middle	Science
5. Shelley	Female	24	African American	Year 3	Elementary	All subjects
6. Anthony	Male	21	African American	Year 3	High	Social Studies
7. Brianna	Female	24	Hispanic	Year 3	Elementary	All subjects
8. Raul	Male	21	Hispanic	Year 3	High	Art
9. Vicki	Female	35	Black	Year 4	Middle	Social Studies
10. Lacey	Female	23	White	Year 4	Elementary	All subjects
11. Chris	Male	22	White	Year 4	High	Math

### Research Question One

Research question one, *What social media tools are pre-service teachers using for teacher development?*, was answered using frequencies and percentages calculated from responses to the *Teachers' Use of Social Media Survey*. One survey item pertained to social media tools used by pre-service teachers and included six social media sub-items. Participants were asked to choose the one tool that they use most frequently for teacher development.

Several social media tools were reported as being used for teacher development. The three highest reported tools were YouTube (26.4%, n = 33), Facebook (27.2%, n = 34), and Pinterest (24.8%, n = 31). Twitter was ranked fourth (11.2%, n = 14) and the least used tool reported was Instagram (10.4%, n = 13). Table 4.8 displays the percentages and frequencies of professional social media tools responses indicating frequency of social media used for teacher development.

Table 4.8

*Frequency of Social Media Tools for Teacher Development*

Social Media Tool	Frequency (n)	Percentage (%)
1. Facebook	34	27.2
2. Twitter	14	11.2
3. Instagram	13	10.4
4. Pinterest	31	24.8
5. YouTube	33	26.4

Table 4.9 provides information regarding school level and the social media tools reported as being used for teacher development. Respondents preparing to teach at the elementary level are using Facebook (30.8%, n = 24) and Pinterest (29.5%, n = 23)

slightly more than the middle and high school levels. However, YouTube is being utilized more at the high school level (51.7%, n = 15) than the elementary (16.7%, n = 13) and middle school level (33.3%, n = 6). Twitter was ranked behind Pinterest and while all levels are utilizing it for teacher development, the majority are at the high school level (24.1%, n = 7), with middle school (11.1%, n = 2) and elementary (6.4%, n = 5) ranking second and third respectively. While Instagram was not selected by many participants, all respondents that did select it as the tool they use for teacher development are planning on teaching at the elementary level (16.7%, n = 13).

Table 4.9

*Frequency of Social Media Tools for Teacher Development and School Level Preparing to Teach*

	Elementary (%)	Middle School (%)	High School (%)
Facebook	30.8 (n = 24)	27.8 (n = 5)	17.2 (n = 5)
Twitter	6.4 (n = 5)	11.1 (n = 2)	24.1 (n = 7)
Instagram	16.7 (n = 13)	0.0 (n = 0)	0.0 (n = 0)
Pinterest	29.5 (n = 23)	27.8 (n = 5)	6.9 (n = 2)
YouTube	16.7 (n = 13)	33.3 (n = 6)	51.7 (n = 15)

When looking deeper beyond the school level to the subject area of the respondents, survey results indicated that most of the participants that are preparing to



teach all subjects in a self-contained classroom are utilizing Facebook (31.3%, n = 20) and Pinterest (29.7%, n = 19) for teacher development. Both YouTube and Instagram were selected at an even rate (15.6%, n = 10) following Facebook and Pinterest. Respondents that are planning on teaching a STEM subject turn to YouTube the most (48.1%, n = 13) with Pinterest ranking second (22.2%, n = 6). However, pre-service teachers focusing on math only are utilizing Facebook (40.0%, n = 2) just as much as YouTube. YouTube also ranked high among those preparing to teach a Humanities subject (29.4%, n = 10); however, these respondents also chose Facebook (29.4%, n = 10). Interestingly, Instagram was the least popular social media tool among the STEM and Humanities subjects. The majority of Instagram users are choosing to become self-contained and teach all subjects. Table 4.10 displays the percentages and frequencies of professional social media tools responses indicating frequency of social media used for teacher development based on the subject areas the participants are preparing to teach.

Table 4.10

*Frequency of Social Media Tools for Teacher Development and Subject Areas Preparing to Teach*

	SC	RLA	Math	Science	SS	Art
	(%)	(%)	(%)	(%)	(%)	(%)
Facebook	31.3 (n = 20)	33.3 (n = 6)	40.0 (n = 2)	9.1 (n = 2)	36.4 (n = 4)	0.0 (n = 0)
Twitter	7.8 (n = 5)	16.7 (n = 3)	20.0 (n = 1)	9.1 (n = 2)	18.2 (n = 2)	20.0 (n = 1)
Instagram	15.6 (n = 10)	5.6 (n = 1)	0.0 (n = 0)	4.5 (n = 1)	0.0 (n = 0)	20.0 (n = 1)
Pinterest	29.7 (n = 19)	27.8 (n = 5)	0.0 (n = 0)	27.3 (n = 6)	0.0 (n = 0)	20.0 (n = 1)
YouTube	15.6 (n = 10)	16.7 (n = 3)	40.0 (n = 2)	50.0 (n = 11)	45.5 (n = 5)	40.0 (n = 2)

*Note:* SC – self-contained, RLA – Reading and Language Arts, SS- Social Studies

### Research Question Two

Research question two, *To what degree do pre-service teachers perceive social media can be used as an educational tool for teacher development?*, was answered using frequencies and percentages calculated from responses to the *Teachers' Use of Social Media Survey*. One survey item pertained to the potential for using social media as an educational tool for teacher development which participants rated using a 4-point Likert scale (1 = High Potential, 2 = Some Potential, 3 = Low Potential, 4 = No Opinion).

In examining totals, most participants selected High Potential (47.2%, n = 59) or Some Potential (32.0%, n = 40) for social media to be used as an educational tool. In

other words, respondents perceived that social media benefits pre-service teachers by giving them tools for their own teacher development. Table 4.11 displays the percentages and frequencies of pre-service teachers' responses indicating frequency of potential for social media to be used as an educational tool for teacher development.

Table 4.11

*Frequency of Potential for Social Media to be Used as an Educational Tool*

Potential to be used as an educational tool	Frequency (n)	Percentage (%)
1. High Potential	59	47.2
2. Some Potential	40	32.0
3. Low Potential	16	12.8
4. No Opinion	10	8.0

Of the participants that are preparing to teach elementary school, the majority (78.2%, n = 61) believe that there is *High Potential* or *Some Potential* for social media to be used as an educational tool. Respondents at the middle school level (77.8%, n = 14) and at the high school level (82.1%, n = 23) also believe that there is *High Potential* or *Some Potential* for social media to be used as an educational tool. Interestingly, the largest percentage is from those planning on teaching high school. 4.12 displays the percentages and frequencies of pre-service teachers' responses indicating frequency of potential for social media to be used as an educational tool for teacher development based on the school level they are preparing to teach.

Table 4.12

*Frequency of Potential for Social Media to be Used as an Educational Tool and School Level Preparing to Teach*

	Elementary (%)	Middle School (%)	High School (%)
High	37.2	50.0	71.4
Potential	(n = 29)	(n = 9)	(n = 20)
Some	41.0	27.8	10.7
Potential	(n = 32)	(n = 5)	(n = 3)
Low	12.8	22.2	7.1
Potential	(n = 10)	(n = 4)	(n = 2)
No Opinion	9.0	0.0	10.7
	(n = 7)	(n = 0)	(n = 3)

Table 4.13 provides information regarding subject areas participants are preparing to teach and their belief that social media has potential to be used as an educational tool. Of the respondents preparing to teach in a self-contained classroom, the majority (78.1%, n = 50) believe that there is *High Potential* or *Some Potential* for social media to be used as an educational tool. Participants planning on teaching in a STEM subject (88.9%, n = 24), as well as those planning on teaching a Humanities subject (73.5%, n = 25) also believe there is *High Potential* or *Some Potential*. However, the Humanities subjects have the highest rate of *Low Potential* responses (17.6%, n = 6) compared to STEM (7.4%, n = 2) and self-contained (12.5%, n = 8). In addition, within STEM subjects, all math teachers (100.0%, n = 5) believe there is *High Potential* compared to a small percentage of science teachers (9.1%, n = 2) who believe there is *Low Potential* for social media to be used as an educational tool.

Table 4.13

*Frequency of Potential for Social Media to be Used as an Educational Tool and Subject Areas Preparing to Teach*

	SC	RLA	Math	Science	SS	Art
	(%)	(%)	(%)	(%)	(%)	(%)
High Potential	34.4	55.6	100.0	63.6	63.6	20.0
	(n = 22)	(n = 10)	(n = 5)	(n = 14)	(n = 7)	(n = 1)
Some Potential	43.8	11.1	0.0	22.7	9.1	80.0
	(n = 28)	(n = 2)	(n = 0)	(n = 5)	(n = 1)	(n = 4)
Low Potential	12.5	22.2	0.0	9.1	18.2	0.0
	(n = 8)	(n = 4)	(n = 0)	(n = 2)	(n = 2)	(n = 0)
No Opinion	9.4	11.1	0.0	4.5	9.1	0.0
	(n = 6)	(n = 2)	(n = 0)	(n = 1)	(n = 1)	(n = 0)

*Note:* SC – self-contained, RLA – Reading and Language Arts, SS- Social Studies

### Research Question Three

Research question three, *Is there a statistically significant relationship between the social media used most often by pre-service teachers and their professional activities?*, was answered using a Chi-Square Test of Independence to determine if there was a relationship between social media use and how they are using it to assist them with teacher development. Findings of the Chi-Square Test of Independence suggested there was a statistically significant relationship between social media use and professional activities,  $\chi^2(12, N = 125) = 25.505, p = .013$ . Based on this study, the professional activities pre-service teachers are executing for their own teacher development are achieved by specific social media tools. The most popular social media tool for finding resources appears to be Facebook (36.4%). However, this tool is not as common for

professional training (22.2%). The participants preferring Instagram are using it for finding lesson ideas (53.8%) but is not the chosen tool for collaboration (0.0%). Of the participants using Pinterest (64.5%), finding resources is the common activity. Twitter (50.0%) and YouTube (42.4%) fans are mostly utilizing these tools for finding lesson ideas; however, YouTube is most popular for collaboration (35.3%) and training (33.3%). When looking across all social media tools within this study, Facebook (27.2%), Pinterest (24.8%), and YouTube (26.4%) were the overall preferred social media tools for professional activities regarding personal teacher development.

Table 4.14 provides data on the relationship between pre-service teachers' social media use and professional activities for all participants by school level (elementary, middle, and high school). Findings of this study showed that while there is not a statistically significant relationship for the middle and high school levels ( $p > .05$ ) with the type of social media being utilized most often for professional activities, there is an indication of a statistically significant relationship at the elementary level,  $\chi^2(12, N = 78) = 25.437, p = .013$ . Pre-service teachers that are preparing to teach at the elementary level appear to be using specific social media tools for certain professional activities. For elementary pre-service teachers, Facebook (30.8%) and Pinterest (29.5%) are the preferred social media tools. These tools are being utilized for finding resources and lesson ideas. Facebook is favored for finding resources (37.5%) while Pinterest is the choice for locating lesson ideas (42.9%). A small percentage of elementary teachers are using social media for collaboration (11.5%) and professional training (12.8%). When this activity is the focus, these participants are utilizing YouTube (33.3%) for training and Facebook (70.0%) for collaboration.

While this study did not reveal a statistically significant result within middle and high school levels, there do appear to be some trends. For middle school, half of the

participants (50.0%) are using social media for finding lesson ideas. Within this group, Pinterest (44.4%) and YouTube (33.3%) are the favored social media tools. Professional training is ranked second for the middle school level with YouTube (50.0%) as the social media of choice. Interestingly, Instagram is not used as a social media tool for teacher development within any professional activity for pre-service teachers at the middle school level. As with the middle school level, high school participants are also using social media for finding lesson ideas (44.8%). However, their tool of choice is Twitter (30.8%) and YouTube (53.8%). For high school, the professional activity focused on the least regarding social media usage is collaboration (13.8%). This group, like the middle school level, is also not utilizing Instagram as a social media tool for teacher development.

Table 4.14

*Crosstabulation of Pre-Service Teachers' Professional Social Media Use by School Level and Professional Activities*

Grade Level	N	$\chi$	p-value
A. All (PK-12)	125	25.505	.013*
B. Elementary (PK-5)	78	25.437	.013*
C. Middle (6-8)	18	11.533	.241
D. High (9-12)	29	6.999	.637

\*Statistically significant ( $p < .05$ )

In addition, Table 4.15 provides data on the relationship between pre-service teachers' social media use and professional activities for all participants by subject areas the pre-service teachers are preparing to teach. Results showed that while there is not a statistically significant relationship for STEM subjects or Humanities subjects ( $p > .05$ ) regarding the type of social media being utilized most often and the professional activities it is being utilized for, there is a statistically significant relationship for pre-service teachers planning on teaching all subjects in a self-contained classroom,  $\chi^2(12, N = 64) = 27.631, p = .006$ . Pre-service teachers that are preparing to teach all subjects in a self-contained classroom are using specific social media tools for certain professional activities that are assisting with teacher development. Almost half of participants (46.9%) preparing to teach all subjects, are using social media to assist with finding lesson ideas. This group overwhelmingly prefers Pinterest (43.3%) for this activity. However, when searching social media for resources, Facebook (42.1%) is favored. When Instagram is used by these participants, it is for finding resources (40.0%) and lesson ideas (50.0%). A small percentage of these participants (10.9%) are utilizing social media for professional training, however when they do, YouTube (42.9%) is the tool of choice.

While findings for participants preparing to teach a STEM or Humanities subject did not yield a statistically significant result, there are a few areas to highlight. Within the STEM areas, finding lesson ideas (37.0%) continues to be the professional activity focus for social media; however, collaboration (29.6%) is a close second. When searching for lesson ideas, STEM participants are using YouTube (50.0%). Interestingly, this group is also using YouTube (50.0%) for collaboration. Instagram is not popular within the STEM subjects (3.7%), and when used, it is only for finding lesson ideas (100.0%). Similar to the STEM subjects, Humanities subjects are also utilizing social media to assist with finding lesson ideas (50.0%). These participants are going to Pinterest and YouTube



evenly (29.4%); however, Facebook and Twitter (17.6%) are also popular tools for this activity. Almost a quarter (23.5%) of Humanities subjects are using social media for professional training and prefer Facebook (37.5%) to assist with this training. In addition, these participants also find Twitter and YouTube (25.0%) to be helpful with training. Instagram was not popular amongst the Humanities subjects either (5.9%) and similar to STEM, when it is used, it is for finding lessons (100.0%).

Table 4.15

*Crosstabulation of Pre-Service Teachers' Professional Social Media Use by Subject Area and Professional Activities*

Subject Area	N	$\chi$	p-value
A. RLA	18	9.636	.648
B. Math	5	3.333	.504
D. Social Studies	11	3.960	.411
D. Science	22	8.337	.758
E. Self-Contained	64	27.631	.006*
F. Art	5	6.250	.396

\*Statistically significant ( $p < .05$ ) *Note:* RLA – Reading and Language Arts

### Research Question Four

Research question four, *What professional activities are pre-service teachers utilizing social media for to assist with teacher development?*, was answered using frequencies and percentages calculated from responses to the *Teachers' Use of Social Media Survey*. One survey item pertained to the professional activities pre-service teachers are using social media for regarding teacher development (1 = Getting Lesson Plan Ideas, 2 = Finding Resources, 3 = Talking to Other Educators, 4 = Professional Training).

Results indicated most respondents regardless of school level are utilizing social media to find resources and lesson plans (72.0%, n = 90). Ranking second and third is training (14.4%, n = 18) and collaboration (13.6%, n = 17), which were both selected at a similar rate. Table 4.16 provides data on the professional activities pre-service teachers are using social media for based on school level. Looking deeper at each grade level, elementary (44.9%, n = 35), middle (50.0%, n = 9), and high school (44.8%, n = 13) are all using social media the most for finding lesson ideas. Ranking second for elementary (30.8%, n = 24) and high school (24.1%, n = 7) is finding resources. However, middle school participants ranked professional training second (22.2%, n = 4).

Table 4.16

*Frequency of Social Media Professional Activities by School Level Preparing to Teach*

	All (%)	Elementary (%)	Middle School (%)	High School (%)
Resources	26.4 (n = 33)	30.8 (n = 24)	11.1 (n = 2)	24.1 (n = 7)
Lesson Ideas	45.6 (n = 57)	44.9 (n = 35)	50.0 (n = 9)	44.8 (n = 13)
Collaboration	13.6 (n = 17)	12.8 (n = 10)	16.7 (n = 3)	13.8 (n = 4)
Training	14.4 (n = 18)	11.5 (n = 9)	22.2 (n = 4)	17.2 (n = 5)

Table 4.17 provides information regarding professional activities the respondents are using social media for based on subject areas they are preparing to teach. Results indicated participants preparing to teach in a self-contained classroom (46.9%, n = 30), STEM subjects (37.0%, n = 10), and Humanities subjects (50.0%, n = 17) are mostly using social media for finding lesson ideas. The Humanities subjects had the most respondents using social media for professional training (23.5%, n = 8), while STEM subjects had the most respondents using social media for collaboration (29.6%, n = 8). The data revealed three areas that no participants are utilizing social media for regarding these professional activities. Math teachers are not using social media for assistance with professional training. In addition, Social Studies teachers and Art teachers are not using social media for collaboration purposes.

Table 4.17

*Frequency of Social Media Professional Activities by Subject Areas Preparing to Teach*

	SC	RLA	Math	Science	SS	Art
	(%)	(%)	(%)	(%)	(%)	(%)
Resources	29.7 (n = 19)	16.7 (n = 3)	20.0 (n = 1)	22.7 (n = 5)	27.3 (n = 3)	40.0 (n = 2)
Lesson Ideas	46.9 (n = 30)	61.1 (n = 11)	60.0 (n = 3)	31.8 (n = 7)	45.5 (n = 5)	20.0 (n = 1)
Collaboration	12.5 (n = 8)	5.6 (n = 1)	20.0 (n = 1)	31.8 (n = 7)	0.0 (n = 0)	0.0 (n = 0)
Training	10.9 (n = 7)	16.7 (n = 3)	0.0 (n = 0)	13.6 (n = 3)	27.3 (n = 3)	40.0 (n = 2)

*Note:* SC – self-contained, RLA – Reading and Language Arts, SS- Social Studies

**Research Question Five**

Research question five, *How do pre-service teachers use different forms of social media for teacher development?*, was answered by analyzing qualitative data from 11 semi-structured interviews of elementary and secondary pre-service teachers enrolled in a four-year medium sized, suburban public university located in southeast Texas. Data were analyzed using an inductive coding process. From the interviews and coding process, responses were assigned to four themes: (a) resources, (b) lesson ideas, (c) collaboration, and (d) professional training. The major themes and subthemes are explained in greater detail below.

## Resources

A central theme that emerged from the interview data was using social media for its numerous resources. Several of the participants (90.9%) spoke to using resources they found on Facebook, Pinterest, and YouTube. They all mentioned that resources are easily accessible through social media and therefore, it saves time while giving access to everything they need. “I am able to search for what I need from home. This makes it very convenient,” explained Brianna [Elementary, Self-Contained]. Another participant repeated this sentiment and included “There are so many resources available on social media. You can find exactly what you are looking for,” said Sally [Elementary, Self-Contained].

Vicki [Middle, Humanities] stated:

There are many resources available on all the social media sites. I don’t have to leave my house. If I need to watch a video or include one in my lesson, I can find it on Facebook or YouTube. I can also find out how to motivate students.

While all participants spoke to using Facebook, Pinterest, and YouTube, as well as other social media, there were some slight differences among the school levels. Elementary participants felt as if Pinterest and Facebook were the most beneficial tools for finding resources. Mary [Elementary, Self-Contained] explained “Pinterest has resources specifically for elementary teachers. This helps because I am planning on teaching all subjects and that’s a lot.” Shelley [Elementary, Self-Contained] explained how social media is helping her prepare to teach all subjects at the elementary level as well. “I chat with an educator on Facebook and use many of the ideas she has already tried in her classroom.” This participant spoke about having access to lesson ideas, videos, charts, and handouts through her social media connections. Participants planning on teaching middle school spoke mostly about using Facebook. Tina [Middle, STEM]

stated, “Facebook helps me with finding science resources. There are groups that post regularly. I find a lot there.” The high school participants referred to YouTube as their first choice. Raul [High, Humanities] explained, “I can find a video for all of the mediums and techniques I would teach.”

When focusing on subject level with the interview participants, the results remained similar to the grade level findings. Participants planning on teaching all subjects in a self-contained classroom preferred Pinterest (66.7%) and Facebook (33.3%) for finding resources. The participants preparing for a STEM subjects spoke about Facebook (50.0%), but also favored YouTube (50.0%). While Humanities subjects preferred YouTube (66.7%) and Facebook (33.3%) for locating useful resources.

### **Lesson Ideas**

The second theme discussed by the interview participants, when they were explaining how they use social media as an educational tool, was for the purpose of getting ideas for lessons. All participants (100.0%) voiced that social media was particularly helpful for finding lesson ideas. Two subthemes emerged within this theme. These include instructional lessons and behavioral lessons. Each of these themes is discussed in greater detail in the following sections.

**Instructional.** One of the major benefits, mentioned by the pre-service teachers interviewed, was gaining ideas for instructional lessons about many different topics. The use of Facebook, Pinterest, YouTube, and Instagram to gain lesson ideas was mentioned by participants. Lacey [Elementary, Self-Contained] stated: “There are so many lesson plans already created out there. I use ideas from other teachers and make them my own.” For her, using social media sites helped her not to have to start from scratch. She mentioned how this saves time and helps her to get started.

Chris [High, STEM] explained “There is always someone that has an idea or has created a lesson already on what you are looking for.” He discussed how hard it can be to put together a lesson when you have never taught the material before. He stated:

I searched Facebook for a math lesson and found a group that shares lessons.

They post videos that help. You can find just about anything on social media.... I don’t have to leave my house.

From elementary to middle to high school levels, all participants are looking for lesson ideas. This was a popular professional activity discussed and the one that all interviewees believed they use social media for the most. Tracy [Elementary, Self-Contained] said she found ideas related to specific curriculum and from other educators as well.

I use Pinterest when I'm stuck and need good ideas. Facebook helps a lot too. A lot of teachers post things they did in their classroom and I get ideas from that. I just started using Instagram when a friend showed me all of the lesson plans that are posted there. Lots of options.

At the middle school level, it was mentioned not wanting to start from scratch when creating lessons. Tina [Middle, STEM] spoke to the convenience of social media. “I go on Facebook for help when I’m at home. It’s easier to look at something someone has already made and change it than to start from nothing.” It appears that many began using this avenue because they could search from home. Chris [High, STEM] likes Facebook for the same reason. “I belong to a math group that shares lesson plans.” He also referenced YouTube as a good source of instructional videos for math. “I look for videos that give examples. It helps students, but it helps me too.” Based on the interview responses, social media has become somewhat of a professional learning community for these participants from the comfort of their couch.

Subject area that the interview participants are planning on teaching definitely played a role in which social media tool was the one they tend to search first. All of the elementary participants are preparing to teach in a self-contained classroom. Since their focus is on all subjects, Pinterest was the preferred social media tool. “I like Pinterest because every subject I need is posted and ideas are elementary friendly. I know it’s not about being cute, but it helps,” explained Lacey [Elementary, Self-Contained]. Participants preparing to teach STEM subjects, as well as those preparing for Humanities subjects, like to search Facebook and YouTube for instructional lesson ideas. A common idea surrounded joining groups based on the subject area they are planning on teaching; as well as, utilizing videos within the lessons.

**Behavioral.** In addition to using social media for instructional lessons, participants (54.5%) mentioned finding lessons and ideas to help with classroom behavior as well. These participants spoke about finding videos, techniques and ideas concerning management, and already made behavior management charts.

Lacey [Elementary, Self-Contained] stated, “There are tons of ideas for student behavior. Students behave better when you have everything planned.” She uses Pinterest mostly to find charts for stations, student job ideas, and behavior handouts already made.

I found a student jobs chart on Pinterest. All I had to do was print it and get clothes pins. It’s so easy and there were more jobs on the chart that I hadn’t thought about.

The idea of using social media for classroom management ideas was focused on the elementary level only. Participants planning for this level were concerned about behavior and ensuring they were equipped with tools for management. Shelley [Elementary, Self-Contained] spoke to these concerns, “I see how hard it is. If you don’t



handle the behavior, you can't teach." Tracy [Elementary, Self-Contained] echoed this sentiment:

I have a friend who is a teacher already. She said a teacher she knows was fired because her kids were acting crazy. I don't want that to be me. I want to be ready. While middle and high school participants voiced concerns about classroom management regarding what they may not be fully prepared for, they do not seem to be seeking out answers to this concern on social media. They are however, turning to social media to assist with motivating students. Vicki [Middle, Humanities] explained "It is hard to get middle school students to care. When I see posts that are inspiring, I save them." Chris [High, STEM] mentioned, "I want the girls that will be in my class to know they can be good at math. You see videos all the time now that deal with this."

Interview data revealed that pre-service teachers who are planning on teaching all subjects in a self-contained classroom are using social media to assist with classroom management ideas. Pinterest was the popular first choice, however, these participants are also searching Facebook and Instagram to assist with this area. Participants that are focused in the STEM and Humanities subject areas do not seem to be utilizing social media for classroom management ideas. Instead, the focus is on motivational lessons using Facebook and YouTube.

As evidenced, all participants found that acquiring lesson ideas was a great benefit of using social media as an educational tool. The areas of interest included instructional and behavioral ideas. It was apparent throughout the conversations with these pre-service teachers that gaining new ideas was an advantage of using social media sites.

## **Collaboration**

Another theme discussed by the interview participants, when they were explaining how they use social media as an educational tool for teacher development, was collaboration. Two subthemes emerged. These include networking and other viewpoints. Each theme is discussed in greater detail in the following sections.

**Networking.** Collaboration and networking with others were key factors in professional social media use for interview participants (36.4%). These participants mentioned connecting with others and having personal exchanges through social media. Brianna [Elementary, Self-Contained] explained, “Social media allows me to meet other pre-service teachers and professional educators that I do not have access to through my university.” She elaborated that through these connections, she has grown her classroom exponentially enabling her to learn from more than just her professor and classmates.

I follow #newteacher on Twitter. Someone posted the question “What are some classroom essentials that you cannot live without?” The responses included anything from coffee mug to individual white boards to an instructional strategies reference guide. It seems like I should know these things, but it helps to read about them. I’ve started making a list of things I want for my classroom. This participant further explained that networking with others can help as she begins her career. She believes that today’s pre-service teachers are more connected and aware of their options not only for training and lesson preparation, but also future careers due to networking.

While interview data showed that elementary level pre-service teachers are collaborating more often, middle and high school participants recognized the benefits of these connections. Shelley [Elementary, Self-Contained] spoke of “the importance of expanding your knowledge through expanding your circle.” She uses Facebook to follow

teachers, educational leaders, and authors, but also the more personal connections. She explained:

I think networking is very important. My dad used to say it's not always what you know, but who you know. I think there's some truth to that. Through social media, I can connect with others that I would never get the chance to meet. I follow several children's book authors such as Mercer Mayer. He posts tips and motivation, as well as connections to his book and pictures of his book characters.

You can connect with all kinds of people through social media.

Facebook was one of the main social media tools mentioned that allow the participants to connect with educators worldwide. Regarding Facebook, Tina [Middle, STEM] clarified her networking practices:

I like to follow professional organizations like *Education Week* and *US Dept of Education*. They keep me updated on the current trends and changes. I also follow local school districts that I am wanting to work for. I want to know about the district in advance. It makes me feel like I have a leg up going into the interview.

Raul [High, Humanities] also described the collaborations he builds through Twitter. He explained he follows teachers and educational leaders in the districts he hopes to work for. He believes that these connections could help him to secure a job in his preferred district. He stated:

I mostly follow people on Twitter. I'm following a district I am interested in so I'm able to see announcements they have and new things they are doing. I found out about their new podcast and now I listen to that as well. I plan on using these items as talking points when I finally get to the interview.

While Instagram was not the main social media tool the participants used, several of them stated they used it when they were looking to create relationships with other pre-service teachers. Mary [Elementary, Self-Contained] stated:

Instagram is a great forum for connecting with people anywhere. I have connected with several students at other universities. It is interesting to read what they are going through and realize that we all have the same feelings.

Throughout the interviews, the pre-service teachers commented and explained they felt using social media to network benefits them, regardless of the subject area they are planning to teach. Participants focused on all subjects, STEM subjects, and Humanities subjects all seem to feel these connections would benefit them after they graduate and move into the field of education themselves.

**Other viewpoints.** It was apparent that for pre-service teachers, they were also collaborating using social media to get other viewpoints. Participants stated that is helpful to learn from others that have different experiences than they do based on several factors including the university they attend or experience in the educational field itself. Mary [Elementary, Self-Contained] stated:

It can feel like we are alone in this and then we find out we aren't, that others feel the same way. But they may be thinking about it differently depending on what they heard as being important. It's always good to hear other viewpoints. It pushes you to think differently.

Another participant stressed collaborating for the purpose of getting other viewpoints also. Shelley [Elementary, Self-Contained] explained social media "gets you to think in a different way. So many times, I think I didn't think about that."

As mentioned with collaborating for networking purposes, participants that spoke to collaborating for other viewpoints also resonate mostly with elementary level pre-

service teachers. Tracy [Elementary, Self-Contained] explained, “It [social media] allows me to see other views. You get to read the comments that are posted.” This participant spoke about a Facebook post from a teacher regarding the best children’s books that encourage children to be kind.

The comments were just as important to me as the article. Educators and non-educators had opinions posted about the books. It was good to see the different viewpoints, and it helped me to decide which books would be best for my assignment.

Vicki [Middle, Humanities] also felt that she learned more about how others felt about the videos she uses on YouTube by the comments left.

I watched a video and the comments were great! They gave specific feedback about how the strategies worked or didn’t work. Some also left links to other videos for more strategies. There were many different opinions. It gave me a lot to think about.

Lacey [Elementary, Self-Contained] enjoyed connecting with educators using Twitter. This participant likes communicating with other pre-service teachers, but she also likes connecting with authorities in education. She explained:

I like to use Twitter because there are so many educators using this platform. I can read their articles and can ask questions or comment right there. The great thing is you usually get a reply! I have access to so many people I never would be able to meet otherwise. For example, I follow Todd Whitaker. He wrote *What Great Teachers Do Differently*. He responded to my tweet! It was very exciting.

While not all the participants spoke to the importance of other viewpoints as a central aspect of social media use, several stressed this component across all subject areas including STEM and Humanities subjects. These participants were using social media to

collaborate on educational topics, and this included being exposed to other viewpoints. Through social media, participants have taken their classroom worldwide. Collaboration with others was a key theme for them. Networking and other viewpoints were specifically significant.

### **Professional Training**

All aspects linking to the use of social media for professional growth was included with professional training. This is the final common theme expressed with the participants (45.5%) and was broken down into three major subthemes which included teacher preparation, individual interests, and a comprehensive understanding of practices. These were the three most prominent areas mentioned by the interviewees when referring to using social media for professional training purposes.

**Teacher preparation.** Training and preparing to have their own classroom were key aspects in professional social media use for many of the participants. Participants mentioned getting ideas for setting up their classrooms, learning about working with difficult students, understanding how to become a master teacher, and gathering information on motivational techniques. Tracy [Elementary, Self-Contained] said, “You can learn a lot on social media about teaching. Every day I see a new post with ideas that I can use.”

Interview data shows that elementary participants are searching mostly for how to set up a classroom and what materials they need. When discussing ideas for setting up a classroom, Shelley [Elementary, Self-Contained] stated:

Pinterest is my go-to. There are so many ideas. I found a free resource about setting up your room without losing your mind. It came with a printable checklist which I use to start collecting items I will need. I even gave it to my mom for gift ideas.

Working with difficult students also seems to be a common fear for many of the elementary level participants. Several spoke about wanting to learn as much as possible before getting their own classroom. Brianna [Elementary, Self-Contained] explained:

I have a friend that is a teacher already and she tells me stories that scare me. I use YouTube a lot to watch videos about how to help challenging students. My friend told me about a few of them, but I've also found more. I saw a good Ted Talk that was so motivating it made me feel like I can teach anyone.

Middle and high school level participants voiced using social media for teacher preparation as well. The concentration for these levels focused mostly on wanting to become a master teacher and knowing how to motivate their future students. Tina [Middle, STEM] said, "I like to watch YouTube videos of science teachers. It helps to learn the content." Chris [High, STEM] explained, "I look for YouTube videos that will show why my subject is important."

Many of participants felt that they would be better prepared to take on their own classroom of students by utilizing social media. They spoke to understanding there was more to know beyond what they learn at school and found social media as an easy avenue to achieve this knowledge.

**Individual interests.** Participants also mentioned they were using social media to learn about topics that interested them personally in the professional world. Data revealed that they follow professional organizations on several social media platforms so that they receive posts relating to their interests. Lacey [Elementary, Self-Contained] explained, "I have been watching posted videos about students with disabilities, specifically autism. I have a friend who teaches already and said that it's hard to know what to do with these students. So, I'm trying to prepare myself."

Participants at all school levels stated they follow authors, educators, or educational resources to gather information about their interests for their profession.

Brianna [Elementary, Self-Contained] stated:

If I have a question or am curious about something, I pick up my phone and go to social media to find others that are interested in the same thing. All you have to do is go to the search button and type in what you are looking for and there will be someone to follow. Everything is right at your fingertips these days. You don't find many young people that aren't on social media. It's how we communicate.

Individual interests for pre-service teachers cover a wide range of topics.

However, all participants across all subjects, including STEM and Humanities, had one thing in common which is utilizing various forms of social media to find out more about those interests.

**Comprehensive understanding of practices.** While not all mentioned using social media to understand their profession better, several participants (36.4%) spoke to utilizing several social media platforms to learn how to be a better teacher. Tina [Middle, STEM] stated:

Understanding all the content we have to know is overwhelming. I frequently go to YouTube to watch videos about the content, so I know how to best teach my lessons. It helps to watch someone else do it first.

Participants also mentioned models of teaching and instructional practices as a reason for turning to social media. Lacey [Elementary, Self-Contained] explained:

We learn about teaching as a facilitator and using strategies such as project-based learning. It's scary thinking about doing this in my own classroom. I'm not sure I'm ready. I can read more about how to do this and watch videos of it being done



on social media. I watched a video of a teacher doing a lesson using this strategy on YouTube and felt much better, like I can do this.

The participants felt that using social media for professional training provided them the opportunity to learn more prior to entering their own classroom. Anthony [High, Humanities] stated that “class time is limited, and nothing is better than on the job training. But I want to be as prepared as possible before I get there.” This seemed to be the consensus for all participants regardless of grade level or subject level.

Research question five centered on how pre-service teachers are using social media for educational use. Through analysis, various themes and subthemes emerged. Resources, lesson ideas, collaboration, and professional training were factors for using social networking sites for educational use.

### **Summary of Findings**

Surveys were sent to pre-service teachers in a four-year medium size, suburban public university located in southeast Texas. Possible participants were enrolled in a required technology class and 125 surveys were returned completed. The quantitative analysis indicated that Facebook, Pinterest, and YouTube are the social media tools used most frequently for professional use. At the elementary level, Pinterest and Facebook are the preferred tools with middle and high school leaning toward YouTube and Facebook. Most pre-service teachers perceive a high potential for social media to be used as an educational tool regardless of grade level or subject area. The findings also indicated that overall, there is a statistically significant correlation between professional social media use and the activities pre-service teachers are using it for. In addition, at the elementary level, pre-service teachers preparing to teach in a self-contained classroom are using specific social media tools for certain professional activities thus resulting in a statistically significant result. Data revealed overwhelmingly that pre-service teachers are

utilizing social media to find resources and lesson ideas using Facebook, Pinterest, and YouTube.

Qualitative analysis illustrated that the influences for pre-service teachers utilizing social media as an educational tool include resources, lesson ideas, collaboration, and professional training. When considering the benefits that participants felt from the use of social media, increased collaboration, access to numerous resources and lessons, and training opportunities beyond local entities were each identified. Overall, the 11 pre-service teachers interviewed were regularly going to social media platforms for educational reasons and felt they would be better prepared to enter their own classrooms because of it.

### **Conclusion**

This chapter presented the analysis of qualitative and quantitative data collected from surveys and interviews, participant demographics, and processes of answering each research question. In the next chapter, findings will be presented to compare what was found through this study with existing literature. Implications of this study in education and future research will be discussed.

## CHAPTER V: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the role of social media as an educational tool among pre-service teachers. Although social media has substantially grown in the last few years, offers many benefits, and has gained popularity amongst educators, there is a lack of research focusing on pre-service teachers and their use of social media to satisfy the need for teacher development prior to entering the classroom (Redman & Trapani, 2012). Several studies mention the necessity for pre-service teachers to examine social media as a means toward technology usage with students (Acarli & Saglam, 2015; Redman & Trapani, 2012). Although social media is an effective tool for student learning in classroom instruction, researchers are not providing enough investigation into how social media can also benefit learning for pre-service teachers (Abe & Jordan, 2013).

To quantify perceptions and seek greater insight into social media used as an educational tool for teacher development, 125 pre-service teachers within a medium sized, four-year suburban public university located in southeast Texas completed the *Teachers' Use of Social Media Survey*. Eleven pre-service teachers, who used social media for teacher development, participated in semi-structured interviews. The qualitative data enhanced the understanding of perceptions and motivating factors regarding the use of social media for teacher development by pre-service teachers. This chapter will contextualize the study within the larger body of research. Furthermore, implications for universities, school districts, and pre-service teachers will be discussed. Recommendations for future research will conclude the chapter.

## Summary

### Research Question One

Research question one, *What social media tools are pre-service teachers using for teacher development?*, was answered using frequencies and percentages calculated in response to one survey question. Quantitative analysis demonstrated that several social media tools are reported as being used for teacher development; however, the three highest reported tools are Facebook, Pinterest, and YouTube. Twitter and Instagram are being utilized but at a much lower rate. Amongst the school levels, elementary leans mostly toward Facebook and Pinterest, and are the only group utilizing Instagram. While middle school is also using Facebook and Pinterest, their first tool of choice is YouTube. High school participants favor YouTube by over half, but interestingly, Twitter is their second choice. More specific results based on the subject areas the pre-service teachers are preparing to teach reveal that participants planning on teaching all subjects in a self-contained classroom prefer Facebook and Pinterest. Respondents preparing for a STEM subject favor YouTube by 48.1%, while Humanities subjects prefer YouTube and Facebook evenly.

These results indicating Facebook, YouTube, and Pinterest as the most popular social media tools for teacher development support previous research. A national survey of 1,520 adults conducted (Greenwood, Perrin, & Duggan, 2016) found that Facebook continues to be the most popular social networking platform by a substantial margin. Nearly eight-in-ten online Americans (79%) now use Facebook, more than double the share that uses Twitter (24%), Pinterest (31%), or Instagram (32%). In addition, Facebook is popular among college students and effective for learners (da Rocha et al., 2014; Chugh & Ruhi, 2018), YouTube is ranked highest as the preferred learning tool (Alwehaibi, 2015; Genota, 2018), and Pinterest is the third mostly widely used tool in the

United States (Greenwood, Perrin, & Duggan, 2016; Cooper, 2019). Therefore, this study's results align with widespread use of social media, which continues to include Facebook, Pinterest, and YouTube as the social media tools of choice. While the perception tends to be that younger generations are moving more toward tools where a simple picture can say all you are thinking or feeling, the ease of the more established social media still appears to be preferred for educational purposes. One reason could be the established user base in these platforms makes them more useful for academic conversations.

## **Research Question Two**

Research question two, *To what degree do pre-service teachers perceive social media has potential to be used as an educational tool for teacher development?*, was answered using frequencies and percentages calculated from survey responses to one question. Quantitative analysis demonstrates most participants believe that there is *High Potential* for social media to be used as an educational tool for their own teacher development. This is true regardless of the grade level or subject area pre-service teachers are preparing to teach. Interestingly, high school participants are the largest group believing social media has *High Potential* at 71.4%. While middle school has half of the participants believing social media has *High Potential*, they are also the largest group of *Low Potential* at 22.2%. More specific results indicate that Math participants feel strongly about social media's benefits with 100.0% of them selecting *High Potential*. In addition, Humanities subjects have the highest rate of participants believing social media has *Low Potential* to be used as an educational tool for teacher development.

Regarding participant ratings demonstrating potential for social media to be a beneficial tool for teacher development, results are consistent with previous research that pre-service teachers feel social media is beneficial for teacher development. Krutka et al.

(2014), studied 77 preservice teachers and found social media successfully decreased student teachers' perceived isolation and enhanced their social connections with one another. This study supports the premise of social media being an effective tool for pre-service teachers. In addition, a study of pre-service teachers enrolled in a technology course (O'Bannon et al., 2013) examined their use of Facebook. These pre-service teachers reported that Facebook was helpful in preparing for course-related assessments and enhanced their learning, thus agreeing that social media has potential to be an effective tool for teacher development. Hutchison and Wang (2012) conducted a qualitative study to explore how 15 preservice teachers used social media in a children's literature course. These findings suggest that written posts on social media sites influence choices pre-service teachers are making, as well as complement more in-depth class discussions (Hutchison and Wang, 2012). This research, along with the research stating the use of social media tools addressed in question one, aligns with the participants' responses indicating that there is *High Potential* for social media to be used as an educational tool for teacher development. Several factors may contribute to this finding including the convenience of being able to search social media from the comfort of home, along with the generational "digital natives" facet. Today's pre-service teachers have grown up with the internet and are tied to social media consistently. This tool seems to be viewed as beneficial in all aspects of life, so it is not surprising that it would benefit educationally as well.

### **Research Question Three**

Research question three, *Is there a statistically significant relationship between the social media used most often by pre-service teachers and their professional activities?*, was answered using a Chi-Square Test of Independence to determine if there is a relationship between social media use and how they are using it to assist them in the

classroom. Quantitative analysis found a statistical significance suggesting that overall, the professional activities pre-service teachers are executing for their own teacher development are achieved by specific social media tools. This study revealed Facebook is the most popular tool for finding resources. In addition, there is an indication of a statistically significant relationship at the elementary level and with pre-service teachers preparing to teach all subjects within a self-contained classroom. Elementary pre-service teachers are utilizing two social media tools the most, Facebook and Pinterest, for the purpose of finding lesson ideas and resources. Moreover, pre-service teachers planning on teaching all subjects in a self-contained classroom are also utilizing Facebook and Pinterest to find lesson ideas and resources. While there is not a significant result regarding STEM subjects and Humanities subjects, there are some trends. Participants planning on teaching STEM subjects are utilizing social media mostly for lesson ideas and collaboration and the tool of choice is YouTube. However, the Humanities subjects' participants are looking for lesson ideas and training, and it doesn't seem to matter what social media tool is used. This group utilizes Pinterest, YouTube, Facebook, and Twitter, if it provides them with what they are needing.

These findings are consistent with previous research by Carpenter, Cassaday, and Monti (2018) that focuses on educators' use of Pinterest. This qualitative study identified reasons why educators are using Pinterest, including finding learning materials and collaboration (Carpenter, Cassaday & Monti, 2018; Price, 2013; Schroeder, Curcio, & Lundren, 2019). Additionally, this tool allows educators to stay up-to-date and learn about new projects and ideas (Price, 2013). A mixed-methods study, completed by Kabilan (2016), looked at 91 pre-service teachers and how Facebook contributed to their teaching experience. Findings indicated Facebook was a crucial element for finding resources (Kabilan, 2016; da Rocha et al., 2014). It is possible social media platforms are

catering to specific audiences as they track data usage. This could lead to users preferring particular tools for designated activities.

#### **Research Question Four**

Research question four, *What professional activities are pre-service teachers utilizing social media for to assist with teacher development?*, was answered using frequencies and percentages calculated from survey responses to one question.

Quantitative analysis demonstrates most respondents regardless of school level are utilizing social media to find resources and lesson ideas. They are also using social media for collaboration and professional training at a lower rate. Data ranks lesson ideas first with resources second except at the middle school level. These participants are ranking professional training behind finding lesson ideas. Within subject areas, self-contained, STEM, and Humanities pre-service teachers all chose using social media for finding lesson ideas first. The Humanities subject participants have the most respondents using social media for professional training, while STEM subject participants have the most using social media for collaboration.

While previous research indicates social media is being utilized for instructional resources, best practices, collaboration between educators, and professional training (Ghavifekr & Rosdy, 2015), this study differs slightly in its results. The focus of this study shows most participants are using social media to find resources and lesson ideas regardless of school level or subject area. Previous research shows indications of collaboration [communication] being the main source of social media use (Vockley & Lang, 2009; Sendurur, Sendurur, & Yilmaz, 2015; Trust, 2012). These variances may be a result of participants using communication as the over-arching theme, while this communication could be used for finding resources and lesson ideas. It is evident there could be a gap in knowledge for pre-service teachers regarding writing lessons. There



may also be limited access to resources to assist with lesson building. This has sent pre-service teachers to social media to fill these gaps. It is also possible that there is a sense of not wanting to “reinvent the wheel” when lessons have already been created.

### **Research Question Five**

Research question five, *How do pre-service teachers use different forms of social media for teacher development?*, was answered using inductive thematic coding of 11 semi-structured interviews of elementary and secondary pre-service teachers enrolled in a four-year medium sized, suburban public university located in southeast Texas.

Responses were organized into four major themes: *Resources*, *Lesson Ideas*, *Collaboration*, and *Professional Training*. In addition, throughout the data collection process, subthemes were identified within the larger categories. Overall, interview participants (100%,  $n = 11$ ) felt social media is beneficial for teacher development and that it will help them to be better prepared for their own classroom. This study aligns with previous research that found social media aids pre-service teachers in a variety of methods including as an important and essential pedagogical tool (Szeto, Cheng, Hong, 2016; Ghavifekr & Rosdy, 2015; Flanagan, 2012).

All participants spoke to the convenience of social media, and it became obvious that a major draw to social media is the factor of being able to search from the comfort of home. With regard to how social media is being used for teacher development, qualitative analysis indicates participants are utilizing all forms of social media for finding lessons ideas and resources, collaboration, and training. From the data, it is clear pre-service teachers are most concerned with finding lesson ideas and resources utilizing Facebook, Pinterest, and YouTube. Not wanting to start from scratch is a common sentiment among participants voicing that there are many resources and lesson plans already created. Social media is saving time while providing a template to build upon.

Prior research indicates pre-service teachers' social media use is diverse. Consistent with that research, Facebook is a popular effective tool for learners utilized mostly for collaboration, which includes finding resources (Mazman & Usluel, 2010; da Rocha et al., 2014; Daniels & Billingsley, 2014; Kabilan, 2016; Goktalay, 2015). Additionally, it is noted that Facebook appears to be the preferred method for collaboration rather than traditional methods (Daniels & Billingsley, 2014, Suwannatthachote & Tantrarungroj, 2012). Moreover, Pinterest is gaining in popularity and visited more times per day than Facebook (Price, 2013). This tool is used frequently for finding lessons ideas and sharing resources (Carpenter, Cassaday & Monti, 2018; Schroeder, Curcio, & Lundren, 2019; Price, 2013; Pearce & Learmonth, 2013). Aligning with this study, previous research shows YouTube has become a useful method for sharing and distributing content for lessons (Alwehaibi, 2015; June, Yaacob, & Kheng, 2014; Szeto & Cheng, 2014). It is ranked as the highest preferred learning tool (Genota, 2018), which this study supports. It is apparent that social media is an answer for pre-service teachers as a means for preparing themselves to teach in their own classroom. Several factors, including convenience, support this statement. However, it is possible that this generation of pre-service teachers is only doing what they do for every problem they encounter in their lives. In the long run, this may not be the final answer to the underlying bigger issue concerning lack of teacher support and development in an educational system that evolves and shifts on a daily basis.

### **Implications**

Pre-service teachers are turning to social media to assist with their own teacher development. With the increase in accountability and mounting pressure on teachers to perform, there is a need for enhanced teacher development beyond what colleges and districts are providing (Brown, Lee & Collins, 2015). Results from this study support

previous research findings that social media is an effective educational tool to assist pre-service teachers with their teacher development. Furthermore, results are consistent with previous research regarding the benefits and uses of social media for teacher development. Finally, results of this study include recommendations consistent with previous research.

### **Implications for Universities**

Much of the data gathered steers toward two main suggestions. First, teacher education programs in universities and colleges should plan instruction around social media use for classroom purposes. As technology shifts, pedagogy should improve to fit with the new accessible social media tools that teachers will encounter. Second, when it comes to personal teacher development, universities and colleges should make every effort to help pre-service teachers learn how to utilize social media for this purpose. There is a responsibility to assist students with becoming confident and comfortable enough critically examining any resources, lesson ideas, or professional training they find through online social media. Without a firm grasp on how to weed through the many resources, trainings, and expert opinions online, pre-service teachers will not be able to effectively utilize this educational tool in a manner that is consistent with school district expectations. Facebook, Pinterest, and YouTube may be preferable tools to use as a starting point since this study identifies these tools as the favored choices regarding teacher development. It must also be acknowledged that there seems to be a gap in pre-service teachers' knowledge or motivation toward writing lesson plans and building resources. This study clearly finds a need to provide more training in this area.

## **Implications for School Districts**

School districts must consider that new teachers entering the field of education have grown up in a world where technology and social media have always existed. These teachers entered college as social media experts and are utilizing this tool for every aspect in their lives, including their own teacher development. Pre-service teachers are recognizing the knowledge that must be attained in order to be successful in the ever-changing world of education. Their desire to ensure they are prepared is leading them to social media. This study reveals pre-service teachers perceive there is high potential for social media to be utilized as an educational tool; therefore, districts should consider how resources and lesson ideas found online can fit in with the current curriculum. This could include creating guidelines for teachers, which assist with identifying if resources or lesson ideas are appropriate. In addition, creating a committee or portal for vetting of resources and lesson ideas could be beneficial. By allowing teachers to have a hand in this process, everyone could benefit.

Furthermore, school districts should recognize the impact social media can have on PLCs. A lack of time to effectively implement PLCs has been identified in the research. Social media is attempting to remedy this barrier by allowing teachers to collaborate with other teachers, authors, policy makers, and many other experts in the field from any place at any time. A PLC is group of educators that meets regularly, shares expertise, and works collaboratively to improve teaching skills and the academic performance of students (Dufour, 2004). This study reveals this is exactly what pre-service teachers are doing on social media thus creating a virtual PLC. Instead of limiting the opportunities for teachers to seek out their own professional training and collaboration with educators, school districts should embrace this practice allowing for reflection and conversation within site-based PLCs. By bridging the two worlds,

educators are exposed to many thoughts and practices that could benefit the district in ways that ultimately reach the students.

Finally, school districts must develop a new vision regarding technology beyond the typical classroom use with students. This study reveals social media to be a viable source for teacher development. However, there are concerns that may be limiting schools from utilizing social media's full potential, such as lack of content control and measurable goals with objectives. With a blended approach, districts will be able to bring their schools up to match the new generation of educators that are entering them. However, it is important to remember that technology does not replace the essential work that takes place on the campuses between teachers, campus teams, and district level administrators in a face-to-face fashion. These practices should not be abandoned, just enhanced to incorporate these new practices that will continue to evolve and improve.

### **Implications for Pre-Service Teachers**

Even with changes made at the university and school district levels, pre-service teachers have a responsibility regarding social media. This group of educators must understand district and campus expectations regarding utilizing social media resources, lesson ideas, training, and expert opinions. They must learn how to evaluate social media resources and lesson ideas, including alignment to state standards and measurable goals with objectives. It is not enough to pull a lesson because it is cute or seems fun. Pre-service teachers must accept responsibility for critically examining what is being used from social media ensuring it is appropriate and falls within the proper guidelines.

### **Recommendations for Future Research**

Findings from this study involved gaining feedback (quantitative and qualitative) from elementary and secondary level pre-service teachers. Although collected data includes participants' perceptions, the recommendations for future research could

enhance the knowledge base. The quantitative and qualitative data collected are available to serve as a basis for the recommendations.

Given data were collected in a four-year medium sized, suburban public university located in southeast Texas, one is not able to generalize to other populations outside of that demographic. It would be beneficial to conduct research in other settings with participants from universities of various sizes and geographic locations. The data might yield similar or different results based on the demographics of the university.

Another step for future research that would expand the knowledge base is to collect and analyze data from pre-service teachers outside of those taking the required technology course. Since the study only collected data from pre-service teachers currently enrolled in a required technology course, it would be interesting to investigate similarities or differences among a wider group of pre-service teachers. The perceptions of pre-service teachers may vary being more inclusive with the sample.

A point of interest could be collecting data from other stakeholders. For example, understanding how universities view social media as a possible educational tool for teacher development and how that impacts pre-service teachers' preparation for entering the classroom could be powerful. In addition, investigating school districts' perceptions of social media could be influential in understanding the impact these tools can have regarding teacher development.

Lastly, a follow-up study following the interview participants as they become classroom teachers could help to ascertain the benefits of their social media use for teacher development. For those that utilized social media for finding resources and lesson ideas, collaborating with other educators, and professional training, the research could seek to learn if these practices prepared them more fully for having their first classroom compared to new teachers that did not utilize social media for their own teacher

development as a pre-service teacher. The research could focus on how these practices benefit the participants now that they are in the classroom.

### **Conclusion**

The purpose of this study was to examine the role of social media as an educational tool among pre-service teachers and how this tool can be beneficial for teacher development. The ultimate focus was to demonstrate how pre-service teachers are using social media to become fully prepared for entering the profession and their own classroom. Examination of the participants' favored social media tool, perceived potential, as well as how these tools are assisting with teacher development supported the premise that social media can be beneficial for pre-service teachers' career preparation. This information will empower universities and school districts to begin developing research-based approaches for understanding these perspectives and making use of them in the preparation of teachers and their work with students, ultimately benefitting all stakeholders.

## REFERENCES

- Abe, P. & Jordan, N. A. (2013). Integrating social media into the classroom curriculum. *About Campus*, 18(1), 16–20.
- Acarli, D. & Saglam, Y. (2015). Investigation of pre-service teachers' intentions to use of social media in teaching activities within the framework of technology acceptance model. *Procedia - Social and Behavioral Sciences*, 176(20), 709-713.
- Alwehaibi, H. (2015). The impact of using youtube in EFL classroom on enhancing EFL students' content learning. *Journal of College Teaching & Learning*, 12(2), 121-126.
- Araujo, M., Carneiro, P., Cruz-Aguayo, Y., & Schady, N. (2016). Teacher quality and learning outcomes in kindergarten, *The Quarterly Journal of Economics*, 131(3), 1415–1453.
- Asghar, J. (2014). Teacher development: An overview of the concept and approaches. *Journal of Educational and Social Research*, 4(6), 147-159.
- Baker, J. (2013). Beyond death by chocolate: Using Pinterest professionally. *Knowledge Quest*, 42(2), 74-77.
- Balakrishnan, V. & Loo, H. (2012). *Social networks and e-learning: Key determinants identification*. Paper presented at International Conference on Education and e-Learning (EeL); Singapore, 15-19.
- Banas, J. & York, C. (2014). Authentic learning exercises as a means to influence preservice teachers' technology integration self-efficacy and intentions to integrate technology. *Australasian Journal of Educational Technology*, 30(6), 728-746.
- Bärthel, M. (2018). YouTube channels, uploads and views: A statistical analysis of the past 10 years. *Convergence*, 24(1), 16–32.



- Billen, M. (2015). *#Learningtoteach: Using instagram to elicit pre-service teacher reflection* (Doctoral Dissertation). Retrieved from:  
[https://trace.tennessee.edu/utk\\_graddiss/3323](https://trace.tennessee.edu/utk_graddiss/3323)
- Blazer, C. (2012). Social networking in schools: Benefits and risks; review of the research; policy considerations; and current practices. *Information Capsule*, 1109, 1-23.
- Boyd, D. & Ellison, N. (2010). Social network sites: Definition, history, and scholarship. *IEEE Engineering Management Review*, 38(3), 16.
- Brown, A., Lee, J., & Collins, D. (2015) Does student teaching matter? Investigating pre-service teachers' sense of efficacy and preparedness, *Teaching Education*, 26(1), 77-93.
- Carpenter, J., Cassaday, A., & Monti, S. (2018). Exploring how and why educators use Pinterest. *SITE* (March), 2222-2229.
- Carpenter, J. & Krutka, D. G. (2014). How and why educators use twitter: A survey of the field. *Journal of Research on Technology in Education*, 46(4), 414-434.
- Chugh, R. & Ruhi, U. (2018). Social media in higher education: A literature review of facebook. *Education and Information Technologies*, 23(2), 605-616.
- Clement, J. (2019). Topic: Twitter. Retrieved from  
<https://www.statista.com/topics/737/twitter/>
- Courtois C., Mechant P., Ostyn V., & De Marez L. (2011). Uploaders' definition of the networked public on YouTube and their feedback preferences: A multi-method approach. *Behavior & Information Technology*, 1-13.
- Clark, T. (2019, December 2). 37 Instagram Statistics That Matter to Marketers in 2020. Retrieved from <https://blog.hootsuite.com/instagram-statistics/>
- Da Rocha, R., Conradie, P., & Lombard, A. (2014). *Learner perceptions on the use of*

- social networking services in education: A case study*. Paper presented at the 9<sup>th</sup> International Conference on E-Learning, 241-247.
- Daniels, K. & Billingsley, K. (2014). "Facebook"--It's not just for pictures anymore: The impact of social media on cooperative learning. *Journal of Educational Technology, 11*(3), 34-44.
- Darling-Hammond, L. (2006). Securing the right to learn: Policy and practice for powerful teaching and learning. *Educational Researcher, 35*(7), 13-24.
- Darling-Hammond, L. (2012). The right start: Creating a strong foundation for the teaching career. *Phi Delta Kappan, 94*(3), 8-13.
- Dee, T., & Goldhaber, D. (2017). *Understanding and addressing teacher shortages in the United States*. Brookings Institution Reports.
- DeMatthews, D. (2014). Principal and teacher collaboration: An exploration of distributed leadership in professional learning communities. *International Journal of Educational Leadership and Management, 2*(2), 176-206.
- Desai, N. (2012). Online social networks as markov chains: Measuring influence in the pinterest community.
- Diana, T. (2013). Microteaching revisited: Using technology to enhance the professional development of pre-service teachers. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 86*(4), 150-154.
- Donelan, H. (2016). Social media for professional development and networking opportunities in academia. *Journal of Further and Higher Education, 40*(5) 706–729.
- Dufour, R. (2004). What is a professional learning community? *Educational Leadership, 61*(8), 6-11.
- Dufour, R. & Reeves, D. (2016). The futility of PLC lite. *Phi Delta Kappan, 97*(6), 69-

71.

- Ferrara, E., Interdonato, R., & Tagarelli, A. (2014). *Online popularity and topical interests through the lens of Instagram*. Paper presented at the 25th ACM conference on hypertext and social media; NY: ACM., 24-34.
- Ferriter, W. & Provenzano, N. (2013). Today's lesson: Self-directed learning...for teachers. *Phi Delta Kappan*, 95(3), 16-21.
- Flanagan, M. (2012, June 16). The dingo that stopped the presses and stirred a nation. *The Saturday Age*.
- Forsyth, I. (2014). *Teaching and learning materials and the internet*. New York, NY: Routledge.
- Forte, A., Humphreys, M., & Park, T. (2012). *Grassroots professional development: How teachers use twitter*. Paper presented at Sixth International AAAI Conference on Weblogs and Social Media, Trinity College, Dublin, Ireland.
- Flower, A., McKenna, J., & Haring, C. (2017). Behavior and classroom management: Are teacher preparation programs really preparing our teachers?, *Preventing School Failure: Alternative Education for Children and Youth*, 61(2), 163-169.
- Eric Geiger. (2018, December 10). Who Are the iGeneration and What Does Research Tell Us? Retrieved from <https://ericgeiger.com/2018/01/who-are-the-igeneration-and-what-does-research-tell-us/>
- Genota, L. (2018). Why generation z learners prefer YouTube lessons over printed books; video learning outranks printed books in survey. *Education Week*, 38(4), 6.
- Ghavifekr, S. & Rosdy, W.A.W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES)*, 1(2), 175-191.

- Go, E., & You, K. H. (2016). But not all social media are the same: Analyzing organizations' social media usage patterns. *Telematics and Informatics*, 33, 176-186.
- Goldie, J. (2016). Connectivism: A knowledge learning theory for the digital age? *Medical Teacher Journal*, 38(10), 1064-1069.
- Goodwin, A. & Kosnik, C. (2013) Quality teacher educators = quality teachers? Conceptualizing essential domains of knowledge for those who teach teachers, *Teacher Development*, 17(3), 334-346.
- Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomized controlled trial of quality teaching rounds. *Teaching and Teacher Education*, 68, 99-113.
- Gorgoretti, B., & Pilli, O. (2012). Pre-service teachers' views on the effectiveness of teaching practice course. *Procedia - Social and Behavioral Sciences*, 47, 812–817.
- Goktalay, S. (2015). The impact of Facebook in teaching practicum: Teacher trainees perspectives. *Educational Research and Reviews*, 10(17), 2489-2500.
- Greenhalgh, S.P. & Koehler, M.J. (2017). 28 days later: Twitter hashtags as “just in time” teacher professional development. *TechTrends*, 61, 273–281.
- Greenwood, S., Perrin, A., & Duggan, M. (2016). *Social media update 2016*.
- Handayani, F. (2016). *Instagram as a teaching tool? Really?* Paper presented at the Fourth International Seminar on English Language and Teaching (ISELT-4).
- Hansen, R., & Zumpano, N. (2016, March 16). 7 tips for teachers building collaborative, fearless PLNs. Retrieved from:  
<http://www.eschoolnews.com/2015/03/16/teachers-fearless-plns-547/>

- Harris, A. & Jones, M. (2010). Professional learning communities and system improvement. *Improving Schools*, 13(2), 172-181.
- Hollan, J., Hutchins, E., & Kirsh, D. (2000). Distributed cognition: toward a new foundation for human-computer interaction research. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 7(2), 174-196.
- Hollins, E. R. (2011). Teacher preparation for quality teaching. *Journal of Teacher Education*, 62(4), 395–407.
- Huberman, B., Romero, D., & Wu, F. (2008). Social networks that matter: Twitter under the microscope. Retrieved from <https://arxiv.org/pdf/0812.1045.pdf>
- Hur, J. & Brush, T. (2014). Teacher participation in online communities: Why do teachers want to participate in self-generated online communities of K–12 teachers? *Journal of Research on Technology in Education*, 41(3), 279-303.
- Hutchison, A., & Wang, W. (2012). Blogging within a social networking site as a form of literature response in a teacher education course. *Educational Media International*, 49(4), 263–275.
- Jackman, W. M. (2019). YouTube usage in the university classroom: An argument for its pedagogical benefits. *International Journal of Emerging Technologies in Learning*, 14(9), 157–166.
- John, O., Main, S., & Cooper, M. (2014). Student perceptions of online interactive versus traditional lectures; Or how I managed not to fall asleep with my eyes open. *Journal of Online Learning and Teaching*, 10, 405-419.
- Johnson, C. (2006). Effective professional development and change in practice: Barriers science teachers encounter and implications for reform. *School Science and Mathematics*, 106, 150-161.
- Junco, R., Elavsky, C. M., & Heiberger, G. (2013). Putting twitter to the test: Assessing

- outcomes for student collaboration, engagement and success. *British Journal of Educational Technology*, 44(2), 273-287.
- June, S., Yaacob, A., & Kheng, Y. (2014). Assessing the use of YouTube videos and interactive activities as a critical thinking stimulator for tertiary students: An action research. *International Education Studies*, 7(8), 56-67.
- Kabilan, M. (2016). Using Facebook as an e-portfolio in enhancing pre-service teachers' professional development. *Australasian Journal of Educational Technology*, 32(1), 19-31.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite!: The challenges and opportunities of social media. *Business Horizons*, 53(1), 59-68.
- Khan, F., Yusoff, R.M. & Khan, A. (2014). Job demands, burnout and resources in teaching: A conceptual review. *World Applied Sciences Journal*, 30 (1), 20–28.
- Kimmons, R. & Veletsianos, G. (2014). The fragmented educator 2.0: Social networking sites, acceptable identity fragments, and the identity constellation. *Computers & Education*, 72, 292-301.
- Koehler, V. (1985). Research on preservice teacher education. *Journal of Teacher Education*, 36(1), 23-30.
- Krutka, D. & Carpenter, J. (2016) Why Social Media Must Have a Place in Schools. *Kappa Delta Pi Record*, 52(1), 6-10.
- Krutka, D., Carpenter, J., & Trust, T. (2017). Enriching professional learning networks: A framework for identification, reflection, and intention. *TechTrends*, 61(3), 246-252.
- Krutka, D. G., Bergman, D. J., Flores, R., Mason, K., & Jack, A. R. (2014).

- Microblogging about teaching: nurturing participatory cultures through collaborative online reflection with pre-service teachers. *Teaching and Teacher Education*, 40, 83–93.
- Landsbergen, D. (2011). Government as part of the revolution: Using social media to achieve public goals. *Leading Issues in E-Government*, 147.
- Lee, V., Leary, H., Sellers, L., & Recker, M. (2014). The role of school district science coordinators in the district-wide appropriation of an online resource discovery and sharing tool for teachers. *Journal of Science Education and Technology*, 23, 309–323.
- Lemon, N. (2016). Pre-service teachers engaging with Twitter as a professional online learning environment. *Professional Development and Workplace Learning: Concepts, Methodologies, Tools, and Applications*, 31.
- Leonardi, P. (2014). Social media, knowledge sharing, and innovation: Toward a theory of communication visibility. *Information Systems Research*, 25(4), 667-691.
- Luhan, N. & Day, B. (2010). Professional learning communities: Overcoming the roadblocks. *Delta Kappa Gamma Bulletin*, 76(2).
- Lynch, M. (2018). How to use Instagram in the classroom. *The Tech Advocate*, Retrieved from: <https://www.thetechadvocate.org/use-instagram-classroom/>
- Mamaqi, X. (2015). The efficiency of different ways of informal learning on firm performance: A comparison between, classroom, web 2 and workplace training. *Computers in Human Behavior*, 51, 812-820.
- Mancabelli, R. (2012). *Looking for the road to 21st-century schooling? It's being paved by your teacher innovators*. Retrieved from <https://www.districtadministration.com/article/looking-road-21st-century-schooling>

- Martínez-Alemán, A. (2014) Social media go to college, *Change: The Magazine of Higher Learning*, 46(1), 13-20.
- Mazman, S. G., & Usluel, Y. K. (2010). Modeling educational usage of Facebook. *Computers & Education*, 55, 444–453.
- McLean, R. (2014). Facebook, Twitter and Pinterest, oh my! Using social media as a professional development tool. *The Agricultural Education Magazine*, 86(4), 10-12.
- Mergler, A. & Spooner-Lane, R. (2012). What pre-service teachers need to know to be effective at values-based education. *Australian Journal of Teacher Education*, 37(8), 66-81.
- Montealegre, R. & Cascio, W. (2017). Technology-driven changes in work and employment. *Communications of the ACM*. 60(12), 60-67.
- Mouza, C., Karchmer-Klein, R., Nandakumar, R. Ozden, S., & Hu, L. (2014). Investigating the impact of an integrated approach to the development of preservice teachers' technological pedagogical content knowledge. *Computers & Education*, 71, 206-221.
- O'Bannon, B. W., Beard, J. L., & Britt, V. G. (2013). Using a Facebook group as an educational tool: effects on student achievement. *Computers in the Schools*, 30(3), 229.
- Pappano, L. (2018, August 5). The iGen shift. *The New York Times*, p. F6.
- Pearce, N. & Learmonth, S. (2013). Learning beyond the classroom: evaluating the use of Pinterest in learning and teaching in an introductory anthropology class. *Journal of Interactive Media in Education*, 1-10.
- Perrin, A. (2015, October 8). *Social media usage: 2005-2015*. Retrieved from Pew



- Research Center website:
- <http://www.pewinternet.org/2015/10/08/socialnetworking-usage-2005-2015/>
- Phillips, L. F., Baird, D., & Fogg, B. J. (2011). Facebook for educators. Retrieved from <http://circlesofinnovation.valenciacollege.edu/files/2014/05/Facebook-for-Educators.pdf>
- Pilgrim, J., & Bledsoe, C. (2011). Engaging pre-service teachers in learning through social networking. *Journal of Literacy and Technology*, 12(1), 2–25.
- Powers, K., & Green, M. (2016). Principals’ perspectives on social media in schools. *The Journal of Social Media in Society*, 5(2), 134-168.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6.
- Prensky, M. (2010). *Teaching Digital Natives: Partnering for real learning*. Thousand Oaks, CA: Corwin.
- Price, K.B. (2013). Using Pinterest as a training and development tool. Retrieved from <http://www.td.org>
- Rayburn, J. (2014). Back to school with Pinterest. *The ASHA Leader*, 19(7), 28-29.
- Redman, C. & Trapani, F. (2012). *Experiencing new technology: Exploring pre-service teachers' perceptions and reflections upon the affordances of social media*. Australian Association for Research in Education (AARE).
- Reich, S. (2010). Adolescents’ sense of community on Myspace and Facebook: A mixed-methods approach. *Journal of Community Psychology*, 38(6), 688–705.
- Reich, J., Levinson, M., & Johnston, W. (2011). Using online social networks to foster preservice teachers’ membership in a networked community of praxis. *Contemporary Issues in Technology and Teacher Education*, 11(4).
- Reilly, C. (2017). Twitter as a professional development tool for teachers and aspiring

- teachers: A review of literature. *National Teacher Education Journal*, 10(2), 57-61.
- Riggs, L. (2013, August). Why do teachers quit? And why do they stay? *The Atlantic*. Retrieved from <http://www.theatlantic.com/education/archive/2013/10/why-do-teachersquit/280699/>
- Ross, C., Maninger, R., LaPrairie, K., and Sullivan, S. (2015). The use of twitter in the creation of educational professional learning opportunities. *Administrative Issues Journal*, 5(1), 55-76.
- Sadler, T. (2016). "I won't last three weeks": Preservice science teachers reflect on their student-teaching experiences. *Journal of Science Teacher Education*, 17(3), 217-241.
- Schlager, M.S., & Fusco, J. (2003). Teacher professional development, technology, and communities of practice: Are we putting the cart before the horse? *The Information Society*, (19), 203-220.
- Schroeder, S., Curcio, R., & Lundgren, L. (2019) Expanding the learning network: How teachers use pinterest. *Journal of Research on Technology in Education*, 51(2), 166-186.
- Sendurur, P., Sendurur, E., & Yilmaz, R. (2015). Examination of the social network sites usage patterns of preservice teachers. *Computers in Human Behavior*, 51, 188-194.
- Serdyukov, P. (2017). Innovation in education: what works, what doesn't, and what to do about it?, *Journal of Research in Innovative Teaching & Learning*, 10(1), 4-33.
- Shane-Simpson, C., Manago, A., Gaggi, N., & Gillespie-Lynch, K. (2018). Why do

- college students prefer Facebook, Twitter, or Instagram? Site affordances, tensions between privacy and self-expression, and implications for social capital. *Computers in Human Behavior*, 86, 276-288.
- Skehan, L. (2018). Growing high standards: Using the AITSL standards to develop your teaching: The AITSL standards are an unexpectedly flexible and powerful learning tool for shaping teachers' professional development. *Agora*, 53(3), 26–33.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology & Distance Learning*, 2(1), 3-10.
- Spencer, J. (2012). Ten ideas for using Instagram in the classroom. Retrieved from: <http://www.educationrethink.com/2012/07/tenideasfor-using-instagram-in.html>
- Sponcil, M. & Gitimu, P. (2013). Use of social media by college students: Relationship to communication and self-concept. *Journal of Technology Research*, 1-13.
- Stanley, A. (2011). Professional development within collaborative teacher study groups: Pitfalls and promises, *Arts Education Policy Review*, 112(2), 71-78.
- Suwannatthachote, P., & Tantrarungroj, P. (2012). How facebook connects students' group work collaboration: a relationship between personal facebook usage and group engagement. *Creative Education*, 3(Suppl.), 15-19.
- Szeto, E. & Cheng, A. (2014). Exploring the usage of ICT and YouTube for teaching: A study of pre-service teachers in Hong Kong. *Asian Pacific Education Research*, 23(1), 53-59.
- Thomas, J. Y., & Brady, K. P. (2005). Chapter 3: The elementary and secondary education act at 40: equity, accountability, and the evolving federal role in public education. *Review of Research in Education*, 29(1), 51–67.
- Trust, T. (2012). Professional learning networks designed for teacher learning. *Journal of*

- Digital Learning in Teacher Education*, 28(4), 133-138.
- Twenge, J. M. (2018). *IGen: why today's super-connected kids are growing up less rebellious, more tolerant, less happy -- and completely unprepared for adulthood\**: \*and what that means for the rest of us. New York: Atria International.
- Tucker, V. (2015, May). Using social media for student collaboration. *Journal of Faculty Development*, 29(2), 45-56.
- Underhill, A. (1986). The role of groups in developing teachers' self-awareness. *ELT Journal*. 46(1), 71-79.
- US Department of Education (2018). College scorecard. Retrieved from:  
<https://collegescorecard.ed.gov/>
- Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, 61, 47-59.
- Vockley, M. M. (2007). Creating & connecting: Research and guidelines on online social and educational networking. *National School Boards Association*. Retrieved from <http://www.cominit.com/content/creating-connectingresearch-and-guidelines-onlinesocial-and-educational-networking>
- Vockley & Lang. (2009). *Digitally inclined: Teachers increasingly value media and technology*. Grunwald Associates LLC.
- Vu, X., Abel, M. & Morizet-Mahoudeaux, P. (2015). A user-centered and group-based approach for social data filtering and sharing. *Computers in Human Behavior*, 51, 1012-1023.
- Wankel, C. (2009). Management education using social media. *Organization Management Journal*, 6(4), 251-262.

- Weingarten, R. (2010). A new path forward: Four approaches to quality teaching and better schools. *American Educator*, 34(1), 36-39.
- Winarno, S., Muthu, K. S., & Ling, L. S. (2018). Students' feedback of mdpbl approach and the learning impact towards computer networks teaching and learning. *International Journal of Educational Methodology*, 4(1), 37-43.
- Zarro, M. & Hall, K. (2012). *Social curation on the website Pinterest.com*. Paper presented at the American Society for Information Science and Technology, 1-9.
- Zephoria (2019) The Top 20 Valuable Facebook Statistics – Updated March 2019  
<https://zephoria.com/top-15-valuable-facebook-statistics/>
- Zhang, J. (2013). A strategic issue management (SIM) approach to social media use in public diplomacy. *American Behavioral Scientist*, 57(9), 63-75.
- Zhang, G. & Zeller, N. (2016). A longitudinal investigation of the relationship between teacher preparation and teacher retention. *Teacher Education Quarterly*, 43(2), 73-92.
- Zhang, J., Yuan, R., & Yu, S. (2017). What impedes the development of professional learning communities in China? Perceptions from leaders and frontline teachers in three schools in Shanghai. *Educational Management Administration & Leadership*, 45(2), 219–237.
- Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college- and university-based teacher education. *Journal of Teacher Education*, 61(1-2), 89-99.
- Zimmerman, J. A. & May, J. J. (2003). Providing effective professional development: What is holding us back? *American Secondary Education*, 31(2), 37-48.

APPENDIX A:  
SURVEY LETTER



University  
of Houston  
Clear Lake

Dear Pre-Service Teacher,


Greetings! I am conducting a study to examine the role of social media as an educational tool among pre-service teachers. This study is focused on elementary and secondary level pre-service teachers who currently use some form of social media for instructional resources, professional training, and teacher collaboration. Your participation could impact how teacher development is designed for pre-service teachers ensuring candidates are well prepared to enter the classroom upon graduation.

Please respond to each question since answering all the questions will make the survey most useful. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. No obvious undue risks will be endured. In addition, you may not benefit directly from your participation in the study. This survey will take approximately 10 minutes to complete, and all your responses will be kept completely confidential. If you choose to participate, please click on this link to open the survey.

[Link to survey: Teacher's Use of Social Media](#)

Your cooperation is greatly appreciated and your willingness to participate in this study is implied if you proceed with completing the survey. Your completion of the *Teachers' Use of Social Media Survey* is not only appreciated, but invaluable to the future of pre-service teacher preparation programs, as well as new teacher development in school districts. If you have any further questions, please feel free to contact me at [EubanksL3262@uhcl.edu](mailto:EubanksL3262@uhcl.edu). Thank you!

Sincerely,

Lecia Eubanks  
The University of Houston Clear-Lake  
  
[EubanksL3262@uhcl.edu](mailto:EubanksL3262@uhcl.edu)

## APPENDIX B:

### INFORMED CONSENT

#### Informed Consent to Participate in Research

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether to participate.

Title: The Role of Social Media as an Educational Tool Among Pre-Service Student

Investigator(s): Lecia Eubanks

Faculty Sponsor: Jana Willis, Ph.D.

#### PURPOSE OF THE STUDY

The purpose of this research is to examine how pre-service teachers are utilizing social media for instructional resources, best practices, and teacher collaboration.

#### PROCEDURES

The research procedures are as follows: The participants will be asked to meet at a convenient time and location to participate in an interview. The participants will be asked open-ended questions about their use of social media for the purposes of professional growth. The responses will be recorded for accuracy.

#### EXPECTED DURATION

The total anticipated time commitment will be approximately 30-45 minutes.

#### RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

#### BENEFITS TO THE SUBJECT

There is no direct benefit received from your participation in this study, but your participation will help the investigator(s) better understand the use of social media by teachers and its influence on professional growth.

#### CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Student Investigator for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

#### FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

#### INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.



## CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

If you have additional questions during this study about the research or any related problem, you may contact the Student Researcher, Lecia Eubanks, at phone number [REDACTED] or by email at EubanksL3262@uhcl.edu. The Faculty Sponsor Jana Willis, Ph.D. may be contacted by email at willis@uhcl.edu.

## SIGNATURES:

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principal Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name: \_\_\_\_\_

Signature of Subject: \_\_\_\_\_

Date: \_\_\_\_\_

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title: \_\_\_\_\_

Signature of Person Obtaining Consent: \_\_\_\_\_

Date: \_\_\_\_\_

APPENDIX C:  
INTERVIEW QUESTIONS

Interview Questions

The following represents a list of questions for the participants in the oral interview.

Since the questions will be asked in the context of a dynamic conversation, the following list provides an outline of the interview. The wording of questions during live interviews may differ slightly or there may be follow up questions based on a participant's answer.


1. What prompted you to join the field of education?
2. What grade level and subjects do you plan to teach?
3. How have the university and your field experiences prepared you to have your own classroom?
4. What do you feel you are not prepared for regarding being a teacher?
5. How have you utilized social media to help with that preparation?
6. How do you define social media and what sites do you consider to be social media?
7. Which social media sites do you use and when did you start using them?
8. How has your social media usage changed over time?
9. Do you use social media sites in a way that relates to your future career? If so, which ones and what have you used them for?
10. Share with me your most favored social networking site you use for professional use and explain why you selected it.
11. Have you used social media to collaborate with students, educators, and/or professionals? If so, tell me about the relationship and what are the benefits?
12. How do you decide who to follow?
13. What motivates you to participate in social networking sites for professional purposes?
14. What do spend the most time learning about through social media?
15. What do you believe are the benefits of using social media as an educational tool? What are the drawbacks?

## APPENDIX D:

### SURVEY PERMISSION

#### Teachers' Use of Twitter Survey Permission

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**Lecia Eubanks** <lecia.eubanks@gmail.com> Aug 2 (2 days ago) ☆ ↶ ▾  
to aforte ▾

Dr. Forte,


I hope you don't mind me reaching out to you but I have been reading some of your research on twitter as a resource for teachers. I am currently a doctoral student and my research is focused on the role of social media as an educational tool for pre-service teachers. I have been trying to locate a copy of the survey tool you used for your research but have been unsuccessful. I was hoping you wouldn't mind sharing it.

If the survey originated with you, I was also hoping to get your permission to modify, reproduce, and use parts of your instrument for my dissertation. Would this be acceptable?

Thank you in advance for considering this request!

\*\*\*

---

**Forte,Andrea** <af468@drexel.edu> 5:10 am (1 day ago) ☆ ↶ ▾  
to me ▾

Images are not displayed. [Display images below](#) - Always display images from af468@drexel.edu

Hi Lecia,

Sure, here's an unformatted version of the survey, I believe it was deployed on qualtrics. You can use it however you'd like!

Andrea

--  
Andrea Forte  
Associate Professor, Information Science  
College of Computing and Informatics  
Drexel University, Philadelphia PA 19104  
[aforte@drexel.edu](mailto:aforte@drexel.edu) | 404-242-3813

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APPENDIX E:  
SURVEY

## Teacher's Use of Social Media

Welcome

Thank you for agreeing to take this survey about elementary and secondary teachers' use of social media. It should take you roughly 15-20 minutes to complete.

Please read the following information carefully and indicate your consent to proceed.

By completing this survey and submitting it, you indicate that you understand the data will be used for research purposes and that you are allowing the researcher, Lecia Eubanks, to use your data in her study.

Participation is voluntary, and you may stop participation at any time or skip any questions that you don't want to answer. You may participate in this survey anonymously; however, if you are willing to be contacted for a follow-up interview, you may include your email address at the end of the survey. This information will only be used to contact you and then it will be removed from the dataset and will not be stored. No personal or identifying information about you or any participant will be included in reports or publications about this work.

There are no foreseeable risks to you, and we do not expect you to have immediate or personal benefits from participating, but your answers will help us better understand how social media is being used.

If you have further questions about this survey or the research project, please contact Lecia Eubanks ([EubanksL3262@uhcl.edu](mailto:EubanksL3262@uhcl.edu)).

\* Required

1. I understand and consent to the above information. \*

*Mark only one oval.*

☐ Yes

☐ No

#### Basic Information

2. What is your gender?

*Mark only one oval.*

☐ Female

☐ Male

☐ Other: \_\_\_\_\_

3. What is your age?

\_\_\_\_\_

4. What year of school are you currently in?

*Mark only one oval.*

- ☐ Year 1
- ☐ Year 2
- ☐ Year 3
- ☐ Year 4
- ☐ Other: \_\_\_\_\_

5. What grade level are you preparing to teach?

*Mark only one oval.*

- ☐ Elementary (PK-5)
- ☐ Middle School (6-8)
- ☐ High School (9-12)

6. What subject are you preparing to teach?

*Mark only one oval.*

☐ All subjects (self-contained classroom)

☐ ELAR (Reading and Language Arts)

☐ Social Studies

☐ Math

☐ Science

☐ Other: \_\_\_\_\_

7. Which of these categories best describes you?

*Check all that apply.*

☐ American Indian

☐ Asian or Pacific Islander

☐ Black, African American

☐ Hispanic

☐ White, non-Hispanic

☐ Multiethnic

Other: ☐ \_\_\_\_\_



8. What is the highest degree you plan to earn?

*Mark only one oval.*

- ☐ Associates
- ☐ Bachelors
- ☐ Masters
- ☐ Doctorate

9. As a pre-service teacher, how many hours have you worked with children in an educational setting (practicum field experiences, etc.)?

---

#### Social Media Basics

10. Which social media accounts do you have?

*Check all that apply.*

- ☐ Facebook
- ☐ Twitter
- ☐ Instagram
- ☐ Pinterest
- ☐ You Tube

Other: ☐ 

---

11. How many years have you been active on social media?

*Mark only one oval.*

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 2-3 years
- ☐ 3-4 years
- ☐ 4-5 years
- ☐ More than 5 years

12. How often do you post on social media?

*Mark only one oval.*

- ☐ Several times a day
- ☐ Once or twice a day
- ☐ Several times a week
- ☐ Once or twice a week
- ☐ Less than once or twice a week

13. How would you characterize your social media use?

*Mark only one oval.*

- ☐ Exclusively personal
- ☐ Mostly personal
- ☐ A mix of personal and professional
- ☐ Mostly professional
- ☐ Exclusively professional

14. When you post on social media, how often do you share information for the benefit of other educators? \*

*Mark only one oval.*

	1	2	3	4	5	
Always	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Never

15. Do you follow other educators on social media?

*Mark only one oval.*

- ☐ Yes
- ☐ No

16. If you use social media for professional use, what activity are you doing most? \*

*Mark only one oval.*

- ☐ getting lesson plan ideas
- ☐ finding resources
- ☐ talking to other educators
- ☐ professional training

17. How strong do you believe the potential is for social media to be used as a learning tool?

*Mark only one oval.*

	1	2	3	4	
high potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	no opinion

18. Which social media medium do you use mostly frequently for professional use?

*Mark only one oval.*

☐ Facebook

☐ Twitter

☐ Instagram

☐ Pinterest

☐ You Tube

☐ Other: \_\_\_\_\_

19. Do you have any further comments on your use of social media?

\_\_\_\_\_

20. If you are willing to participate in a follow-up interview about your social media use, please provide a contact email address below. The interview should last 30-60 minutes and will be recorded and transcribed for analysis. This address will not be used for any other purpose and it, along with any identifying information you share, will be kept strictly confidential. Not all respondents will be contacted for an interview, but if you are contacted, you are free to decline or withdraw from the study at any time.

\_\_\_\_\_

**Thank you!!!**

Thank you for taking this survey. Please pass it on to your colleagues who use social media!