

2021

Perspectives on the Use of Technology as a Home–School Communication and Parent Partnership Tool

Julie Christine Hirst
Walden University

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Walden University

College of Education

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Julie C. Hirst

has been found to be complete and satisfactory in all respects,
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Walden University

2021

Abstract

Perspectives on the Use of Technology as a Home–School Communication and Parent
Partnership Tool

by

Julie C. Hirst

MS, Walden University, 2003

BA, California State University San Bernardino, 1996

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

Walden University

August 2021

Abstract

Effective communication between home and school is known to increase student achievement. Although technology has the potential to change how schools communicate with parents, most existing research focuses on how schools use technology as a pedagogical tool. The purpose of this generic qualitative study was to address the identified gap in the literature by exploring parent and educator perspectives on how schools and parents could use technology to encourage home–school communication and parent partnership. The conceptual framework included work in parent involvement, student achievement, and using technology as a communication tool. Epstein et al.’s six types of involvement framework was used to develop interview questions and provide a priori coding. Data were collected through semi structured interviews with 10 K-8 educators and five K-12 parents from public schools in Southern California. Yin’s five-stage analytical process was used to compile, disassemble, reassemble, interpret, and present the findings from the data. Four cycles of coding were used: in vivo, descriptive, a priori, and emergent. Key findings include (a) the pandemic has increased the use of technology for teaching, learning, communicating, and parent partnership; (b) parents prefer two-way communication methods; (c) issues of equity are of great concern; and (d) technology can enhance parenting, communicating, volunteering, learning from home, decision making, community collaboration, relationships, and participation at events. This study’s results may effect positive social change by providing data to inform policy and decision making in the areas of technology, communication, and parent partnership. Understanding how educators and parents use technology to foster communication is essential to increasing student achievement through better parent partnership.

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Dedication

I dedicate this dissertation to my daughter Kallie Lynch for being the inspiration I needed to go back to school and complete this degree. I know that we joke that I had to one up you and become a doctor before you, but your courage to go out and attend college away from home, and to pursue a field in the medical profession, really did make me want to become a better scholar. Your dedication to your own studies inspires me every day. You can do anything you set your mind to, and I can't wait to watch you earn your white coat from Loma Linda University. You can do this Kallie. You are destined for remarkable things and your Dad and I are so proud of you.

Acknowledgments

I would like to thank my family for supporting me on this journey. To my husband Brian, you are my rock, my solace, my everything, and I would not have been able to dedicate time to my studies had you not picked up the slack around the house and with the kids. Your continual support of my endeavors is appreciated more than you will ever know, and I am eternally grateful for you.

To my children Kacey, Kallie, Alex, and Max thank you for giving up time with your mother so I could complete this educational journey and for the many afternoons where we were all working alongside each other on our homework. This degree belongs to us all.

A special thank you to Kacey for always prodding me to get my work done; but knowing when I needed a break and being my ride or die girl for any adventure. I am watching your rise at Universal, and I am so proud of how you take on challenges and excel. You are so much more than you give yourself credit for. You will have your own business one day and I am confident you will be an amazing leader.

To my parents Linda and Russ Drew, who instilled in me an outstanding work ethic, and to my best friend and chosen sister, Sabine Howard, thank you for putting up with endless hours of me expressing frustration with this process. I could not have done this without your encouragement, support and understanding.

Lastly, I would like to recognize my chairs Dr. Naffziger and Dr. Hunt for your support and guidance through this process. The feedback you gave has helped me to become more resilient, focused and patient through the research process. I appreciate you.

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Chapter 1: Introduction to the Study

According to extensive research completed over the last 50 years, parent involvement is critical to student success (Cano et al., 2016; Đurišić & Bunijevac, 2017; Hornby & Blackwell, 2018; Patrikakou, 2016). The California Department of Education (CDE) recognizes the importance of parent involvement. It has created a framework to ensure that districts and schools include parent involvement practices in both the Local Control Accountability Plan and Single Plan for Student Achievement (California Department of Education [CDE], 2014). Most states and districts have written policies that guide schools to communicate with stakeholders in ways that enhance student achievement (Epstein et al., 2019). The problem is, despite years of research and policy development showing the importance of parent involvement in education, many educators still report a lack of parent involvement in today's schools (Epstein et al., 2019). Families in Schools (2015) found that California schools continually struggle to engage parents effectively.

Barriers to parent involvement can include but are not limited to barriers with language, lack of parental education, not knowing how to help students, lack of time, work constraints, parent perception of which types of activities are essential to student growth, and educator inability to foster effective communication between home and school (Epstein et al., 2019; Hornby & Blackwell, 2018).

The effective implementation of communication between home and school is an essential component for meaningful parent involvement (Meier & Lemmer, 2015; Ule et al., 2015). Students whose parents and teachers engage in communication are more likely

to earn higher grades, complete homework assignments, have good behavior, better attendance, fail fewer classes, experience less stress, feel more positive in school, and participate more in classroom activities (Sheldon & Jung, 2015).

The Every Student Succeeds Act (ESSA) of 2015 recognizes the benefit of communication and mandates that schools describe how they conduct meaningful two-way communication with parents (Schwartz, 2017). Advocates believe schools could use technology to help schools meet the law's requirement for parent engagement if used in a meaningful way (Schwartz, 2017). Technology offers new avenues for schools to communicate meaningfully with parents to support student learning, but many schools are not taking advantage of all that technology offers (Goodall, 2016). See et al., (2021) identified that while a large body of research exists examining the use of educational technology in schools, few focused on the use of educational technology in promoting home-school communication.

The purpose of this generic qualitative study was to address the lack of research in the area of using technology as a communication tool between home and school (Goodall, 2016, See et al., 2021) by exploring both parent and educator perceptions on how schools and parents can use technology to encourage meaningful home-school communication and parent partnership. Social constructivism supports the idea that meaningful interactions between home and school are essential to students' academic growth (Olmstead, 2013).

The conceptual framework for this study included work in parent involvement, student achievement, and using technology as a communication tool. I used Epstein et

al.'s (2019). six types of involvement framework to develop interview questions and categorize emerging themes found in the data. Epstein et al.'s (2019). framework, derived from social constructivist theory, supports the idea that families and community play a vital role in how children make meaning of the world around them. Central to the framework is the idea that the school and family collaborate to ensure the student's well-being (Epstein et al. 2019).

In this study, I explored educators' and parents' perceptions regarding how educators and parents could use technology to encourage home-school communication and parent partnership. This study's results can effect positive social change by providing data to district leaders that can inform policy, decision making, and action in the areas of technology, communication, and parent involvement. The basic foundation of all parent involvement policies is a theory of how organizations connect (Epstein et al., 2019). Schools make choices about the connections between home, school, and community, ranging from little interaction to more frequent interaction. In solid partnership programs, schools help students understand and communicate with families (Epstein, 2019; Dillon & Nixon, 2019; Gu, 2017). Understanding how educators and parents use technology to foster connections is vital to increasing student achievement through better parent involvement. In the remainder of this chapter, I provide an overview of my study, including the background, problem statement, nature of the study, and an overview of the conceptual framework discussed in depth in Chapter 3.

Background

This study addressed a gap in the literature and practice of using technology as a communication tool between home and school by exploring both parent and educator perceptions of how technology can encourage home–school communication and parent partnership. Although much of the research on using technology in schools has addressed pedagogical purposes, there is a paucity of literature addressing technology as a communication tool, which may be a mitigating factor in its lack of use for this purpose (Goodall, 2016). Gauvreau and Sandall (2019) found that teachers feel unprepared to communicate effectively with families, especially those from dissimilar cultural and linguistic backgrounds.

Technological advances have made owning technology more affordable and accessible (Gauvreau & Sandall, 2019). Most families own at least one device, such as a cell phone, tablet, laptop, or computer. Thompson et al. (2015) noted that parents often prefer electronic communication methods, including text and email, over schools' more traditional forms of communication. Frequent communication between families and schools is foundational to a school's success, yet educators often struggle to regularly communicate with their students' families in meaningful ways (Gauvreau & Sandall, 2019). A recent Harris Poll showed that while almost all K-12 teachers reported having some training in integrating technology into their classroom lessons, 62% reported having little to no training in communicating with stakeholders using technology, including social media platforms (Chang, 2016).

The purpose of this study was to address the gap in practice and research by exploring how schools can use technology to encourage home–school communication and parent partnership with the understanding that frequent home–school communication improves parent partnership and overall student success (Cheng & Chen, 2018; Meier & Lemmer, 2015; Russell, 2017).

Problem Statement

The effective implementation of two-way communication between home and school is an essential component for developing meaningful parent partnership (Cheng & Chen, 2018; Meier & Lemmer, 2015; Russell, 2017), an area previously identified by researchers as still lacking in today’s schools (Malone, 2015). Technology offers new avenues for schools to communicate with parents to support student learning, but many schools are not taking advantage of all that technology offers (Goodall, 2016). The problem then becomes that although there has been extensive research on how educators use technology as a pedagogical tool, more research needs to be conducted on how technology can be used as a tool to promote effective communication and overall parent partnership (Goodall, 2016, See et al., 2021).

Purpose of Study

The purpose of this generic qualitative study was to address the identified gap in the literature and practice by exploring both parent and educator perceptions on how educators and parents can use technology to encourage home–school communication and parent partnership within schools in a suburban Southern California neighborhood. In this basic qualitative design, I interviewed administrators, teachers, and parents to gather their

perspectives on how educators and parents can use technology as a communication tool to encourage parent partnership. Relying on a social constructivist paradigm, I constructed meaning from the data using my participants' perceptions (Creswell, 2015). From the data collected in this study, patterns and themes emerged that identified critical perceptions that educators and parents have that lead to increased understanding of how educators and parents can use technology as a home–school communication and parent partnership tool.

Research Questions

There was a possibility that educators and parents have different perceptions about how educators and parents can use technology to encourage home–school communication and parent partnership. Malone (2015) found a limited congruency between parent and educator views on what constitutes parent involvement. Previous researchers have recommended that future research include conversations between parents and educators exploring preferred technology modes, usage, efficacy, and participation (Goodall, 2016; Thompson et al., 2015; Willis & Exley, 2018). In this study, I sought to explore educators' and parents' perceptions to determine similarities and differences and what influence these perceptions have on how educators and parents use technology as a communication tool to encourage home–school communication and parent partnership. The research questions for this study were as follows:

RQ1: What are educators' perspectives on how technology can be used to encourage home–school communication?

RQ2: What are educators' perspectives on how technology can be used to encourage parent partnership?

RQ3: What are parents' perspectives on how technology can be used to encourage home-school communication?

RQ4: What are parents' perspectives on how technology can be used to encourage parent partnership?

Conceptual Framework

The purpose of this qualitative study was to address the gap between practice and research in the area of using technology as a communication tool between home and school by exploring both parent and educator perspectives on how technology could be used to encourage home-school communication and parent partnership (Goodall, 2016, See et al., 2021). Social constructivism supports the idea that meaningful positive interactions between home and school are essential to students' overall academic growth (Olmstead, 2013). Vygotsky (1978) posited that a child's first teacher is their parent, and their first learning occurs in the community in which they live. Social constructivists view learning as a social process where knowledge and meaning are constructed through collaborative experiences and seek to understand the world in which they live and work (Vygotsky, 1978). The goal of research from a social constructivist viewpoint is to rely as much as possible on the participants' views of the situation in order to construct meaning from the data (Creswell, 2015). Because schools, not homes, tend to initiate communication, they often define parent partnership without considering the parent

perspective (Walsh et al., 2014). My research, in keeping with the constructivist paradigm, examined all participants' perspectives.

The conceptual framework for this study included work in the areas of parent involvement, student achievement, and using technology as a communication tool. I used Epstein et al.'s (2019) six types of involvement framework to develop interview questions and categorize emerging themes found in the data. Epstein et al.'s work, based on many years of field research, focused on six aspects of involvement:

1. parenting
2. communicating
3. volunteering
4. learning at home
5. decision making
6. collaborating with the community

Epstein et al.'s (2019) framework, derived from Vygotskian theory, supported the idea that families and community play a vital role in how children make meaning of the world around them; the school, family, and community all collaborate to ensure the well-being of the student.

Nature of the Study

This study followed a generic qualitative research design. Generic qualitative research refers to an approach where researchers seek to solve a problem, effect a change, or identify relevant themes without overreliance on epistemological or ontological paradigms (Mihaus, 2019). Researchers in the educational field often use a generic

qualitative design (Caelli et al., 2003; Yin, 2016). Educational Researchers conduct academic research to improve practice (Merriam, 2016), which is consistent with exploring educator and parent perceptions of how technology can encourage meaningful home–school communication and parent involvement. I chose a generic qualitative research design to allow me the opportunity to explore the perceptions and experiences of parents, teachers, and administrators more fully than could be attained in a quantitative survey with preset parameters. Using a semi structured interview approach provided me flexibility within the interview process, allowing me to adjust questioning as context necessitated (Jamshed, 2014).

Definitions

The terms relevant to this study are the following:

Parent involvement: Parent involvement is defined as being aware and involved in schoolwork, understanding the interaction between parenting skills and student success in school, and possessing a commitment to consistent communication with educators about student progress (Pate & Andrews, 2006).

Parent partnership: Epstein et al. builds on parent involvement by adding a partnership aspect. In parent partnerships, the parents, educators, and other community members all share a responsibility for students' learning and development (Epstein et al., 2019).

Home–school communication: Correspondence that goes back and forth between the home and school, where both the home and school are equal participants.

Technology: Methods, systems, and devices that are the result of scientific knowledge being used for practical purposes (Collins Dictionary, n.d.).

Assumptions

Assumptions are notions that are accepted as plausible by researchers and peers (Simon, 2011). Assumptions are unsubstantiated facts that are assumed to be true (Creswell, 2015). The assumptions made for this study were as follows: through strict adherence to participant confidentiality procedures and participant understanding that participation was voluntary and revocable at any time, all participants answered the questions honestly and gave an accurate reflection of their perspectives; the study's inclusion criteria were appropriate for the topic and removed the potential for positional coercion from the researcher. All participants who possessed the inclusionary experience related to the study participated because they were interested in the research and honestly answered the questions; participants had an intrinsic desire to participate in the study. Participants received no compensation; therefore, it is assumed that the research data collected are authentic and honest.

Scope and Delimitations

The scope of this study was K-12 educator and parent perceptions. This study was initially going to be limited to K-8 administrators, teachers, and parents from one Southern California school district; however, lack of parent interest within the original district led me to recruit three parents from outside of the district as well. I specifically focused on the perceptions of teachers with at least 1 full year of classroom teaching experience outside of the school where I work, who had experience using technology in

the classroom; administrators with at least 1 full year of administrative experience outside of the school in which I work, who had experience using technology as a tool in their position; and parents who have children attending a school outside of the school in which I work. Potential participants that fell outside of the selection criteria were not chosen to participate. Each participant was interviewed once for this study using a semi-structured interview process. Each participant had the opportunity to review their responses for accuracy, revision and elaboration. Participants with various of experience levels, ethnicities, gender, and income levels were purposely selected to represent a diverse spectrum of perceptions.

The study's delimitations included limiting the study to educators who had at least 1 year of experience within the district of study and a minimum of one year of experience using technology in their classroom or administrative position. The educators' experience reflected the K-8 grade range as the district only housed K-8 students. The educators came from one district of study in Southern California. Parents were limited to the Southern California region. Current educators and administrators of 9-12 grade students were excluded due to the district only serving K-8 students.

Limitations

This study had several limitations based on design and methodology that may affect the study findings' transferability (Price & Murnan, 2013). These limitations included sample size, study population, personal bias, and researcher inexperience. The sample size was a limitation of this study and had the potential to limit the study's transferability. There are 307,470 K-12 teachers in California (Cal Ed Facts, 2021); in

this study, I interviewed only four teachers, five administrators, one counselor, and five parents, which may affect the applicability of the findings.

The population was another possible limitation of this study. The participants chosen for this study are from Title I, low achieving, socioeconomically disadvantaged, ethnically diverse suburban districts in California. The study findings may not be transferable to parents, teachers, and administrators from differing regions, ethnicities, or economic backgrounds. Also, the majority of participants were from a K-8 school district, so findings may not be transferable to the 9-12 school setting. To address this limitation, I purposefully selected participants from various ethnicities, grades, departments, education, and economic levels to maximize the study's diversity of representation.

My own experience may have created bias and limited this study. I am currently an administrator and have also been both a teacher and parent within the study's school district. I have experienced the district's struggle with parent involvement, low test scores, and technology's pedagogical usage first-hand. To address any personal bias, I selected to interview teachers, parents, and administrators from outside of my school, use member checking to ensure my interpretation of the data was grounded in the participants' experience, engage in reflective bracketing, and document my process with fidelity.

My inexperience as a researcher may have created a limitation to this study. To address my inexperience, I used a research design appropriate for the type of research I conducted. I sought expert input and feedback on instruments used to assure validity. I

field-tested the questions with a small group of individuals that resemble the target participants (i.e., administrators, teachers, and parents). I used member checking to ensure participant responses were valid and interpreted accurately. In addition to the above measures, I completed the National Institutes of Health (NIH) web certification on protecting human research participants.

Significance

This study was significant because it addressed an earlier gap in research identified by Goodall (2016) by exploring how technology can be used as a pedagogical tool and as a tool for two-way communication between home and school. Effective communication is crucial for building meaningful school and family partnerships (Epstein et al., 2019). Effective communication between home and school establishes the foundation for all other components of parental engagement in education. It has the potential to increase motivation for learning, improving behavior, attendance, test scores, and encouraging a more positive attitude about the importance of education (Đurišić & Bunjevac, 2017; Epstein et al., 2019; Hornby & Blackwell, 2018; Park et al., 2017; Patrikakou, 2016). The more parents and educators share and communicate with each other about a student, the stronger the abilities of both to help that student achieve become (Epstein et al., 2019).

This study's results can effect positive social change by providing data to district leaders that may inform policy and decision making in the areas of technology, communication, and parent partnership. Understanding how educators and parents use technology to foster home-school communication is essential to increasing student

achievement through better parent engagement. It gives educators and district policymakers greater insight into which communication policies and practices support better parent partnership.

Summary

In this section, I introduced the problem that although there is an extensive amount of research examining how technology is being used as a pedagogical tool, more research needs to be conducted on how it can be used as a tool to promote effective communication and overall parent involvement (Goodall, 2016, See et al., 2021). I provided an overview of the conceptual framework based on Vygotsky's (1978) theory of social constructivism and Epstein et al. (2019) theory of the overlapping spheres of influence and six types of involvement framework. This topic is significant because there is a lack of research examining how technology can be used not only as a pedagogical tool but as a tool for home-school communication that increases parent involvement, which educators have found still lacks in many schools. As demonstrated in and Willis and Exley's (2018) study, it is also possible that there is a difference in educator and parent perceptions on this topic; this study may help close the gap in practice related to research in this area and provide educational policymakers reliable data that may inform policy and decision making in the areas of technology, communication, and parent involvement. Chapter 2 presents a review of the literature on parent involvement, technology, student achievement, and Epstein et al.'s (2019) framework, which served as the conceptual framework's foundation.

Chapter 2: Literature Review

Chapter 2 provides an in-depth discussion of the literature on the topic of study, using technology as a home–school communication tool that encourages home–school communication and parent involvement. The chapter begins with an overview of the strategy employed for the literature search, followed by a comprehensive examination of the theoretical and conceptual framework, and finishes with a detailed review of the relevant research on this topic, including a discussion of the policies governing parent involvement and partnership in schools, factors affecting student achievement, research on the importance of and barriers to parent involvement, home–school communication and using technology as a communication tool. The chapter concludes with a summary of the literature review and includes possible implications for this study.

According to research completed over the last 50 years, parent involvement is critical to student success (Đurišić & Bunjevac, 2017; Hornby & Blackwell, 2018; Patrikakou, 2016). The problem is, despite years of research showing the importance of parent involvement in education, many educators still report a general lack of parent involvement in schools (Epstein et al., 2019; Hornby & Blackwell, 2018). The implementation of two-way communication between home and school is essential for creating meaningful parent involvement (Epstein et al., 2019; Meier & Lemmer, 2015; Russell, 2017; Yotyodying & Wild, 2019). Technology offers new avenues for schools to communicate with parents, but many schools are not taking advantage of what technology offers (Goodall, 2016). Although much of the research on using technology in schools address pedagogical purposes, there is a paucity of literature addressing

technology as a communication tool, which may be a factor in its lack of use for this purpose (Goodall, 2016). The purpose of this generic qualitative study was to address this gap in the literature by exploring both parent and educator perceptions of how educators and parents use technology to foster more meaningful home–school communication and parent partnership within schools.

Literature Search Strategy

To find relevant research, I searched available literature using the Walden Student Library, Google Scholar, ProQuest Central, SAGE Journal, ERIC, Education Source, Mendeley, International Journal of Education and Research, Deep Dyve, and Paperity. I used keywords and Boolean phrases such as *technology*, *ESSA*, *social networking*, *social media*, *home school connection*, *parent involvement*, *social-constructivism*, *student success*, *Epstein*, *Dempsey*, *Lareau*, *Vygotsky*, *electronic forms of communication*; *effective parent involvement strategies*; *barriers to parent involvement*; *using technology to increase parent involvement*; *factors affecting student achievement*; *technology as a communication tool*, *six types of parent involvement*, and *overlapping spheres of influence*. Searches were limited to peer-reviewed journals published within the last 5 years, but also included seminal research appropriate and relevant to the framework and parent involvement, which included work outside of the 5-year range. In addition to peer-reviewed journals, this review included white and gray papers, dissertations, governmental reports, and books written on the topic. I used dissertations on comparable topics as a method of finding resources beyond what I was mining from the educational

databases. I continued the literature search strategy until I reached an inundation point on the current literature addressing the different components of my study.

Conceptual Framework/Theoretical Foundation

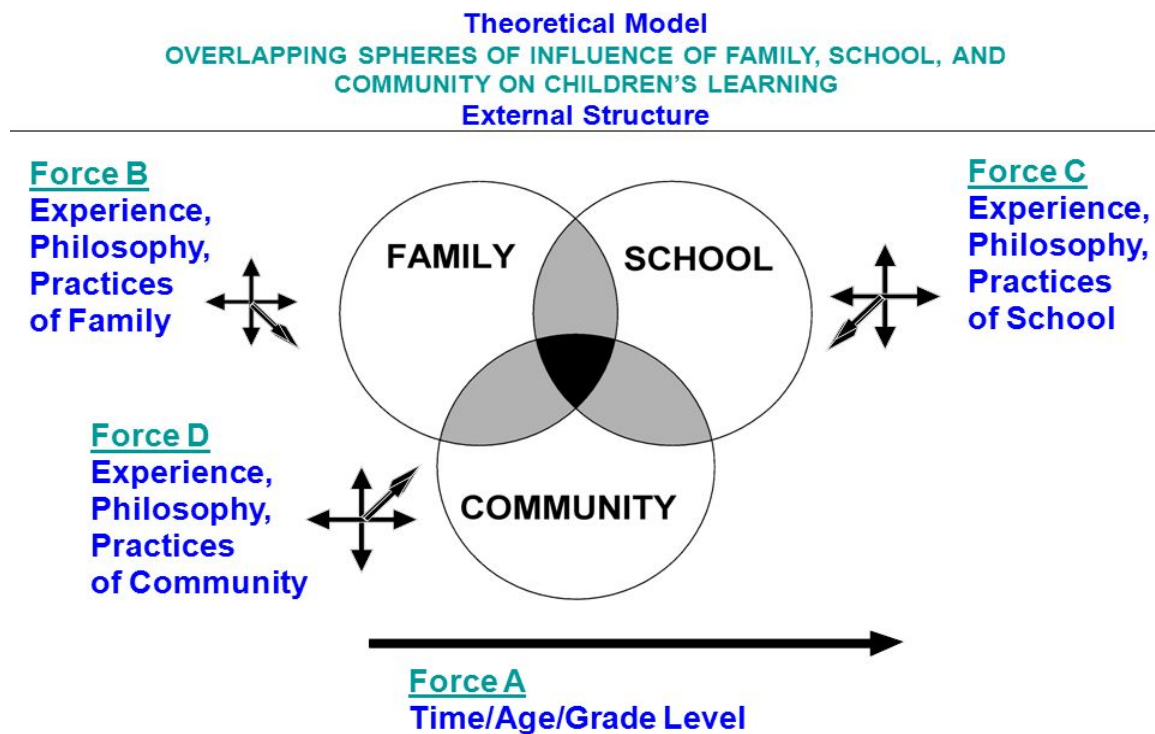
The focus of this study was on how technology can encourage home–school communication and parent partnership. Social constructivists view learning as a social process where people create knowledge and meaning through collaborative experiences. The epistemological approach of social constructivism supported the idea that meaningful communications between home and school are essential to a student’s overall academic growth (Olmstead, 2013). Vygotsky (1978) posited that a child’s first teacher is their parent, and their first learning occurs in the community in which they live. Vygotsky’s theory was essential to understanding how Epstein et al. (2019) overlapping spheres of influence play a role in developing a child’s academic growth.

This study’s conceptual framework was based on Epstein et al. (2019) overlapping spheres of influence and six types of parent involvement framework. Epstein began her research in 1981 out of a need to adapt the sociological theory of effective organizations to focus on student learning and success and a need to revise Bronfenbrenner’s (1979) ecological theory of child development to represent the dynamics of changing relationships of individuals across contexts for student learning (Epstein & Sheldon, 2006). Whereas Bronfenbrenner’s theory focused on the home and school as the primary agents in child development, Epstein felt that the community also played a vital role (Epstein & Sheldon, 2006). Epstein’s research focuses on the

partnerships needed between the school, family, and community to improve student learning outcomes and is derived from social constructivist and ecological paradigms.

Model of Overlapping Spheres of Influence

The model of the overlapping spheres of influence posits that children learn at home, in the school, and the community, but learn better when the school, the home, and the community work in partnership with each other to develop, support, and guide their growth and learning (Epstein et al., 2019). The model is based on the assumption that the child's growth and achievement are the main reasons for school, family, and community partnerships. In Epstein's model, the student is primarily responsible for their learning; however, when the overlapping spheres of school, home, and community work together, they are more apt to see the value in learning. At the heart of the model is the child, family, school, and community operating as influences on the child. These influences combine and interact with the student, moving closer or farther away from each other by shifting external and internal forces. The external forces (see Figure 1) at work in the theory include (a) time/age/grade level; (b) experience, philosophy, practices of family; (c) experience, philosophy, and practices of school; and (d) experience, philosophy, and practices of community, while the internal forces (see Figure 2) include interinstitutional interactions between all families, children, educators, and the entire community and individual interactions between one parent, child, teacher, and community partner (Epstein et al., 2019).

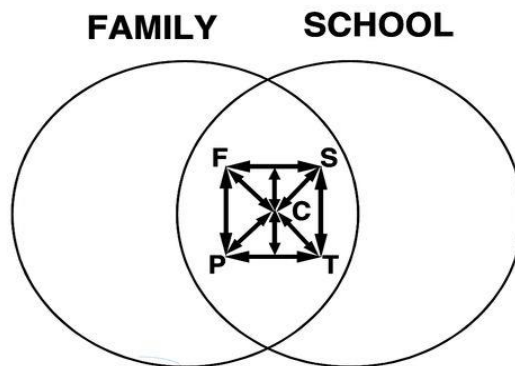
Figure 1*Overlapping Spheres of Influence, External Structure*

See *Handbook* chapters 4 and 5 for the *Internal structure* of interpersonal connections in this model.

Note From *School, Family, and Community Partnerships: Your Handbook for Action* (4th ed.), by J. L. Epstein, M. G. Sanders, S. B. Sheldon, B. S. Simon, K. C. Salinas, N. R. Jansorn, F. L. Van Voorhis, C. S. Martin, B. G. Thomas, M. D. Greenfeld, D. J. Hutchins, & K. J. Williams, 2019, Corwin Press. Copyright 2019 by Corwin Press. Reprinted with permission.

Figure 2*Overlapping Spheres of Influence, Internal Structure*

Theoretical Model
OVERLAPPING SPHERES OF INFLUENCE*
Internal Structure



KEY: *Inter-institutional interactions (in overlapping area)*

F = Family C = Child S = School P = Parent T = Teacher

Interactions include those at the institutional level (e.g., all families, children, educators, and entire community) and at the individual level (e.g., one parent, child, teacher, community partner).

***Note:** In the full model, the internal structure is extended to include the community (Co) and individual business and community agents (A), and interactions in the nonoverlapping areas.

Note. From *School, Family, and Community Partnerships: Your Handbook for Action* (4th ed.), by J. L. Epstein, M. G. Sanders, S. B. Sheldon, B. S. Simon, K. C. Salinas, N. R. Jansorn, F. L. Van Voorhis, C. S. Martin, B. G. Thomas, M. D. Greenfeld, D. J. Hutchins, & K. J. Williams, 2019, Corwin Press. Copyright 2019 by Corwin Press. Reprinted with permission.

Epstein et al. (2019) model of overlapping spheres of influence defines parent involvement as a partnership between schools, parents, and the community, with children being at the core of the model (Epstein et al., 2019). Although the model of overlapping spheres of influence defined parent involvement, it did not define what activities the stakeholders needed to participate in for the partnership to be successful. Epstein's later research focused on finding the activities that would lead to successful home-school partnerships and developed a framework of six types of involvement activities that would directly and successfully affect interactions within the spheres of influence.

Framework of Six Types of Involvement Activities

Epstein et al. (2019) framework for involvement defines parenting, communicating, volunteering, learning at home, decision making, and collaborating within the community as activities that successfully promote home-school-community partnerships (Epstein et al., 2019). Understanding how technology can increase involvement in these areas is key to developing effective parental partnership and e-involvement in schools.

Parenting helps families understand the growth and development of the child and create home conditions that support children as scholars during each phase of their educational journey. While parenting helps families understand their child as a student, it can also assist schools in understanding the dynamics of the family (Epstein et al., 2019). When schools understand families' philosophy, experience, and practice, they are more effective at developing trust and building partnerships that positively influence student growth and achievement.

Communicating with families about school events, programs, and student progress through effective means of two-way communication is a significant component to building effective partnerships. The school should provide various mediums for communication, and the parent and student should access these forms of communication as a resource for monitoring student progress and participating in the other five types of involvement (Epstein et al., 2019). Parents prefer two-way communication that offers parent participation and feedback over one-way communication methods (Sad et al., 2016). Technology allows schools to increase parent partnership through frequent and effective communication between home and school (Sad et al., 2016). Schools can take advantage of the latest technologies to communicate with parents and provide information and connect with them (Sad et al., 2016).

Volunteering time at school is also an essential aspect of the involvement framework. Schools should develop policies and practices that improve recruitment, training, scheduling, and location to involve as many parents as possible in supporting students and school programs (Epstein et al., 2019). Parents being physically present in the building, volunteering at school, and attending school activities are positively correlated with student success (Jaiswal, 2018). Technology offers asynchronous avenues for training, scheduling, and location options, but little research has been done to correlate its effects in this area on student success.

Learning at home includes involving families in supporting their children's acquisition of knowledge by creating opportunities for families to learn about developing home environments that are conducive to learning, and by creating opportunities that help

support their students in their academics, including homework, study habits, curricular projects, educational programs, and extra-curricular decisions (Epstein et al., 2019). Technology can provide opportunities to extend learning in all of these areas (Sad et al., 2016). Technology can provide access to school resources and learning platforms without the time constraints imposed by a typical school day, which allows parents to strengthen their participation in the academic success of their students (Sad et al., 2016); schools need to be mindful of digital equity issues when looking at how technology can be utilized in home environments to promote learning outside of the typical school day (Resta et al., 2018).

Decision making should encourage families to be participants in the school's decision-making processes by welcoming and encouraging parents to take an active role in school governance committees, parent organizations, and advocacy groups (Epstein et al., 2019). A recent national survey showed that only 42% of parents polled had participated in school committees and only 5%-6% in a governing committee (Noel et al., 2015). Of those who participated, more were of European descent and operated in higher income brackets (Noel et al., 2015). How technology is used to increase the decision-making capacity of parents of all ethnicities and income levels is something worth exploring and is answered through the findings in this study.

Collaboration with the community is the sixth type of involvement. It involves coordinating community, family, and school resources to ensure everyone is working together to ensure all students' success in the neighborhood (Epstein et al., 2019). The

addition of the community as an agent of change in a student's trajectory is one area that sets Epstein's work apart from that of others in her field.

Schools widely accept the framework as a practitioner manual for developing home-school-community partnerships. However, this framework focuses more on schools' actions and not on the actions of parents, who need to be significant participants in the framework if parent involvement is to be increased and enhanced. The six types of involvement included in the framework are relevant to this study as they are research-based and have been shown to be effective at creating meaningful parent involvement that could be enhanced by the use of technology, especially in communication.

Literature Review Related to Key Concepts and Variable

Government Policies

The Elementary and Secondary Education Act (ESEA) was signed into law in 1965 under Lyndon B. Johnson. It was designed to bring a full educational opportunity to all students (U.S. Department of Education, 2019). The ESSA, a reauthorization of ESEA and the No Child Left Behind Act (NCLB) of 2002, was signed into law in 2015 and is the most current reauthorization of ESEA. Since the beginning, the law intended to close the achievement gap by providing all children, especially those in low-income areas, the opportunity to receive a high-quality education regardless of their ethnicity, primary language, disability, socioeconomic status, or location (U.S. Department of Education, 2019). The purpose of ESEA was to provide additional resources to vulnerable students to ensure equity across educational systems. One way to ensure this equity was to give parents of underserved students a voice in their local school's decision-making policies.

Under ESSA, schools must include parents in the school's decision-making processes and policies to help the school improve student outcomes. The successful implementation of ESSA depends on the meaningful inclusion of parents and communities representing traditionally underserved students, including minorities, students with disabilities, and low-income students. One of the reasons that parent and family engagement plays such a prominent role in ESSA is that there is an impressive amount of research showing that parent involvement and family engagement is of critical importance to student achievement (Đurišić & Bunijevac, 2017; Epstein, 2019; Goodall, 2016; Hornby & Blackwell, 2018; Patrikakou, 2016). See & Gorad (2015) examined research on interventions for increasing student achievement outcomes and found that only interventions supporting parent engagement in their child's learning merited continued use and funding.

Section 1116 of ESSA spells out the expectations that states, districts, and schools must follow in parent and family involvement if ESSA federal funds are granted. Under ESSA, each district is required to set aside 1% of its Title I funding to carry out parent and family engagement activities (Elementary and Secondary Education Act of 1965 [ESEA], 2018). The federal government allocates Title I funds to the state. The state then allocates the funds to districts and then schools. The amount of money the district receives depends on the number and percent of students living in poverty. The amount a school receives depends on the percentage of students who participate in the free and reduced lunch program and on the district's individual decisions, including school achievement indicators. Title I funds must be used on at least one of the following

activities: (a) training school staff on research-based engagement strategies, (b) supporting programs that reach families at home, in the community, and at school, (c) disseminating information on the best practices for increasing family engagement – especially for increasing engagement for economically disadvantaged families, (d) sub-granting to collaborate with community-based organizations or businesses that have a history of increasing engagement, and (e) participating in activities that the district believes will increase parent and family engagement (ESEA of 1965, 2018).

A key component to ESSA is the outreach that districts and schools must do to include parents and families in the school’s decision-making processes. Outreach measures are to include (a) convening an annual meeting that informs parents of their right to be involved in the decision-making processes of the school, (b) providing flexible meeting times and regular opportunities for families to participate in the decision-making processes, (c) finding alternative ways to include parents who are not able to make it to the school, (d) addressing the importance of communication between families and staff by offering parent-teacher conferences, regular progress reports, (e) volunteering opportunities, (f) communicating in a language the parent understands, (g) providing information on academic standards, training on how to help students meet these standards, and (h) training for staff on the importance of including and communicating with parents (ESEA of 1965, 2018).

At the local level, the CDE, operating under the guidelines of ESSA, recognizes the importance of parent involvement and has created a framework to ensure that districts and schools include parent involvement practices in both the Local Control

Accountability Plan and Single Plan for Student Achievement. The CDE mandates that at least 1% of a school's Title 1 apportionment is allocated to parent involvement practices to increase parent engagement and student achievement (CDE, 2014). California has created the Local Control Funding Formula, which allows districts the autonomy to make funding decisions that directly support building powerful partnerships between educators and parents (Families in School, 2015).

Factors Affecting Student Achievement

Student achievement is one of the most prominent issues facing today's schools and is a primary reason for ESSA legislation. Despite a sustained focus on increasing home-school partnerships, gaps remain between policy rhetoric and practice, especially in high-poverty communities (Curry et al., 2016). Student achievement is the degree to which students meet or do not meet a set of competencies as evidenced by achievement indicators at the state and local level (Warren et al., 2018). ESEA, NCLB, and ESSA were created to close the noted achievement gap between underserved students and their more affluent peers. The achievement gap is widespread and is found in many classrooms regardless of location and is often tied to race and socioeconomic status (Al-Zoubi & Younes, 2015). Research conducted through the National Center for Education Statistics (NCES) shows that the gap begins before students start kindergarten and is a *school readiness gap* (Mulligan et al., 2019). Researchers have found that various factors, including cultural, structural, economic, medical, psychological, and parental, can affect student achievement and create a gap (Al-Zoubi & Younes, 2015). Hatch (2014) found

several factors that affect student achievement, including discipline referrals, homework completion, and parent involvement.

It is well documented, that parental factors, including race and socioeconomic status, profoundly impact how students achieve (Day & Dotterer; 2018, Erdener, 2016; Erol & Turhan; 2018). Researchers have found a positive correlation between parent involvement and higher student performance in academics; attendance, behavior, pass/fail ratios, and graduation rates (Heath et al., 2015). Low parental involvement occurs more often in low-income families (Wang et al., 2016). In her seminal work on unequal childhoods, Annette Lareau (2011) noted that low socioeconomic students are more likely to have limited parent involvement and lower academic achievement than their more affluent peers. Lareau identified three significant differences in how middle-class and poor working-class families handle everyday life; how family members use language, how kids spend their time, and how parents interact with schools and other institutions. Middle-class families tend to practice *concerted cultivation*, while poor, working-class families practice *natural growth*. In concerted cultivation, middle-class parents see parenting as a hands-on, labor-intensive endeavor that requires the cultivation of language skills, the acquisition, scheduling, and implementation of enrichment activities, and direct intervention in school and other institutions that interact with their children. Poor, working-class families tend to be more deferential, allowing what they view as the experts to make decisions regarding their children, allowing their children to have more autonomy and freedom in their choices, more time for play, and providing less effort on language acquisition and skill development activities, children are essentially

left to grow naturally. While both types of parenting have benefits, long term tracking of the children in Lareau's study showed that the children from the poor, working-class families continued to struggle well into adulthood not just because of academic performance, but because their parents did not prepare them with generalized knowledge about navigating systems and institutions (Lareau, 2015). Given this knowledge, the school then becomes a critical factor in leveling the playing field for all students and should look for opportunities to grow parental knowledge, efficacy, and involvement. Technology can change how schools interact and communicate with parents and could level the playing field in these areas.

Parent Involvement, Engagement and Partnership

There is a large amount of research that supports that learner outcomes improve when parents are actively involved and engaged in their children's learning (Castro et al., 2015; Epstein et al., 2019; Goodall & Montgomery, 2014; Kraft & Rogers, 2015; Park et al., 2017; Povey et al., 2016; Wang et al., 2016). The definition of parent involvement has evolved from "bodies in the building" to a more complex partnership that involves a shared responsibility between parents, educators, and community members that can take place at home, in the community, or at school and focuses on building student efficacy and learning (Epstein et al., 2019). Hornby and Blackwell (2018) found that the benefits of parent engagement and partnership can include improved parent-teacher relationships, teacher morale, and school climate; improved school attendance, as well as improved attitudes, behavior, and mental health of children; and increased parental confidence, satisfaction, and interest in their education.

Hornby and Blackwell (2018) also found that while there is compelling evidence showing the benefits of parent involvement in children's learning, there are factors that prevent parents from being more involved. These factors are categorized into parent and family factors, parent-teacher factors, and societal factors. Within these categories, Hornby and Blackwell (2018) found school operating hours, parent work constraints, parent health issues, past parental experience with their schooling, lack of relationship building between educators and parents, lack of trust, issues with communication, language barriers, transportation issues, lack of information and lack of training to be important reasons why some parents are not as involved as others. It is important to note that parent engagement may not equate to parents' direct engagement with the school building (Goodall & Montgomery, 2014). Many parents from ethnic minority groups or who face economic challenges may find engaging with the school difficult but still desire to be involved in their children's learning and educational experience (Lareau, 2015).

Goodall and Montgomery (2014) proposed a continuum that moves from parent involvement with the school at one end to parent engagement with a child's learning at the other. Effective parental engagement should be rooted in the home, which is a paradigm shift for schools that view parent engagement as the school's primary responsibility (Goodall & Montgomery, 2014). As schools and parents move along the continuum, the needs shift from that of the school to prioritizing decisions made collaboratively with families. Findings in research show that parent involvement efforts that focus on the parent's needs are more effective than those that are school-centered (Curry et al., 2016). Frequent interactions between educators, parents, family members,

and community partners help students develop learner self-efficacy (Epstein et al., 2019). Technology by nature can help schools break the brick-and-mortar confines of involvement and offer parents alternative opportunities to engage in their student's learning regardless of location and time constraints (Goodall, 2014). Utilizing technology for facilitating home-school communication, progress monitoring, and supporting academic achievement has become an interest for educational policymakers (Sad et al., 2016).

Parental e-nvolvement

With the diffusion of new technological innovations, the landscape of parent involvement inevitably changes to include these advances. Sad et al. (2016) define parental e-involvement (electronic involvement of parents) as “parental efforts to plan, engage in, support, monitor and/or assess the learning experiences of their children either at home or at school predominantly using technological devices and media.” Parental e-involvement can take many forms, including active involvement in student acquisition of content, project planning, developing e-portfolios, and communicating with teachers about student learning, progress, and socio-emotional well-being.

Sad et al. (2016) found that most parents use or have their children use technology such as smartphones, computers, tablets, and the internet for communication, educational purposes, and entertainment. While parents reported technology was a beneficial method of solving problems and staying connected academically, it also brought forth concerns of abuse, including too much screen time and gaming (Sad et al., 2016). Also, Sad et al. found that using technology for one-way communication was not favorable to parents, so

schools must work diligently to use technology for two-way communication endeavors that could include social media and blogs that ask for parental input.

Two-Way Home–School Communication

Researchers have demonstrated that while most types of parent involvement improve student outcomes, parent involvement with their child’s learning at home is the most effective in increasing student achievement (Goodall & Montgomery, 2014). Increased and meaningful communication between home and school enhances parent involvement on all levels (Chena & Chena, 2015; Goodall, 2016; Meier & Lemmer, 2015; Walsh et al., 2014). Meier and Lemmer (2015) found that home–school communication is generally the most powerful when there is mutual respect between the parent and the educator, which Epstein et al.’s (2019) research supports, adding that communication should take place in multiple ways in order to connect schools, homes, and communities. Weekly communications, either by phone or a written communique with parents about school progress and actionable improvement methods, are successful in bolstering student achievement (Kraft, 2017). Bergman (2015) and Hurwitz et al. (2015) found that text messaging parents regarding student progress increased student achievement. Rogers and Feller (2016) demonstrated that sending letters home to parents about student’s absences reduced student absenteeism.

Communication is the foundation of successful home–school relationships. Communication should be multi-directional and foundational to all six types of parent involvement (Goodall, 2016). The two most predominately used types of home–school communication are institutional, between the school and all families, and individual,

between a specific person in the school and a specific family (Goodall, 2016). Frequent communication between home and school helps bolster student learning at home, encourages parental engagement in school activities, develops student self-efficacy towards learning, and improves parents' expectations regarding their children's educational outcomes (Heath et al., 2015).

Beatte and Ellis (2014) have defined *communication* as a process where an organism (transmitter) encodes information into a signal which passes to another organism (receiver) which decodes the signal and is capable of responding accordingly. For effective communication to occur, the recipient must receive the stimulus as intended to be received by the sender (Goodall, 2016). Transactional communication occurs when communication is multi-directional, fluid, and has mutually assigned meaning (Schneider & Arnot, 2018). In a school setting, transactional communication requires that the school be responsible for providing effective communication systems that emphasize continual dialogue between school and home, enhance teachers and parents' mutual understanding, and create an operational environment for parental engagement (Schneider & Arnot, 2018). Effective communication, which includes listening and responding, and a frequent flow of quality information, is regarded by researchers to be one of the most influential factors of successful collaboration between school and home (Heath et al., 2015).

Despite research showing the importance of effective home-school communication, research data show that communication between public schools and parents is rare (Noel et al., 2015). Many schools struggle to provide effective home-school communication due to cultural, socioeconomic, and educational differences

(Heath et al., 2015). Some of these differences are the same ones found to inhibit parent involvement overall and can include time constraints, language barriers, and lack of relational trust (Heath et al., 2015), while others are due to systemic issues such as lack of teacher non-instructional time, lack of school policies regarding communication and outdated contact information (Kraft, 2017). Baker et al. (2016) noted parental concerns regarding communication timing issues, citing late information or none at all as a barrier for parental engagement. In order for schools to overcome these barriers, information must be disseminated in a clear, concise, and timely manner that all stakeholders, including those with language barriers and low literacy levels, can understand. Communication must be timely, relevant, and meet parents' needs (Heath et al., 2015).

Technology as a Communication Tool

The nature of home–school communication has evolved due to smartphone technology advances (Thompson et al., 2015). The use of smartphones and other internet-connected devices has allowed parents to be more involved in their student's learning (Thompson et al., 2015). Technology allows asynchronous communication at times that are convenient to both educators and parents (Goodall, 2016; Thompson et al., 2015). Technology provides a medium to share pictures, videos, and pertinent school information (Goodall, 2016). Technology allows for real-time student data management and provides mediums to engage in face-to-face and real-time communication (Goodall, 2016).

Since the first smartphone appeared in 1992, the range of technological means of communication has grown tremendously (Goodall, 2016). The Pew Institute (2021)

reports that 81% of Americans now own a smartphone, 75% own computers, and 52% own some type of tablet, e-reader, or other internet-accessible devices. Seventeen percent of Americans use smartphones as their means of getting internet access (Pew Research Center, 2021). Using Cell phones for the internet is common among younger adults, minorities, and low-income Americans (Pew Research Center, 2019). As smartphone usage increases, 24% of Americans say they are online constantly, and 77% report being online at least once a day (Perrin & Jiang, 2018). A 2018 Pew survey showed that 68% of American adults use Facebook, 73% use YouTube, 78% of young adults use Snapchat, 71% use Instagram and 45% use Twitter, with 71% responding that they visit these sites at least once a day (Smith & Anderson, 2018). While three-quarters of the public uses more than one social media platform, Facebook remains the most consistently used by adults of all ages and demographic groups (Smith & Anderson, 2018).

In the past 10 years, social media has transitioned from a frivolous teenage fad to a legitimate communication platform across all age levels (Duggan et al., 2015). To be relevant and prepared for the workforce, today's youth must be savvy in the consumption and production of information (Krutka & Carpenter, 2016). The problem is today's schools tend to focus only on what students should not be doing with these media (Krutka & Carpenter, 2016). To be more effective and develop 21st-century skills, schools should focus on how these media are used to improve, alter, and transform the educational landscape for their students (Krutka & Carpenter, 2016).

While many schools already have webpages, text messaging systems, staff email addresses, student management systems, social media pages, and online grade books

available for parent access, more needs to be done to ensure that these platforms are being used to their fullest capabilities. Despite the research showing how technology can positively impact home–school communication, many schools have not taken advantage of what technology can offer in this area. There are many reasons adoption has been slow; among these is a lack of training, knowledge, and willingness to diffuse (Goodall, 2016; Olmstead, 2013). As school leaders look to employ technology as a communication tool, they need to be mindful of its introduction and use (Goodall, 2016). Technology should be used as an informational tool and a tool to increase parental efficacy in supporting student learning and as a tool to build relational capacity between educators and parents (Goodall, 2016). Before school leaders deploy technology as a home–school communication tool, they need to possess knowledge of parental needs and understand the technology usage and access capabilities their stakeholders possess (Goodall, 2016). Also, using these platforms as primary communication models can raise digital equity issues, so administrators should employ strategies to address these issues (Resta et al., 2018).

Summary and Conclusions

There is a large amount of research literature that supports that learner outcomes improve when parents are actively involved and engaged in their children’s learning (Castro et al., 2015; Epstein et al., 2019; Goodall & Montgomery, 2014; Kraft & Rogers, 2015; Park et al., 2017; Povey et al., 2016; Wang et al., 2016). The definition of parent involvement has evolved from “bodies in the building” to a more complex partnership that depends on shared responsibility between parents, educators, and community

members that can take place at home, in the community, or at school. It focuses on building student efficacy in learning (Epstein et al., 2019). Despite comprehensive research demonstrating that parent involvement is essential to student achievement and despite government policy mandating parent involvement activities are offered, schools struggle to engage parents in their student's learning. Epstein et al.'s (2019) six types of involvement framework is recommended for use by administrators looking to employ research-based activities to increase involvement. Schools need to reframe their practice to include activities outside of the school building and traditional school day to mitigate the barriers that researchers have found to prevent parents from being involved and engaged in their students' learning. These barriers include not getting time off of work, inconvenient meeting times, lack of childcare, language barriers, relational trust issues, content knowledge deficits, and a lack of timely information regarding opportunities for involvement (Redford et al., 2019).

The implementation of two-way communication between home and school is essential for creating meaningful parent involvement (Epstein et al., 2019; Meier, 2015; Russell, 2017). Educators and parents agree that effective communication between school and home is essential to forming partnerships that encourage student achievement (Blackboard, 2018). Digital tools are providing new opportunities for communication (Blackboard, 2018). Schools can maximize parent involvement by using technology to bridge the communication gap between schools and parents but must work to ensure that schools' methods to communicate are the ones preferred by parents. Recent studies have shown that just 16% of parents viewed Facebook as an effective means of

communication, while 38 % of administrators surveyed perceived it to be so (Herold, 2018). The effective use of technology for home–school communication depends significantly on educators’ understanding of what methodologies and tools most meet parental needs (Blackboard, 2018).

To examine these issues further, I investigated parents’, teachers’, and administrators’ perceptions of how they think technology can be used as a home–school communication tool that increases parent partnership in the six areas of Epstein et al.’s (2019) involvement framework. This research will add to the body of literature in the field by explicitly looking at how technology is more than just a pedagogical tool, an underrepresented area in the literature. In Chapter 3, I provide an in-depth discussion of the methodology used to conduct this study.

Chapter 3: Research Method

The purpose of this generic qualitative study was to expand existing research on the use of technology in schools by exploring parent and educator perspectives on how educators and parents can use technology to encourage meaningful home–school communication and parent partnership. In Chapter 3, I present the rationale for using a generic qualitative study design, including the role of the researcher; description of the methodology, including procedures for participant selection, instrumentation, and recruitment; and the procedures for data collection and analysis. Chapter 3 draws to a close with a discussion of trustworthiness and the ethical issues involved in this study’s conduction.

Research Design and Rationale

This study followed a generic qualitative research design. Generic qualitative research refers to an approach where researchers seek to solve a problem, effect a change, or identify relevant themes without overreliance on epistemological or ontological paradigms (Mihaus, 2019). Generic qualitative research is used in various disciplines and is most often used in educational research (Caelli et al., 2003; Yin, 2016). According to Merriam (2009), the purpose of qualitative educational research is to improve practice. Qualitative research is unique from other social science methods because every event can become a study topic (Yin, 2016). In qualitative research, the researcher’s passions and beliefs may be the impetus behind the study’s formation (Yin, 2016). Qualitative researchers pursue three objectives: transparency, methodic-ness, and adherence to evidence (Yin, 2016). Although there are multiple qualitative research approaches, the

most common are generalized research, action research, narrative, phenomenology, grounded theory, ethnography, and case study (Yin, 2016). Qualitative researchers seek to understand how people construct their worlds through experience interpretation and assigned meaning (Merriam & Tisdell, 2016). Researchers choose qualitative research methodology when they desire to explore, understand, and establish meaning from the perspective of those studied (Hammarberg et al., 2016). Qualitative methods are appropriate when the researcher aims to understand how groups or individuals perceive a particular issue (Patton, 2015).

Qualitative research methodology is multifaceted and includes a breadth of orientations that allow for customizable research (Yin, 2011). Although qualitative research includes a mosaic of methodological choices, some features distinguish it from other research methods (Yin, 2016). Qualitative research varies from other forms of social science research in five ways: (a) studying the meaning of people's lives in their real-world context without the constraints of artificial research procedures and instrumentation, (b) representing the participants' views and perspectives, (c) accounting for and addressing the real-world conditions and settings where the participants' lives take place, (d) drawing connections from existing or emerging research to explain social behavior and thinking, and (e) relying on multiple sources of evidence as a way to interpret data more richly (Yin, 2016).

Qualitative research is primarily inductive; new theories and concepts emerge from the data collected (Merriam & Tisdale, 2016). Although a unified method of qualitative research may not exist, Yin (2016) asserts that nearly all qualitative research

designs have procedures in common; these procedures include the five features discussed earlier and include (a) the use of flexible research design; (b) the collection of field-based data, both the researcher and those of the participants; (c) the recording of data into a more formal set of notes; (d) the analysis of nonnumerical data; and (e) interpretation of the data through categorization into themes and concepts.

I chose a generic qualitative approach as the design for my study for several reasons. Qualitative studies are most appropriate when (a) the researcher seeks to solve a problem, effect a change, or identify relevant themes without over-reliance on epistemological or ontological paradigms (Mihaus, 2019); (b) the researcher aims to understand how groups or individuals perceive a particular issue (Patton, 2015), and (c) the research centers on “how” and “why” questions (Yin, 2016). I tackled the problem of low parental engagement in schools by examining educators and parents perspectives on how they can use technology to encourage home–school communication with the understanding that home–school communication is an effective tool in increasing parental engagement (Chena & Chena, 2015; Goodall, 2016; Meier & Lemmer, 2015; Walsh et al., 2014). An exploration of the perspectives of those in the field, both parents and educators, was consistent with qualitative methodology (Creswell, 2015).

The data collection method for this study included semi-structured interviews of educators and parents. Data collection occurred in the school district where the educators work and where the parents have students attending. Three parent participants were recruited from surrounding districts due to parents’ lack of interest in the initially chosen district. Permission to go outside of the initially identified district was granted from the

Walden University Institutional Review Board (IRB). Data were analyzed using a priori codes based on Epstein et al.'s (2019) six types of involvement framework and open coding to identify any emerging themes regarding how educators and parents thought technology could be used to encourage home–school communication and parent engagement. Epstein's framework identifies the six research-based parent involvement activities that have been shown to be effective at creating meaningful parent involvement. These activities could be enhanced by the use of technology, especially in communication, and the framework helped organize data into categories.

I used a semi-structured interview approach, following an agenda and well-defined interview guide (see appendices A-C), with all educator and parent participants. Using an interview guide helped me focus on the critical points I wanted participants to address concerning my research questions (Knight, 2013). Interviews are among the most widely used data collection methods in qualitative research (Jamshed, 2014). The benefit to conducting interviews over questionnaires is that interviews are more effective in eliciting narrative data that allows researchers to investigate people's views in greater depth (Alshenqeeti, 2014). The semi structured approach provided flexibility within the interview process, allowing me to adjust depending on the context (Jamshed, 2014). Administrators, teachers, and parents were interviewed individually. Using multiple sources of data allowed for data triangulation and increased the study's trustworthiness (Patton, 2015). The guiding research questions for this study are:

RQ1: What are educators' perspectives on how technology can be used to encourage home–school communication?

RQ2: What are educators' perspectives on how technology can be used to encourage parent partnership?

RQ3: What are parents' perspectives on how technology can be used to encourage home-school communication?

RQ4: What are parents' perspectives on how technology can be used to encourage parent partnership?

Role of the Researcher

As is common in dissertation research, I was the only person responsible for collecting the data, analyzing, and interpreting results. I conducted the interviews, recorded responses, and transcribed and coded those responses using a priori codes based on Epstein et al.'s. (2019) six types of involvement framework and open coding to identify common emerging themes outside of Epstein et al.'s. framework. To reduce researcher bias, I allowed the participants to review my interpretation for accuracy.

Before the study began, participants clearly understood that my role was that of a nonparticipating interviewer even though I work within the study district. I did not act as a participant during the study. I conducted the study with participants who were not working at or attending the site that I administrate. My experience as an administrator, teacher, and parent helped me develop a rapport with all participants of the study and guided me in developing more in-depth, probing questions during the interview. I addressed any personal biases by being reflective and consciously examining any previously held assumptions I had through the process of self-reflection and bracketing. In the bracketing process, any preconceived notions I had about the topic, either from

personal experience or previous research, were set aside to explore the topic from a fresh perspective (Creswell, 2015).

Methodology

This section explains the design and implementation of the generic qualitative study that I developed to explore parent and educator perspectives on how educators and parents can use technology to encourage home–school communication and parent partnership. I conducted an exploratory, generic, qualitative study that used individual semi-structured interviews with educators and parents. Through the interview process, I gathered data regarding educator and parent perspectives on the use of technology as a home–school communication and parent partnership tool. In the remainder of this section, I discuss the methods for participant selection, data collection, and analysis.

Participant Selection

This study’s location was a high-poverty, K-8 school district in Southern California; as previously stated, three parent participants were recruited from outside the district but were still located in surrounding districts in the same region as the study district. As of the 2017–2018 school year, the district’s enrollment totaled 8,707 students. The district comprises three middle schools, two K-8 schools, one virtual academy, and nine elementary schools. In this school district, 81% of students qualified for free and reduced lunch; 17.5% are English language learners, 98% of whom speak Spanish as their primary language; 3% are in foster homes; 64.5% are Hispanic or Latino; 20% are African American; 7.7% are Caucasian; 2.2% are Asian or Pacific Islander; 0.4% are Native American; and 3.1% identify as two or more races. The teacher to student ratio is

23 to 1. The district employs 369 full-time teachers who have an average of 7 years of teaching experience, and 34% of the teaching staff are within their first two teaching years. The average daily attendance rate for the district is 90%. The district receives Title 1 funding for all of its school sites.

Teacher participants were selected using multiple criteria, including experience and grade level taught. The teachers selected did not work at the school where I work, taught for a minimum of 1 year, and had experience using technology in the classroom as a teaching tool. Teacher participants were selected to represent various grade levels and disciplines from both the elementary and middle school and worked within the district of study.

Administrator participants were selected to represent different administrative roles within the district. As with teacher participants, administrative participants had at least 1 year of experience in their job classification and experience using technology. Administrative participants were selected to represent elementary, middle, and district level positions.

Parent participants were selected using the following criteria: they had to have a student enrolled and attending at least one school site outside of the school where I work. Purposeful sampling ensured that I chose parent participants representing a variety of different levels, sites, demographics, and technological experience.

Instrumentation

My data collection method included semi-structured interviews (see Appendices A–C). Researchers conduct interviews when they are not able to observe the phenomena

(Patton, 2015) directly. I conducted semi-structured interviews with all participant groups—administrators teachers, and parents.

Before conducting the research, I prepared a clear agenda, interview guide, and questioning route (see Appendices A–C) to ensure the same basic inquiry format was followed with all participants in the semi-structured interview setting (Patton, 2015). Before conducting the research, I had questions prepared aligned with my overarching research questions and Epstein et al.’s (2019) framework of involvement. Although I prepared questions in advance, the questions were open-ended to engage the study topic participants. The semi-structured format allowed me to provide additional follow-up questions related to each interview’s context and setting. The interviews were conversational and provided me with the opportunity to build a rapport with the interviewee. Yin (2016) asserted that interviews conducted conversationally allow for authentic two-way interaction between the researcher and the participant, which was necessary for developing relational trust and eliciting more in-depth and honest responses.

The interview guide and questioning route (see Appendices A–C) were adequate collection instruments because the questions are both wide enough to elicit detailed information and narrow enough to cover the investigation topic (Yin, 2016). As this study focused on educator and parent perceptions, interviews were an appropriate data collection tool. I constructed the interview questions using Epstein et al.’s (2019) six types of involvement framework. As a way to increase validity, I asked three educational experts outside of my study to review the interview questions and provide me with

feedback using Simon and White's (2016) interview question validation rubric. Taking the expert panel's feedback, I lowered the number of questions and modified the questions to make them more easily understandable to the participants. Also, I field-tested the questions and made further adjustments to ensure a smooth process for the study participants.

Procedures for Recruitment, Participation, and Data Collection

Identification, contact, screening, and recruitment of participants form the core of the informed consent process and ensure that ethical concerns are addressed (University of California, 2019). The recruitment of participants followed IRB and school district guidelines. The school district required a preliminary meeting with the superintendent to discuss the proposed study for initial approval and then a more formal meeting, following written IRB approval. These guidelines protected the district and ensured that data collection methods met ethical standards. I participated in the preliminary meeting with the district superintendent on September 19, 2019 and received approval to conduct my study in April of 2020.

Once IRB approval was granted from Walden University, and the superintendent approved, I explained the study and sent study invites to all district administrators. The email sent to the administrators asked them for recommendations of parents and teachers from their school sites. The district administration shared information about the study at their staff, "Coffee with the Principal," and PTA meetings and then sent me names of teachers and parents that expressed interest in participating in the study. I sent invites to those interested. Seven administrators responded with interest in participating in the

study. Of these seven, five participated in the study. I sent study invites to the parents and teachers who expressed an interest in participating. Seven teachers responded with interest and five participated. Five parents responded with interest, but only two showed up for their interview. Three other participants from outside of the district, who study participants recommended, were invited, and all three participated. The names of the participants meeting the selection criteria were entered into a database by the site (district, school), categorization (parent, teacher, administrator), grade level (taught or student), ethnicity, gender and were assigned a number by participant categorization.

The potential participants in each category and site received an emailed invitation to participate in the study, along with the consent form. The consent form informed the participant of the purpose of the study, and outlined the procedures and time involved in participating, provided examples of the research questions, stated that participation in the study was entirely voluntary, confidential and could be revoked at any time, and ensured the participant that there would be no adverse reactions from either the school district or Walden University as a result of participation or non-participation in the study. Also, potential participants received notification of any potential risks and benefits for participating in the study, including those to safety and well-being. I informed participants that there would be no compensation for participating in the study. I gave each participant my email address and phone number. Each participant received the phone number of the Research Participant Advocate at Walden University as well. I let the participants know that if they had any concerns about the study's data collection

methods and reporting procedures that were not addressed in the consent form or in conversation with myself, that they could contact the Research Participant advocate.

I asked all participants to provide consent through email within 5 days to confirm their willingness to participate in the study. Once participants emailed me their consent, they were sent a link for a demographic survey. I was able to meet my goal of having fifteen participants in total. Overall, I was able to recruit 20 interested participants; however, five did not show for their interviews, so I had to select alternative participants from my potential participant list. Also, I could only get three parents from the district who wanted to participate, so I had to use parent participants from outside the district. Due to the pandemic, I conducted interviews using the videoconferencing platform Zoom. I recorded the interviews using the Zoom recording option for transcription.

To provide enough time to discuss informed consent procedures, explain the interview process, develop rapport, conduct the interview, ask for clarifications and answer any questions the participants may have upon completion of the interview, I blocked 90 minutes of time for interviews. Following my interview agenda and guide, the beginning of each interview included the researcher's role, the purpose of the study, consent procedures, confidentiality measures, and a statement to let the participant know they could stop the interview or withdraw from participating in the study at any time. I digitally recorded the interviews for transcription. All interviews were uploaded to NVivo (version 12) and transcribed verbatim from the interview recording. At the end of the study, I gave all participants a copy of their interview transcript, a compilation of study findings, and interpretation for their review and input. Allowing the participants to review

and revise their responses and add to the data's interpretation created an added level of credibility (Yin, 2016).

Data Analysis Plan

Collected data must be organized and analyzed to elicit meaning and draw realistic conclusions (Bengtsson, 2016). While there are many methods of collecting and analyzing the data, Yin (2016) recommends using a five-stage analytic process that includes (a) compiling an orderly set of data, (b) disassembling data, (c) reassembling and arraying data, (d) interpreting data, and (e) drawing conclusions from the data. According to Yin, the process is non-linear and may require the researcher to move back and forth within the process until saturation is reached.

Data was compiled by transcribing the digital recordings verbatim into a word processing document. After I transcribed the digital recordings using the NVIVO transcription software, I disassembled the data using a priori codes based on Epstein et al.'s (2019) six types of parent involvement framework, in vivo coding, where participants own words were used and then descriptive coding to identify any common emerging themes both inside and outside of Epstein's framework. Once I categorized the data using Epstein's framework, I looked for data that did not fit into the a priori codes. I used an open coding technique to highlight repeated words, phrases, and ideas and then sorted them into category codes. Using a spreadsheet, I sorted the data into category codes and then into themes. I repeated the process until I discovered the emerging themes presented in the data (Yin, 2016). After data was compiled and sorted, the next step was reassembling the data so patterns could be recognized (Yin, 2016). One way to

reassemble the data is to illustrate the data visually. Graphic illustrations allow the researcher an opportunity to see patterns, themes, and connections that I may not have previously recognized in the textual organization of the data (Yin, 2016). To sort my data visually, I used a spreadsheet and color-coding.

Once data was compiled, disassembled, and reassembled, interpretation occurred. In the interpretation stage, I explained the data in rich detail, using graphic illustrations to support my research findings (Yin, 2016). During this stage, I answered my research questions by employing both inductive and deductive reasoning as I analyzed both the concrete and abstract data (Merriam & Tisdell, 2016). This examination required me to create a new narrative with relevant visual representations to support my findings. Yin (2016) postulates that a comprehensive interpretation of the data should include completeness, fairness, accuracy, value-addition, and credibility. To ensure completeness, accuracy, fairness, and credibility, I asked the participants to member check my analysis and interpretation of the data for accuracy. I asked the participants to respond by email within seven days their feedback.

The final stage in Yin's (2016) process is the conclusion stage. Yin (2016) asserts that clear conclusions bring coherence to a study. Conclusions should be connected to the research findings found during the interpretation phase and should extend the findings, not just be a restatement (Yin, 2016). During the conclusion phase, the researcher communicates the more considerable significance of the study, makes recommendations, and describes new research implications. (Yin, 2016). In the conclusion phase, I communicate the significance of my study, discussed findings and implications, and

made recommendations for future research based on the data I collected, which is commiserating with Yin's (2016) discussion on the most common ways that researchers conclude their studies, recommending new research; challenging old assumptions; presenting new theories; and generalizing to a broader set of situations.

Trustworthiness

Trustworthiness refers to researchers' procedures to ensure the quality, rigor, and credibility of a study (Morgan & Ravitch, 2018). Lincoln and Guba (1985) are recognized as having developed the first iteration of trustworthiness in qualitative research (Morgan & Ravitch, 2018). Lincoln and Guba (1985) looked at the four questions typically raised by evaluators of research and identified four essential practices that can ensure trustworthiness in a study: credibility, transferability, dependability, and confirmability (Morgan & Ravitch, 2018).

Trustworthiness is relevant to educational research because it defines the practices in methodology that researchers undertake to make their research transparent to the consumer (Morgan & Ravitch, 2018). The trustworthiness section of a study generally explains to the consumer how the researcher uses a methodical approach to ensure that findings are credible (Morgan & Ravitch, 2018).

Credibility

Credibility refers to the researcher being able to establish confidence in the findings' truth (Morgan & Ravitch, 2018). There are many ways that a researcher can establish credibility, but two of the most commonly used strategies are triangulation and member checking (Morgan & Ravitch, 2018). In triangulation, the researcher uses

multiple data sources to cancel out any method's weaknesses (Morgan & Ravitch, 2018). I am conducting semi-structured interviews with teachers, administrators, and parents within multiple sites, departments, and grade levels in my study. This triangulation of the data allowed me to build a more comprehensive interpretation of the phenomena (Morgan & Ravitch, 2018).

Member checking is the systematic process used to engage the study participants with the data, findings, and data analysis (Morgan & Ravitch, 2018). Member checking allows the researcher to determine if they have accurately reflected the lived experiences of their participants. Member checking is one way a researcher can account for data that falls outside of the emerging themes and categories in a study (Morgan & Ravitch, 2018). I used member checking as a way to build credibility in my study. Participants received copies of their completed personal transcripts, my draft analysis of the data, and my draft interpretation of the results. Through the member checking process, I asked participants to verify whether the interpretations I made in my draft analysis were accurate and logical based on their interview responses. Participants were allowed to provide feedback and elaboration on any areas they found necessary.

Transferability

Transferability refers to the reader's ability to demonstrate the extent to which the findings of a study have applicability in other contexts (Morgan & Ravitch, 2018). Generic qualitative studies tend to be bound by context to ensure transferability. Yin (2016) recommends presenting the findings at the conceptual level by connecting the findings to the pre-existing literature. In connecting my findings to the literature, I can

examine any incongruence or similarity in the literature, which helped me demonstrate transferability. In addition to situating the literature findings, using three different participant groups from multiple sites, departments, and grade levels and the participant's own words lent transferability to my study.

Dependability

Dependability refers to whether a different researcher could replicate the study's findings with similar participants (Morgan & Ravitch, 2018). To ensure dependability, Shenton (2004) recommends thoroughly describing the research process conducted so that another researcher could follow the process and obtain comparable results.

Researchers can ensure an elevated level of dependability by following the research protocols established by their University. I followed all of Walden University's research protocols. I established an interview guide and questioning route, and the interviews were recorded and transcribed verbatim to check for accuracy. I took notes before, during, and after the interview process and documented the research process extensively, including my rationale for all methodological decisions (Ryan-Nichols & Will, 2009).

Confirmability

In qualitative research, it is assumed that the researcher brings their perspective to the study. Confirmability refers to the data's accuracy and neutrality as confirmed by others (Houghton et al., 2013). The process for establishing confirmability relies on the data being grounded in the participants' experiences, not in those of the researcher (Shenton, 2004). One way to support confirmability in a study is to use bracketing (Peters & Halcomb, 2015). Sorsa et al. (2015) defined bracketing as a researcher's conscious use

of their background as a research tool. The purpose of bracketing is to ensure that the participant's understanding of the phenomena is not influenced by the researcher (Sorsa et al., 2015). I bracketed my research by creating a mind map of my own biases regarding the topic and engaged in journaling during the data collection and analysis phase. I examined my assumptions and feelings by asking a series of questions whenever the data caused a visceral reaction in me.

Understanding my own bias was an essential part of ensuring the confirmability of my study. As an educator, parent, and employee of the district, I am aware that I have my own opinions and beliefs about using technology as a home-school communication and parent involvement tool. I engaged in the reflective bracketing process to document any personal bias as I read through the interview transcripts. Reflective bracketing allowed me to reach deeper reflection levels across all stages of my research (Tufford & Newman, 2012). The opportunity for substantial reflection during the research process enhanced my research's sagacity and facilitated a more profound and rigorous analysis and interpretation of the data (Tufford & Newman, 2012). To engage in the bracketing process, I used a reflective journal that allowed me to reflect on every stage of the research process from defining the why behind my research, the methodology used, the interpretation of the results, and my subsequent learning and created a mind map of own thoughts and biases on the topic.

Ethical Procedures

Yin (2016) asserted that an essential trait that a researcher must possess is a keen sense of ethics. Researchers ensure credibility and trustworthiness through decisions

made in a transparent environment (Yin, 2016). Researchers are committed to protecting their human subjects from harm by building ethical routines into their work (Patton, 2015). Researchers are urged to study codes of ethics in their work to sensitize themselves to actions that are considered both ethical and unethical (Patton, 2015; Yin, 2016). To ensure that I practiced ethical standards, I followed the Code of Ethics from the American Educational Research Association. The Code defines the ethical principles and standards that govern educational researchers' professional work and is built on the foundation of protecting individuals and groups with whom educational researchers work (American Educational Research Association, 2011). Included in the Code are five principles, professional competence; integrity; professional, scientific, and scholarly responsibility; respect for people's rights, dignity and diversity; and social responsibility. In accordance with upholding these principles, I successfully completed the NIH Human Subjects' Protection training in March of 2017.

The Code's ethical standards set forth rules that researchers must follow to ensure ethical conduct is achieved (American Educational Research Association, 2011). These standards include maintaining confidentiality; seeking informed consent; avoiding harm, discrimination, exploitation, and harassment; conflicts of interest, research planning, implementation, dissemination, and professional competence (American Educational Research Association, 2011). In preparing my research protocol, I considered potential ethical issues such as informed consent, maintaining confidentiality, risk assessment, data access and ownership, researcher-participant relationships, and reporting results (Patton, 2015).

To ensure ethical conduct, I did not begin this study nor contacted any potential participants until my proposal was approved by Walden University's IRB. Once Walden approved the proposal, I scheduled a meeting with the district superintendent to receive formal approval to conduct the study within the district and then begin participant recruitment. Interested participants were sent an informed consent agreement via email. I asked participants to return the email with the words "I consent" within seven days of receipt for consideration for participation in the study. Each participant had the opportunity to ask questions before giving their consent and returning their agreement. The agreement discussed the purpose of the study, the procedures for data collection and analysis; the potential risks and benefits of participating in the study; the steps used to maintain participant confidentiality and identity protection; and informed the participant that their participation was voluntary and could be withdrawn at any time in the process.

I conducted the study in the district where I work. The study was not conducted at my school site and did not use any participants, educators, or parents affiliated with my site. I did not hold a leadership or evaluative role over any of the participants to ensure that participants did not feel pressured into participating in the study. The participants did not receive any type of compensation for participating in the study. Participation in the study was voluntary, and participants could withdraw their participation in the study, at any time, without any negative repercussions occurring.

Every effort was maintained to ensure the confidentiality of the participants. Participants were assigned a random number. I did not use identifying information such as school, age, or name in the narrative. I scanned all written documents into a password-

protected file, and the written documents will be shredded after the mandatory holding period. After five years, the electronic document will be destroyed. All digital data is stored in one file and is password protected. I informed participants of the process for protecting confidentiality in advance of participation to ensure informed consent was obtained. I informed participants that participation could be withdrawn at any time. Information collected before a participant withdrew from the study remains confidential.

The informed consent agreement clearly defines the data collection parameters and analysis, including who has access to the data, how the data is stored, disseminated, and destroyed. The participants knew in advance that they would have the opportunity to review transcribed materials, analysis, and interpretation and would have the opportunity to provide feedback, amend responses or provide a further explanation before the results are to be published.

Summary

Chapter 3 contained a detailed explanation of the study design, including an explanation for choosing a generic qualitative study, a look at the role of the researcher, discussion of the rationale and procedures for participant selection, instrumentation, recruitment, and participation; and by describing the procedures and methods for data collection and analysis; developing trustworthiness, and assurance of ethical procedures.

I chose a generic qualitative research design because it refers to an approach where researchers seek to solve a problem, effect a change, or identify relevant themes without overreliance on epistemological or ontological paradigms (Mihaus, 2019). Generic qualitative research is used in a variety of disciplines and is most often used in

the field of educational research where the main objective is to improve practice (Caelli et al., 2003; Merriam, 2019; Yin, 2016) and is consistent with this researcher's passion for improving practice to improve educational outcomes for students.

This study used semi-structured interviews for data collection. Data collection followed an interview guide and question route. The interviews were digitally recorded, transcribed, and coded using a priori, in vivo, descriptive and open codes. I categorized the codes into emerging themes and provided a complete, explanatory narrative to acquaint the reader with the participants' perceptions. I established credibility by ensuring triangulation and member checking (Morgan & Ravitch, 2018). I used bracketing to lessen any researcher bias (Sorsa, 2015).

The findings of this study provided insights into parent and educator perceptions on how educators and parents can use technology to encourage home-school communication and parent partnership; which researchers have previously demonstrated is a critical component to increasing student success in school (Castro et al., 2015; Epstein et al., 2019; Goodall & Montgomery, 2014; Kraft & Rogers, 2015; Park et al., 2017; Povey et al., 2016; Wang et al., 2016). Chapter 4 presents the findings of this study.

Chapter 4: Results

The purpose of this qualitative study was to address the gap between practice and research in the area of using technology as a communication tool between home and school by exploring both parent and educator perspectives on how educators and parents can use technology to encourage home–school communication and parent partnership (Goodall, 2016). Using a generic qualitative design, I interviewed administrators, teachers, and parents to gather their perspectives on how educators and parents use technology to encourage communication between home and school. The data collected identified patterns and themes that may lead to increased understanding of how schools can leverage technology to improve communication and parent partnerships.

I used Epstein’s six types of involvement framework to develop questions for the semi-structured interviews designed to help me explore the overall research questions for the study:

RQ1: What are educators’ perspectives on how technology can be used to encourage home–school communication?

RQ2: What are educators’ perspectives on how technology can be used to encourage parent partnership?

RQ3: What are parents’ perspectives on how technology can be used to encourage home–school communication?

RQ4: What are parents’ perspectives on how technology can be used to encourage parent partnership?

In Chapter 4, I provide an in-depth discussion of the data collection process including a description of the setting, participant demographics, data collection and leveled analysis procedures, trustworthiness, results of the study, and an overall summary of the chapter.

Study Setting

This generic qualitative study was conducted in the Inland Empire and High Desert region of Southern California and included five administrators, four teachers, one counselor, and five parents. The possible participant pool included over 350 teachers, 19 administrators, 10 counselors, and parents of over 8,000 students. Due to the current restrictions of the SARS-CoV-2 pandemic, I conducted all of the interviews over the Zoom virtual meeting platform. I conducted all interviews outside of school business hours from my home and the homes of the participants. The initial plan was to choose participants from one Southern California school district; however, due to the pandemic, scheduling issues, and a lack of interest, two parents were chosen from school districts outside of the original district, but in the surrounding area. As I work in the district of study, I asked participants to fill out a survey before participating to ensure they were not from my school. The survey ensured that I had no supervisory interaction with the participants. In addition to eliminating participants from my work location, the survey included demographic information that ensured the participants represented a variety of roles (i.e., administrator, educator, parent), had a minimum level of experience in their role (i.e., at least 1 year), and were diverse in ethnicity, education level, gender, and technological proficiency. While ethnicity, education level, gender, and technology

proficiency were not eliminators, they did ensure that the study included a variety of participants to ensure transferability of the findings.

Participant Demographics

The educator criterion for participation was a minimum of 1 year of experience in a position outside of my school. None of the educators selected worked at the school where I am an administrator. Sixty percent listed K-5 as their grade level span, whereas 30% listed 6–8, and 10% listed K-8. Sixty percent reported their level of experience in their current position as 5–10 years, whereas the other 40% had 10+ years of experience in their current position. Sixty percent reported being proficient in using technology to communicate, 20% were advanced, and 20% listed their proficiency as basic. Ninety percent of the educator participants had a graduate level degree, while 10% had a bachelor's degree. Ninety percent of the educator participants identified as female, 10% identified as male. As for ethnicity, 50% identified as White, 10% identified as Hispanic, 10% identified as Black, and 30% reported being multiracial.

The criterion for parent participants was they must have a student who attends school outside of my work location. Eighty percent of parent participants reported having one or more students in the K-5 grade span, while 20% reported having students in the K-10 grade span. Sixty percent of the parents had 10 or more years of experience being a parent, whereas 20% had 5–10 years and 20% had 3–5 years of experience. All parent participants reported being proficient in using technology to communicate. Forty percent possessed a graduate-level degree, 10% a bachelor's degree, 10% an AA degree, and 10% reported having some college but no degree. Eighty percent were female, while 20%

were male; 80% identified as White, whereas 20% identified as Black. Table 1 shows the demographic makeup of the study participants.

Table 1*Demographic Makeup of Participants*

Participant	Role	Experience	Technological proficiency	Education	Gender	Ethnicity
1	Educator	5-10 years	Advanced	EdD	F	Multi
2	Educator	5-10 years	Proficient	MA/MS	F	White
3	Educator	5-10 years	Proficient	MA/MS	F	White
4	Educator	5-10 years	Proficient	MA/MS	M	Hispanic
5	Educator	5-10 years	Advanced	MA/MS	F	Black
6	Educator	5-10 years	Basic	MA/MS	F	White
7	Educator	10+	Basic	BA/BS	F	White
8	Educator	10+	Proficient	MA/MS	F	White
9	Educator	10+	Proficient	MA/MS	F	Multi
10	Educator	10+	Proficient	MA/MS	F	Multi
11	Parent	10+	Proficient	MA/MS	M	White
12	Parent	10+	Proficient	BA/BS	F	White
13	Parent	10+	Proficient	MA/MS	F	White
14	Parent	5-10 years	Proficient	Some college	F	White
15	Parent	3-5 years	Proficient	AA	F	Black

Data Collection

I completed data collection procedures under the approval of the Walden University IRB (Approval no. 07-17-20-0016558) and the participating district superintendent. Following the data collection procedures approved by IRB and the district superintendent, I emailed district principals notification of the study approval. I informed them that their teachers and other administrative staff would receive an emailed invitation to participate. Fifteen participants who worked in locations other than my school site participated. Study data were collected through semi-structured Zoom interviews and followed an interview guide (see Appendices A–C). I emailed a study invite and a consent form to potential participants. I asked participants interested in participating to send a return email with the words “I consent,” written in the body. Participants who expressed interest and gave consent were added to a spreadsheet, assigned a number to ensure confidentiality, and emailed a link to complete the demographic survey. Seventeen participants initially responded and were scheduled for Zoom interviews at their convenience. Only 12 of the initially interested participants completed their interviews, even after rescheduling and gentle email reminders. I recruited more volunteers from outside of the district to meet the 15 participants needed for the study with IRB approval. In total, I interviewed 15 participants, five administrators, four teachers, one counselor, and five parents.

I conducted semi-structured interviews using a pre-defined interview guide. I field-tested the interview guide with three experts in the field and field-tested the interview process with three friends and family members. Following the feedback from

the field-test, I shortened the number of interview questions from 15 to 13 and rewrote one to remove bias. I developed the interview questions using Joyce Epstein's six types of involvement framework. I conducted the interviews over a 1-month period from September 21, 2020, to October 24, 2020. While I allotted 90 minutes for each interview, the actual interviews averaged about 35 minutes each.

Following a defined interview guide (see Appendices A–C), each interview began with a welcome, an explanation of my role as a researcher, a review of the consent form, including the ability to opt out of the interview at any stage, confidentiality procedures, and a review of key terms as they applied to the study. I informed the participants that the interview would be recorded and transcribed verbatim from the audio recording. I informed the participants that they were assigned a number to ensure confidentiality and that their names would not be used in the narrative. Participants were also made aware of their role in member checking the data. Before I started the questioning, participants could ask any questions, and rapport was established through a getting to know you question. During the interview, participants openly answered questions about using technology as a communication and parent involvement tool and provided follow-up as needed. After the interviews, participants received a copy of their transcript to review.

The interviews were conducted and recorded through the Zoom platform. I saved interview audio after each interview to a password-protected folder on my computer and uploaded it into the NVivo online transcription service. Once NVivo transcribed the audio into a Word document, I downloaded the document to the password-protected folder on my computer and then deleted the file from the NVIVO platform. After I had

NVivo transcribe all the interviews, I analyzed the data with word processing and spreadsheet software guided by using Yin's (2016) five-stage analytic process that included (a) compiling an orderly set of data, (b) disassembling data, (c) reassembling and arraying data, (d) interpreting data, and (e) drawing conclusions from data, which allowed me to move back and forth within the process until I reached saturation.

Unusual Circumstances

During two of the interviews, I forgot to start the recording at the beginning of the welcome and explanation of the consent form and terms. However, I did start the recording before the actual interview questions began. I made a note of this irregularity on the transcripts that I sent to the participants. The participants did not have an issue with this irregularity.

Data Analysis

In this data analysis section, I discuss how I completed the first three phases of the five-stage analytic process recommended by Yin (2016), including how I compiled, disassembled, and reassembled my data. In the Study Results section, I include a detailed narrative of Phase 4, interpreting the data, by providing the results of my data, including visual representation as applicable. In Chapter 5, I will conclude the data analysis process by providing the inferences and conclusions I have drawn based on my data collection results.

Compiling an Orderly Set of Data

Yin (2016) recommended compiling an orderly set of data. I used transcription software to transcribe all of my interviews and then downloaded the transcription into a

Word document; this allowed me to cut and paste participant responses into a spreadsheet for order and manipulation. Using a spreadsheet allowed me to move back and forth within one orderly document/codebook. I created multiple tabs that included transcriptions, codes, categories, themes, interview questions, research questions, participant demographics, bracketing, and reflective journaling. These tabs allowed me to easily access my data, coding, data analysis processes, notes, and reflective journaling. I ordered the data by participant type and color-coding, allowing me to create visual representations and see emerging patterns and themes.

Disassembling the Data

To disassemble the data (Yin, 2016), I completed four different coding cycles. In the first cycle, I started by highlighting in vivo codes. In vivo coding uses the participant's actual spoken words and is sometimes referred to as natural coding (Saldana, 2021). In the second cycle, I used descriptive coding to break the in vivo codes into categories. In the third cycle, I looked at the categories generated from the descriptive codes. I identified the a priori codes that I had already established based on Epstein et al.'s (2019) six types of involvement framework. In the fourth cycle, I identified the open codes that were not already present in the first three cycles and continued the process until I had reached saturation.

Reassembling and Arraying Data

Once I had disassembled the data into codes, I put the codes into a new spreadsheet tab. I color-coded them by participant type to identify codes that were common to all participants, codes that were more common to one type of participant or

another, and codes that were only applicable to an individual participant or small group of participants. As I was working with the codes, themes started to emerge from the data, including the types of parent involvement activities that are supported by using technology, benefits and barriers to using technology as a communication and parent involvement tool, the types of interpersonal connections built as a result of using technology as a communication and parent involvement tool, and considerations for the implementation of technology as a communication and parent partnership tool. From the educator data, relationship building, and event participation emerged, but were not found in the parent data.

Study Results

In this section, I address the fourth stage in Yin's (2016) data analysis process by providing a detailed interpretation of the data. I organized the data by the research question, emergent themes, and participant response. I answered the overriding research questions by addressing both educator and parent perspectives on how technology can encourage home-school communication and parent partnership. To address this, I asked participants to discuss how they felt educators and parents could use technology as a two-way communication and parent partnership tool and to describe their experiences with using technology for these purposes. Due to the pandemic and the participants' districts having to switch from a physical to an online learning environment, all participants had recent experience using technology for these purposes and were very candid. I included visual representations to help the reader further understand the data presented. I have separated the data by educator and parent responses in the two a priori themes, home-

school communication, parent partnership, and then present educator and parent responses around the emerging theme of implementation.

Interpreting the Data

In the following section, I present my interpretation of the data collected. The section begins with a presentation of the educator perspectives and then continues with parent perspectives, at the end of the section, I present the emerging themes from both educators and parents that were not part of the a priori codes identified in the research and interview questions.

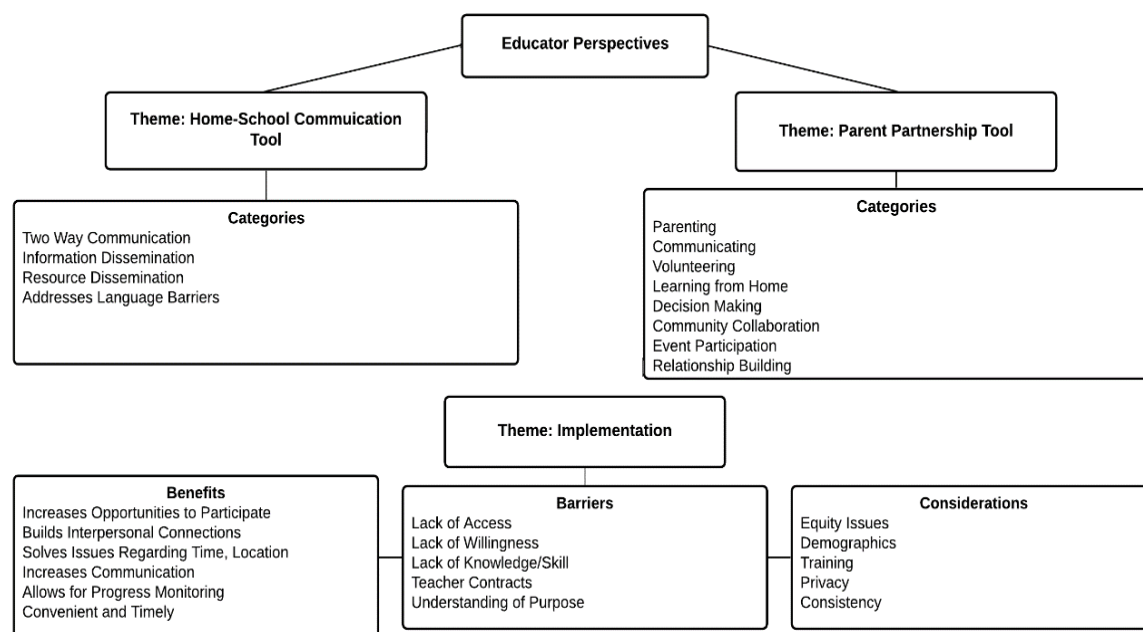
Educator Perspectives

The data is broken down by research question, theme and participant perspective. Figure 3 provides a visual representation of how educators responded to the research questions on how technology can be a home–school communication and parent partnership tool. The themes of home school communication and parent partnership tool were a priori themes identified in the research questions. Under the theme of home–school communication, I identified several categories of educators and parents using technology as a home–school communication tool from the individual data codes; these categories are two-way communication, information dissemination, resource dissemination, and addresses language barriers. Under the theme of parent partnership tool, the a priori categories identified by Epstein et al.’s (2019) framework are parenting, volunteering, communicating, learning from home, decision making, and community collaboration. The additional categories that emerged from the educator data but not the parent data are event participation and relationship building. In addition to the two a

priori themes, another theme emerged from the data implementation. Under the theme of implementation, the categories that emerged were benefits, barriers, and considerations. Under the category of benefits, I identified the following codes, increases opportunities for participation, builds interpersonal connections, solves issues regarding time and location, increases communication, allows for progress monitoring, and is convenient and timely. Under the category of barriers, I identified lack of access, willingness, knowledge and skill, teacher contracts, and understanding of purpose as categories. Lastly, under the category of considerations, I identified equity issues, demographics, training, privacy, and consistency as categories.

Figure 3

Visual Representation of Research Questions 1 & 2 Educator Perspectives



Note. This is a representation of the themes and categories that emerged from the data for research questions 1 & 2 regarding educator perspectives on how technology can be used to foster meaningful home–school communication and parent partnership.

Research Question 1

What are educators’ perspectives on how technology can be used to encourage home–school communication?

To answer research question one, participants were asked how they perceived technology could be used as a communication tool between home and school. I asked participants to describe experiences they had in using technology for this purpose. The first question explored educators’ perspectives on how they thought educators could use

technology as a communication tool, including current and potential uses. The second question explored their lived experiences with using technology for this purpose. The results revealed that technology could be used as a tool for both parents and educators to communicate their wants, needs, and expectations to each other through a variety of mediums, technology could be used as a tool for two-way communication, could be used as a tool to exchange and disseminate information and resources electronically, could be used as a tool to address language barriers, and could be used as a tool to communicate student progress.

Theme: Two-Way Communication Tool

Two-way communication between home–school supports the idea that educators and parents are partners in the education of students. 100% of the educator participants discussed how communicating back and forth with parents through technology during the pandemic had benefited the learning environment. Teacher Participant E commented:

I think the biggest thing is being able to communicate back and forth with parents. The parents that I have the most communication with, that I go back and forth with, are the ones that I am more able to provide support to and are also the ones whose student I can support more.

The feeling was similar between all educator participants regardless of position;

Administrator Participant D noted:

They (parents) can use technology to email and converse with the teacher. They can see what the student is working on. They can communicate with the school

and the administration and they can monitor the progress of the student on a day-by-day basis.

While usage of the technology tools used for two-way communication varied by participants' individual preference; Educator Participant D commented, "I really like Class Tag, but my principal uses Class Dojo," most educator participants' lived experiences included similar methods of two-way communicating, by phone, text, email, video conferencing and through social messaging applications like Facebook, Twitter, Instagram, Class Dojo, Class Tag, Canvas, Remind and Google Classroom Streams. Unique to the pandemic is the rise of video conferencing as a way to not only educate students but to provide a medium for educators and parents to communicate together face-to-face on a variety of topics, including student progress, home learning environments, parenting issues, resources, educational training and support, and content-related information. 30% of the participating educators did express concerns about a potential for miscommunication of intent or tone when only using written forms of communication such as emails, texts, and messaging apps and found video conferencing to be a way to mitigate the potential for miscommunication. Another potential benefit to using video conferencing instead of brick-and-mortar meetings was the potential for meetings to be held in locations and at times convenient to the participants, which positively impacted brick-and-mortar barriers with transportation, and timing.

Categories 1&2: Information & Resource Dissemination

100% of educators felt that technology could be used to communicate information and resources online effectively. Administrator Participant A noted, "People surf, they

are looking for information, they can't help it, it is almost like an appendage." While the participants listed many avenues for communicating information online, such as electronic flyers, webpage postings, emails, messaging applications, and learning management systems, social media was of particular interest due to the potential for two-way communication between the poster and the reader. Administrator Participant A discussed, "When a school has a social media presence, it offers parents a direct connection to the principal, to teachers and to other families." Unlike websites, robocalls and electronic flyers, which are static and offer little opportunity for back-and-forth communication, social media sites such as Facebook, Instagram, and Twitter offer the ability to post information and dialogue back and forth. Another potential benefit of using social media over more static forms of dissemination is that most people have social media already installed on their phones and are using it more frequently; Administrator Participant A pointed out, "A website is a place that people have to come to, you don't necessarily push out the information, people have to find it, it is less interactive. Social media gets more traffic."

Email was another favorite way for educators to communicate information to parents. Like social media, email offers the potential for two-way communication about the information or resources being sent out, Administrator Participant D mentioned:

I've noticed that we've been using it more this year, there's definitely more email interaction with families than I've ever had before, and it's kind of nice for some of the families that are working and aren't home during the day to be able to shoot off a quick email.

Email allows educators and parents to communicate directly with each other outside of the traditional school day; email addresses change less frequently than other contact methods and maybe the most reliable way to get ahold of a parent. Administrator Participant B commented, “if we are not able to get ahold of parents via telephone, we have emails. Parents seem to always get their emails, because email accounts don’t change as much as phone numbers.”

School and text messaging applications were other popular ways to disseminate information and resources out to families. 100% of the educator participants had experience using a school messaging application such as Class Dojo, Class Tag, Remind, Google Stream, or Canvas. The benefit to using these applications included the potential for two-way communication, ease of use, convenience, and being able to communicate without having to share personal contact information; Educator Participant B noted, “Remind is an easy access tool for teachers and parents to respond back and forth without giving out the teacher’s personal phone number.” Participants appreciated the ease of these applications, being able to send out messages to an entire school, classroom, group of parents or individual parents, and being able to share information, assignments, student work, or events all in one application that is accessible at any time. Administrator Participant D shared:

A lot of communication is happening on Google Classroom this year. Some parents will type messages into the stream if they need to get a question answered. I think that’s been a benefit too, as they can go on Google Classroom anytime, see the work, see the assignments and check on what’s been turned in.

Category 3: Addressing Language Barriers

Language barriers are why some parents are not more involved in their student's schooling (Hornby & Blackwell, 2018). Technology can be used to bridge language barriers and is being used to help educators and parents communicate in 90% of the educator participants' schools. Participants shared that programs like Class Dojo have a translation feature built into the program that parents can click on to have the postings translated; Educator Participant C expressed, "I love how technology can translate for our non-English-speaking parents. We can bring them in and show them what they need to click so that the messages I send them are translated into their home language." Also, 90% of the educator participants reported having used Google Translate to ensure written information is communicated in parents' home language. 20% reported having used some type of verbal translation software that allows you to speak directly into the app and have it translated back both verbally and in written form, and 10% reported having used the interpreter feature in Zoom meetings that allow for simultaneous translation using an interpreter and break out rooms.

Research Question 2

What are educators' perspectives on how technology can be used to encourage parent partnership?

To answer research question two, I asked participants a series of interview questions designed around Epstein's (2019) Six Types of Involvement Framework. Through these questions, I identified parent partnership as the overall theme. I then identified parenting, volunteering, learning from home, decision making, community

collaboration, event participation, and relationship building as categories under the parent partnership umbrella.

Theme: Parent Partnership Tool

Category 1: Parenting

Parenting assists families in understanding the growth and development of the child (Epstein et al., 2019). In the area of parenting, 100% of the educator participants felt that technology is used as a progress monitoring tool; administrator Participant E said, “Through technology teachers are able to communicate very quickly and more often with parents about their child’s progress,” while Administrator Participant D noted, “Parents don’t have to wait six weeks for progress reports to come out.” The most frequently talked about progress monitoring tools were Aeries and Google Classroom. Through the Aeries Parent Portal, parents access grades, missing assignments, attendance, and behavior reports in real-time. Through Google Classroom, parents can see student assignments, due dates, missing assignments, grades, assignment expectations and send messages back and forth to the teacher. Educators noted that the pandemic positively impacted the number of teachers and parents who use the programs to communicate progress. Educator Participant C explained, “These programs have been available before, but since distance learning began, they (parents) seem to be logging on more to check whether they (students) are passing the quizzes and stuff.”

Category 2: Volunteering

Volunteering time at school is an important aspect of the involvement framework. Schools should develop policies and practices that improve recruitment, training,

scheduling, and location to involve as many parents as possible in supporting students and school programs (Epstein et al., 2019). Technology can solve some common barriers to volunteering such as time, location, and transportation. Educator participants were excited to discuss how technology could be used to encourage more parents to volunteer at school. Small group instruction through video conferencing was suggested by both Administrator Participants A & D. Administrator A commented, “We can use parents for small groups, you can use parents in small rooms on Zoom and do breakout sessions,” and Administrator D added, “A lot of parents are willing and if properly-trained, could help with some of the breakout rooms.”

In addition to parents helping students, educators discussed that parents could be of assistance to other parents either in helping them with technology issues, in understanding the learning platforms, or through helping them understand the curriculum needs of their students, as Administrator Participant A suggested:

Teaching parents that they can actually help other parents on technology, basically increases the social capital of parents, increases the community’s ability to help each other, which will in turn increase achievement in school. It will increase achievement in the entire school district and community.

Administrator Participant E shared an experience where a parent was able to assist in a Zoom classroom when they had a substitute teacher:

I went into a class when a sub was in there, and we were trying to help the kids navigate some of the apps on Clever, one of the parents actually screen shared the

student screen since it looks different. That helped the sub, and it helped the other parents see where to have their students go to navigate in the Clever app.

Administrator Participant B shared the idea of having a virtual career day where parents would:

Take the kids to work with them through video conferencing or live streaming and show them things that are going on, like maybe if they worked at Amazon. A lot of kids would be interested in how Amazon works on the inside.

While administrator participants were more inclined to suggest technology as a way for parents to take a more significant role in the actual instruction of students and other parents, teachers saw technology as more of a way to disseminate information to parents on opportunities for volunteering their services for classroom events, grading, and task completion, Educator participant A suggested:

If you're going to have some type of event or you need the support of parents on grading or cutting out things, you could send out a message to the parents asking if they can volunteer. You could get more involvement since you messaged the whole class instead of just trying to call one or two parents.

Category 3: Learning from Home

Learning at home includes involving families in supporting their children's acquisition of knowledge by creating opportunities that help families support their students in their academics, including homework, study habits, curricular projects, educational programs, and extra-curricular decisions (Epstein et al., 2019).I asked

educator participants how they thought technology could support home learning environments. Administrator A responded:

I am an advocate of telling one, two, three- minute stories on Instagram or Facebook and then saving that media and uploading it to YouTube... you also can push it out in a podcast, which would be great so people could listen to it while driving down the road...if they listen to a podcast about your school and what's going on, parents will feel connected.

One benefit of uploading information, parenting tips, learning ideas, etc., is that parents can access the information conveniently. It helps parents who cannot otherwise get to the school building in person to feel connected to what is going on at the school.

Administrator Participant A shared:

Connectiveness for parents is huge... I started using Facebook and a program called Canva, where I create a Tip of the Day article. It's about three sentences long and I share it, and then I asked them if they have questions. Parents are asking me as a principal, well, how does it work? I'm looking for them to get involved with me, so that I feel like they have some type of connection, especially when they're at home and they work nights, or they can't come to school.

Another way technology can be used to support home learning environments is through online training that offers parents information on how to set up a classroom environment in their home; administrator Participant B shared, "We can have trainings online to teach the parents how to set up the classroom or how to help their students when they have multiple grade levels, give them ideas." Also, in the distance learning

environment, parents are often sitting near their students while the students are on Zoom; this proximity allows them to see and hear what is being taught and how it is being taught. Parents are able to jump in and ask questions; this allows the parent to extend and support the learning outside of classroom hours; Administrator Participant D stated, “They get a better understanding of the concepts that their kids are working on and they’re seeing exactly what they’re struggling with and what their goals are.” Educator Participant E had a similar response:

I think it helps the parent to understand what the expectation is at school and it helps them to understand more of the pieces that they might need in order to help their student be successful versus, trying to guess what they need.

Beyond podcasting, training, and co-teaching partnerships, educators felt that another way to support home learning environments was to use technology to create parent networks and support groups. Administrator Participant E shared:

I would create a network. I was talking to a parent just today who said, “please tell me I’m not alone in this. Please tell me that other people are feeling the same way that I’m feeling.” I think that we can use it as a way to connect parents with each other, so they know that they’re not alone, that there are other parents out there who feel the same way that they do and create some kind of community or collaboration between the parents to support each other.

Category 4: Decision Making

Decision making should encourage families to be participants in the school’s decision-making processes by welcoming and encouraging parents to take an active role

in school governance committees, parent organizations, and advocacy groups (Epstein et al., 2019). Technology offers new ways to get parents involved by solving common barriers such as time, location, physical presence, and space. Educator participants discussed how the distance learning environment had forced them to think outside of the box. Many have used teleconferencing, online surveys, social media polls, and voting software to solicit their parents' input in their decision-making processes. Administrator Participant E remarked:

It's been a lot easier to get parents on Zoom. I wish we would have thought of this before the pandemic. We could have had a lot more parent participation because now parents can do a zoom meeting and participate in a way that actually feels like they're physically in the meeting or on the committee themselves.

Administrator Participant D commented:

I think it helps for parents that have busy schedules to have the opportunity to become more involved because they don't have to take time to drive down to the school or to find childcare or some of those other barriers that prevent them from helping right now.

While holding meetings through teleconferencing was the most frequent response, some educators have been soliciting parent input through online surveys, polling, and webinars; Administrator Participant C stated, "we use Google forms, or other online survey software that allows you to create a survey that you can push out to parents." Educator Participant E responded, "We have done Zoom polls," and Administrator Participant A suggested:

You can have two people in a webinar having a conversation and then the audience can put questions and comments into the feed, and then you have a third person serve as a moderator that can actually answer and help moderate the questions as they come through.

While teacher respondents mentioned teleconferencing, they also mentioned using school messaging programs like Class Dojo as a way to solicit parent participation and input, Educator Participant A responded:

If they're sending out an email or a message on Class Dojo, then they're able to keep up to date with what's going on versus trying to remember to get that flyer.

You could send a message every day reminding the parent.

Educator Participant B responded:

I put it on my stream when we were doing the elections for school site council and I walked through the process with each of my math classes because that way we would cover all of the parents and have them know to come in vote.

Category 5: Community Collaboration

Collaboration with the community involves coordinating community, family, and school resources to ensure everyone is working together to ensure all students' success in the neighborhood (Epstein et al., 2019). 100 % of the educator participants saw technology as a way to either disseminate information about community resources to parents or as a way to refer parents for services but felt that more work was needed in training the educators on what resources are available in the community and in building relationships with community organizations, Administrator Participant C responded:

I just haven't been able to figure out how we can use the technology as a liaison or to collaborate with our community about resources other than, you know, standard referrals through technology to our supporting partners such as the Desert Mountain SELPA or counselling service or social programs or county probation or county child protection services. But, you know, that's so superficial in nature because it's just merely a means of notification at this time.

Educator Participant A responded, "I think it can be used to create coverage in the community about resources." Educator Participant B commented:

It would be a way to be able to inform people, but you have to know what all those resources are to be able to get them back out there. And, you know, if we were informed about that, then we can share that out, whether it's on the Google stream or through a Remind or Class Dojo.

Category 6: Event Participation

Event participation was not one of my a priori codes. However, as educators talked about how technology could be used, it was frequently mentioned that schools could use it to bring parents in virtually for performances, classroom events, promotions, and award ceremonies. Administrator Participant B shared, "We had our back-to-school night on Zoom and that was kind of interesting. The teachers enjoyed it. I mean, a lot of parents said that they really had a good experience with that." Administrator Participant A shared:

Because of the pandemic, for example, at the end of the school year, we had to do a promotion for fifth grade... so what we did is, I went live on YouTube, so all of

their friends and family could see it. I posted it on the private school page, and I posted it in Class Dojo so the parents could look at it, they could watch it live, or better yet, later on, they could just watch it later. We also did our awards for the end of the school year the same way, I went live with the awards. That was OK. They could actually just watch it on YouTube later. So that just seeing that and making that available for families was a learning experience for me. It gave the parents access and it taught me something new too.

Overall, educators, including Administrator Participant D, felt technology provided a way for “parents to stay informed on what’s going on at the school, in the classrooms and hopefully find something that they’re interested in and get involved that way.”

Category 7: Relationship Building

Another common theme that was not one of the original a priori codes was that technology could be used for relationship building, building connections between home and school, networking, and transitioning from one level of schooling to another; Administrator Participant A noted, “I’m looking for them to get involved with me so that I feel like they have some type of connection, especially when they’re at home and they work nights, or they can’t come to school.” Counselor Participant A responded:

We can have parents actually create parent groups, parent support groups, parent support zooms to help them with the home school and have support with one another, create some kind of community or collaboration between the parents to support each other.

Administrator Participant C noted the importance of being able to build relationships when students are transitioning from elementary to middle school:

It is vitally important at the middle school because, you know, you go from one teacher to six and you know, a lot of kids are shocked by the transition, and it's not like a personal relationship between the parent, the student, and the teacher, and, you know, from an elementary standpoint, where they kind of know each other and it's one person they're dealing with. So now they're dealing with six teachers who are dealing with 180 kids a day, so that interpersonal relationship is kind of not there, because of the number of students that the teacher has so technology can again bridge that gap.”

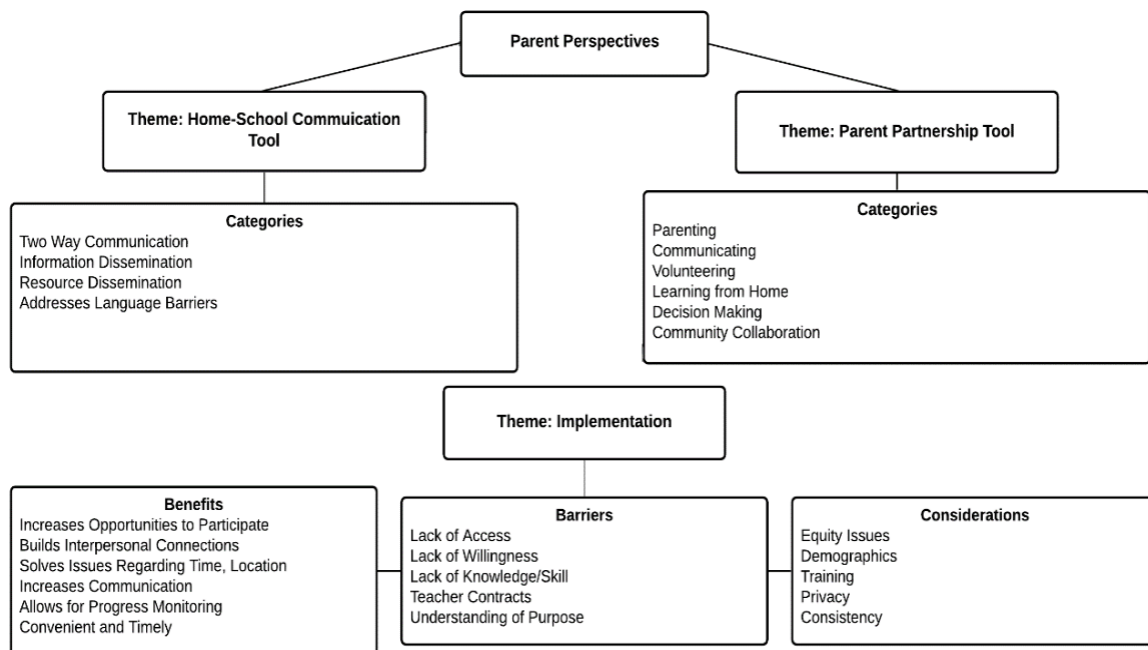
Parent Perspectives

Figure 4 provides a visual representation of how parents responded to the research questions on how technology could be used as a home–school communication and parent partnership tool. The themes of home school communication and parent partnership tool were a priori themes identified in the research questions. Under the theme of home–school communication, I identified several categories of parents using technology as a home–school communication tool from the individual data codes; these categories are two-way communication, information dissemination, resource dissemination, and addresses language barriers. Under the theme of parent partnership tool, the a priori categories identified by Epstein's (2019) framework are parenting, volunteering, communicating, learning from home, decision making, and community collaboration. Unlike in Figure 3, parents did not identify relationship building or event participation in

their codes. In addition to the two a priori themes, another theme emerged from the data implementation. Under the theme of implementation, the sub-themes that emerged were benefits, barriers, and considerations. Under the sub-theme of benefits, I identified the following categories, increases opportunities for participation, builds interpersonal connections, solves issues regarding time and location, increases communication, allows for progress monitoring, and is convenient and timely. Under the sub-theme of barriers, I identified lack of access, willingness, knowledge and skill, teacher contracts, and understanding of purpose as categories. Lastly, under the sub-theme of considerations, I identified equity issues, demographics, training, privacy, and consistency as categories.

Figure 4

Visual Representation of Research Questions 3 & 4 Parent Perspectives



Note. This is a representation of the themes and categories that emerged from the data for research questions 3 & 4 regarding parent perspectives on how technology can be used to foster meaningful home–school communication and parent partnership.

Research Question 3

What are parents’ perspectives on how technology can be used to encourage meaningful home–school communication?

To explore research question three, parent participants were asked how they thought technology could be used as a communication tool between home and school and were asked to describe experiences they had in using technology for this purpose. The first question explored parents’ perspectives on how they thought technology could be

used as a communication tool, including current and potential uses. The second question explored their lived experiences with using technology for this purpose. The results revealed that similar to educators, parents felt technology could be used as a tool for both parents and educators to communicate their wants, needs, and expectations to each other through a variety of mediums; technology could be used as a tool for two-way communication, could be used as a tool to exchange and disseminate information and resources electronically, could be used as a tool to address language barriers, and could be used as a tool to communicate student progress as well.

Theme: Two-Way Communication Tool

Similar to educators' perspectives, parents felt that technology could be used as a two-way communication tool between home and school and reported that school messaging apps, text messages, and emails were the best way to encourage back and forth communication. Parent Participant D noted, "I prefer her (teacher) to either email or text me." Parent Participant A responded:

As a parent, it can be used to keep sending messages back and forth. If, you know, especially with the Corona virus right now, not wanting to get paper mail, this is easy access for everyone to have on their phones, tablets, computers, just a great communication tool to go back and forth.

Parent Participant B responded, "for me, it's been a good experience so far between home and school with my kids and being able to contact the teachers quickly when I need to contact them." Parents confided that since the pandemic, online communication has become more widely used. Parent Participant C noted:

It's really different now. We were actually just talking about how great it is that we have such easy, open communication with the teacher right now, because before we had the ability to email a teacher, but we never really did because we didn't have any reason to. But it's really great now that there's so many avenues. I mean, we can hop on to his zoom if we need to. If we have questions, we can email anytime. There are office hours where we can call. We don't have to just talk to them when we see them at a parent teacher conference or when we have set up a specific time to meet.

Parent Participant D mirrored this sentiment, "It made it much quicker than calling and trying to figure out office hours. It was just way easier that way."

Categories 1 & 2: Information & Resource Dissemination

While Educators felt information, dissemination was an important way technology could be used as a communication tool, parents focused more on it being a two-way communication tool. Also, while educators listed websites, electronic flyers, and social media as examples of how technology is used to disseminate information, parents preferred getting their information in ways that supported two-way communication, such as through emails, text messages, teleconferencing, and personal phone calls, Parent Participant D noted:

Having the ability to easily reach out and talk to the teacher, especially when there is a one on one zoom every week, I think when the kids go back to school, if there could be a one on one zoom every week for every kid, if that would be

possible, would be an amazing thing to have, because it is it's so much more personal.

Category 3: Addressing Language Barriers

Similar to educator perspectives, parents also noted how technology could be used to address language barriers. 40% of the parents had experience with using Google translate, Parent Participant E shared, “instead of me trying to find someone that speaks Spanish, it is easy to use either Microsoft Translator, or Google Translate and shoot off an email,” others mentioned software programs they knew of that could also translate, Parent Participant A shared, “Lots of different translating services you can use. You can just talk right into your technology, a phone or a computer, and at a push of a button, it can translate it for you.” While most parents were supportive of using some type of technology to do translations, some also felt the importance of having an in-person translator; Parent Participant D commented, “I feel like if it's someone with a different language, you're still going to need some kind of interpreter.”

Research Question 4

What are parents' perspectives on how technology can be used to encourage parent partnership?

To answer research question four, I asked participants a series of interview questions designed around Epstein's (2019) Six Types of Involvement Framework. Through these questions, I identified parent partnership as the overall theme. I then identified parenting, volunteering, learning from home, decision making, community collaboration as categories within the parent partnership umbrella. While educators also

had event participation and building relationships as a theme, these did not reveal themselves in the parent responses.

Theme: Parent Partnership

Category 1: Parenting

Parents, like educators felt that technology could be used as a tool for progress monitoring, Parent Participant A responded, “Parents can have 24/7 access to how their child is doing. If they’re missing assignments, or if they’re falling behind on something.”

Parent Participant B noted:

With the Aries parent portal that we have, we are easily able to log in every day if we want to, check web assignments, check where their grades are. It gives me a better handle on being able to watch my student’s progress... I don’t have to wait for parent teacher conferences, progress reports, that sort of thing. If I want to check my kid’s grades, I can just boom, go to Aries, parent portal.

While AERIES was used by all parents interviewed, some preferred to speak one on one with the teacher through teleconferencing or phone calls, Parent Participant D expressed, “I think if every week we could talk to the teachers even briefly, 10, 15 minutes about how a student is doing, it would be so much better than just learning about it when there is a problem or during a one-time parent teacher conference.” In addition to teleconferencing, parents appreciated being able to email and text back and forth with their student’s teacher about progress, Parent Participant D stated, “That’s how I’m fully communicating with her teacher. I think I’ve met her once in person, like we literally communicate strictly through text messaging or emails.”

Category 2: Volunteering

While administrators wanted to see parents in Zoom classrooms doing break out rooms with other parents and students, and teachers were focused on classroom events and materials prep, parents thought that technology could be used to as a way to include parents in what their students were doing in the classroom, Parent Participant E noted:

She would post Dojo messages throughout the school day. So as the kids were learning and they're doing like a Halloween project, she would be recording them, and she would send it to each parent, or when they had class pictures, she would video record them lining up and I would send out to the parents, so some days almost felt like we were in class or in school with him.

Other parents felt that technology could be used to volunteer, but not without training to support parents, Parent Participant B offered:

Parent trainings would help so that we can understand the systems that they use. I do know now, since we have distance learning and we're basically using a lot of Google classroom that there have been parent trainings for Google Classroom, which I think are great, but I do feel like there needs to be a little bit more trainings offered for parents on other programs that the kids use, because are some that I'm not familiar, like my kids know how to use it. But I have no idea. I'm kind of getting an explanation of how a program works, but I'm not a hundred percent sure, so giving training on the technologies and programs used would, I think, help parents because then they know what their kid is talking about when they say Lexia or IXL.

Category 3: Learning from Home

Parents and educators had similar responses to how technology could be used as a tool to create better home learning environments. Parents felt that technology allowed them to be more involved with the actual content taught because they could hear the lessons on Zoom and because teachers were posting links, resources, and assignments in virtual classrooms, Parent Participant D shared:

I think that before, we've never really had to worry about what he's learning and if he's learning it well. But now, we actually know everything that he's learning because we see everything that comes through. So, I think that if we always have a better idea of what he's learning and don't depend on what he tells us, which is not always forthcoming information that he has, that it can help us to be better, just do things in regular, everyday life that coincide with what he's learning.

Similarly, Parent Participant E said:

Just to continue the learning at home and knowing that school and learning does not stop at 2:20, but to kind of continue and reinforce, you know, the learning that would happen at school, also at home because we have a better idea at what is being taught.

Category 4: Decision Making

Educators and parents agree, technology can be used to disseminate school policy and share meeting information with parents, Parent Participant C shared:

Well, for one, just to get the word out or what not, you can send emails and text and all that stuff. I feel like parents in this age respond better to an email or a text

versus sending home a letter with your child. To me, I know I'm always on my email or whatnot, so I'm constantly seeing different things from the school.

Parent Participant A responded:

Just getting parents involved and aware of events because at times, you know, if you send a paper home, kids don't put them in their backpack or in their folders, they just throw it in a backpack, and then when they clean up their backpack, you find it crumpled up to the bottom of it, and you're like, "oh, no, there was this family event or oh, I could have done this or whatever," So I think just having that direct line of communication with parents keeps parents aware of school events or different opportunities to participate in the classroom or to support.

In addition, parents felt that technology could offer avenues for participation that weren't options pre-pandemic, Parent Participant B shared:

I think with the use of Zoom, it makes it easier for parents who maybe can't get to a parent meeting or a school committee meeting or PTO or something. They want to be part of it, but maybe they don't have the transportation they can't get there, so by using programs such as Zoom or Google Hangouts or whatever, they can still be a part of that, but from home, so they don't have to feel like they're missing out.

Parent Participant D reported that their district is doing virtual school board meetings:

I think that's been really neat because we've never attended a school board meeting. But we can hop on now from home and type in questions and that's been great. We would have never done that before all of this, so if they keep doing that,

I think that would be really good because a lot of people just can't get away to be there in person.

Parents felt that technology makes participating in school decisions and policymaking more convenient and more accessible. Parent Participant B shared:

I know a lot of times when we vote for new policies or new rules and stuff, it's kind of like you have to go to a board meeting, or you have to you have to physically be present at whatever meeting is deciding those policies or practices. And by using technology, I think it makes it easier like the survey monkey, it is super easy to use. You don't even need training to use it. And parents can pull it up and vote right there on whatever policy or practice that the school is trying to make decision on. And that would give the parent more support so that they can be participating in it and they don't feel like they don't know what's going on.

Another aspect that parents thought of, but educators did not is that technology gives parents who may not feel comfortable coming to the school for whatever reason another avenue to give their opinion, Parent Participant A noted, "You can send surveys virtually. Have parents answer multiple choice and short answer, they can give their honest opinion without being felt like they're being put on the spot."

Category 5: Community Collaboration

Parents had a more challenging time answering this question than educators but came to a similar conclusion that technology could be used to disseminate information about community resources available to support parents, Parent Participant A responded,

“Everything’s virtual so it can go out to different avenues rather than just word of mouth,” while Parent Participant B noted:

I feel like our communities go to technology a lot. You have Instagram, Facebook, Twitter, that sort of thing. I think by having technology that reaches more parents because more parents have Facebook or Instagram or that sort of thing, by having the school page or district page that they can be friends with or add to, or become a part of, they can see those resources that are in their community and then they know what services and programs that they can partake in if they need help.

Parent Participant E talked about the importance of libraries as community hubs and suggested that schools use technology to share out the resources offered by libraries:

I think letting the community know about events that happen at the local libraries is huge. Libraries are a forgotten resource because people just have access to things on their computers or phones, and so many libraries have so many events, you know, before Covid. They have story time for different age groups or stuff like that, for the older kids, the ability to do research.

Emergent Themes of Both Educators and Parents

Theme: Implementation

Having used Epstein’s (2019) Six Types of Involvement as a framework for developing interview questions predefined some of the themes that I would see emerge from the data. The a priori themes derived from Epstein’s (2019) framework were parenting, communication, volunteering, home learning, decision making, and

community collaboration. Non-a priori themes that emerged from educator data but not parent data were event participation and relationship building. Non-a priori themes that emerged from both educator and parent perspectives were barriers, benefits, and considerations.

Category 1: Barriers to Using Technology

Educators and parents 100% agree that the most significant barrier to using technology as a home–school communication and parent partnership tool is equitable access to technology, especially the internet and Wi-Fi. There are many reasons for accessibility issues, but the two most cited are economics and location. Students who come from more impoverished homes are less likely to have access to Wi-Fi and the internet; Administrator Participant B commented:

When the parents either don't have good Internet, they're in an area where they don't have much Internet or they can't afford the best Internet there, their bandwidth is pretty bad.. it's a luxury in low economic homes to have it. That's a big purchase when your financially desperate and trying to have a car or transportation.

Similarly, Educator Participant C shared:

One of the biggest barriers I think right now is the just the Internet access, because not everybody, even though they want to have Internet access, has it. With everybody on Zoom, and everybody using computer and Wi-Fi, it does have a tendency to glitch. I've had parents tell me, "I just quit the meeting because I can't get it to stay on long enough for it to even be worth my time."

Parents also agreed, Parent Participant B stated, “I think one of the biggest barriers is that a lot of lower income or socioeconomically disadvantaged families don’t have access to technology, they don’t have access to the Internet.”

While equitable access was the number one barrier to using technology, the second most cited barrier was knowledge. Educators and parents agree that lack of tech skills and an understanding of how technology can be used are barriers to it being used more frequently. Administrator Participant A shared:

Lack of knowledge and the where-with-all to know how to use it. Giving them information about what it is used for, you know, how you use it and why you use it, because I have parents that are saying, “I just don’t need it.” There’s no reason, you have to give them a reason behind it. So that is a huge barrier.

Administrator Participant D noted, “there’s definitely the learning curve for learning the new technology...getting people to stick with it so they realize how helpful it can be once they do figure it out.” Teachers agreed, Educator Participant A noted:

One of the biggest barriers, is not knowing how to use the technology, both at the teacher and parent level...teachers don’t know how to use technology very often. If our parents are struggling and they teacher is not tech savvy, then they’re going to have trouble using the tech...So that lack of knowledge and lack of skill is going to be a barrier unless we have basic classes that will teach parents and teachers how to use it.

Parent responses supported educators, Parent D shared, “I guess if the parent isn’t into technology and doesn’t really check emails or things of that sort, which could be a barrier. If they don’t know how to use technology.”

Category 2: Benefits of Using Technology

While equitable access, skill and willingness to use were the most common barriers to using technology, participants also identified the benefits to using technology as a home–school and parent partnership tool. Benefits of using technology as a home–school communication tool included, convenience, flexibility, opportunity for participation, and the ability to communicate back and forth. Participants recognized that the distance learning environment caused by the pandemic was a catalyst to technology being used more often and commented that it should continue to be used when in person schooling returns, Parent Participant D exclaimed, “Do it more. Keep it!” Parent Participant C shared, “I think it should be used in everything going forward, because that’s just where we are in the world.” Administrator Participant E responded:

Being in a situation of distance learning has pushed people to increase their learning faster than I think if it would never have happened. I think it’s going to be a positive thing and kind of exciting to continue implementing this as we return to the regular learning classrooms. Because parents and teachers are definitely more comfortable with the technology now.

Convenience, flexibility, and opportunity to participate were the most cited benefits of using technology as a home–school communication and parent partnership tool, Administrator Participant D shared, “I really liked using the Internet as part of

education and being able to get in touch with the teacher without having to drive somewhere.” Educator Participant A commented, “I think technology is very important and using it to communicate with parents is a quick and easy way to get things out.”

Administrator Participant A agreed:

With parents trying to work and trying to help their kids do school, sometimes just that trip, that 15, to 20-minute trip to the school for Site Council and other clubs is too much. Being at school to participate isn’t always an option, whereas if they can be, you know, driving down the road, listening to the zoom meeting on their phone and getting the information that they need and being a participant.

Parent Participant B shared,

I think with the use of Zoom, it makes it easier for parents who maybe can’t get to a parent meeting or a school committee meeting or PTO or something. They want to be part of it, but maybe they don’t have the transportation they can’t get there, so by using programs such as Zoom or Google Hangouts or whatever, they can still be a part of that. But from home, so they don’t have to feel like they’re missing out.

Educator Participant C added,

I think it could be used to help support the parents who want to be involved, but who don’t necessarily have the hour that they can spend in a meeting at school, but with the Zoom meeting, I was able to actually have a meeting with a parent today where she was able to attend and still be at her work.

Administrator Participant D noted:

I think it helps the parents that have busy schedules, to have the opportunity to become more involved because they don't have to take time to drive down to the school or to find childcare or some of those other barriers that prevent them from helping right now.

Educator Participant A shared, "Parents can have 24/7 access to how their child is doing."

Category 3: Implementation Considerations

Educators and parents alike noted things needing consideration when implementing technology as a home-school communication and parent partnership tool; among these considerations are knowing the demographic makeup of the parents in the school, stakeholder training, being mindful of privacy concerns, being mindful of the potential for miscommunication, and issues with equitable access.

Participants noted that when implementing technology, it is important to understand the demographic makeup up of the school. Administrator Participant A responded:

Social media is huge because it reaches our younger demographics, both male and female, all the way down to 18 years old to about thirty-five years old. What I personally found on Facebook, for example, is that when you push out information that's public, you are more likely to get the younger groups.

Parent Participant E mirrored this sentiment and responded:

Understanding the demographic makeup of the technology, just if they're older, like if you know, they're living with grandma and grandpa. Obviously, they're more than likely not going to have the access to smart phones or being able to

communicate with all of the different apps as easy if the parents were younger, it could be the age.

Administrator Participant E noted, “There are still quite a few families that don’t understand technology, and we’re finding that it’s mostly our Hispanic families.”

Understanding demographics is important to understanding which technology and forms of communication to use.

Training was a key component that both educators and parents felt needed to be considered when planning to implement technology, Administrator Participant A suggested, “I recommend that leaders and teachers actually teach parents how to use the tool as an engagement piece and especially as an involvement piece where you can communicate back and forth.” Administrator Participant B concurred, “Have trainings online to teach the parents how to set up the classroom or how to help their students when they have multiple grade levels, give them ideas.” Educator Participant C suggested, “We could do volunteer trainings, train them to be in the classroom;” additionally, Parent Participant E responded, “Parent trainings would help so that we can understand the systems that the schools use.”

The potential for confidentiality breaches and miscommunication were concerns of both educators and parents. Confidentiality concerns were connected to lack of current contact information and the potential for sending emails to the wrong people, Administrator Participant B responded, “I don’t always feel comfortable with sending an email, if it’s very personal information, to the parents because we really don’t know who has access to their email.” Similarly, Parent Participant E responded, “There’s one more

thing I thought about as a barrier for technology. Not all parents update their information, so things like email addresses are incorrect and they don't keep them updated. I think that that might be a problem that we'd find."

In the area of miscommunication, Educator Participant E noted:

I always hesitate if there's a true issue to use text or email because they can be so misconstrued. You don't always hear the tone in it, and sometimes you know what they think you said and what you were trying to say are two different things. When you can't hear that tone. So, I would say that would be my biggest concern would just be, you know, depending on the situation written might not be the best part. It may not be the right direction to go.

Educator Participant C similarly responded:

I think that even though technology is a great communication tool, we still need as parents and educators, we still need to do that face to face, one on one, because even with technology, you could say something is meant as this way, but somebody takes it the wrong way, and so it does lead to miscommunication at times.

Just as equitable access was listed as one of the main barriers to using technology as a home-school communication and parent partnership tool, it was also listed as one of the top considerations for implementation. Schools located in areas of high poverty need to make a plan for how they are going to get devices and internet capability into the hands of their stakeholders, Administrator Participant C shared:

I think schools and not just schools, but, you know, government agencies have an obligation to make sure that those who are less fortunate have equal access to whatever is going to even the playing field. So, you know, I don't think it's necessarily the school that has to provide it, but there has to be some collaboration between the school and the community to make sure that those parents who don't have Internet access, Wi-Fi access, have the opportunity.

Administrator Participant B noted:

There is an economic divide still regarding that. And right now, the students are depending on the schools to supply the tech. But my question is, is that still going to continue when we go back? Because once we go back and we might, we won't have all the hot spots and I can't say that the students will be able to take Chromebook home anymore because we'll need them at school. Lots things to consider. So those are concerns because children live in different economic brackets.”

Evidence of Trustworthiness

Trustworthiness refers to researchers' procedures to ensure the quality, rigor, and credibility of a study (Morgan & Ravitch, 2018). Trustworthiness is relevant to educational research because it defines the practices in methodology that researchers undertake to make their research transparent to the consumer (Morgan & Ravitch, 2018). In the following section, I discuss Lincoln and Guba's (1985) four key practices to ensure trustworthiness in my study. These practices include credibility, transferability, dependability, and confirmability (Morgan & Ravitch, 2018).

Credibility

Credibility refers to the researcher being able to establish confidence in the findings' truth (Morgan & Ravitch, 2018). There are many ways that a researcher can establish credibility, but two of the most commonly used strategies are triangulation and participant checking (Morgan & Ravitch, 2018). In triangulation, the researcher uses multiple sources of data to cancel out any one method's weaknesses (Morgan & Ravitch, 2018). In my study, I conducted semi-structured interviews with teachers, administrators, and parents within multiple sites, departments, grade levels, ethnicity, gender, technology proficiency, and educational levels. This triangulation of the data allowed me to build a more comprehensive interpretation of the phenomena (Morgan & Ravitch, 2018).

Member checking is the systematic process used to engage the study participants with the data, findings, and data analysis (Morgan & Ravitch, 2018). Member checking allows the researcher to determine if they have accurately reflected the lived experiences of their participants. I used member checking as a way to build credibility in my study. After interviewing, participants received copies of their interview transcripts and a draft copy of my narrative analysis and interpretation. Through the member checking process, I asked participants to verify whether the interpretations I made in my analysis were accurate and logical based on their interview responses. I asked participants to provide feedback and elaboration on my interpretation of the data. None of the study participants submitted additional feedback or elaboration.

Transferability

Transferability refers to whether a study's findings are applicable to other contexts (Morgan & Ravitch, 2018). Generic qualitative studies tend to be bound by context to ensure transferability. Yin (2016) recommends presenting the findings at the conceptual level by connecting the findings to the pre-existing literature. In connecting my findings to the literature, I examined any incongruence or similarity in the literature, which helped me demonstrate transferability. In addition to situating the literature findings, using three different participant groups from multiple sites, departments, grade levels, gender, ethnicity, and educational levels and using the participant's own words in the narrative lent transferability to my study.

Dependability

Dependability refers to whether a different researcher could replicate the study's findings with similar participants (Morgan & Ravitch, 2018). To ensure dependability, Shenton (2004) recommends thoroughly describing the research process conducted so that another researcher could follow the process and obtain comparable results. Researchers can ensure an elevated level of dependability by following the research protocols established by their University. I followed all of Walden University's research protocols. I established an interview guide and questioning route, and the interviews were recorded and transcribed verbatim to check for accuracy. I took notes before, during, and after the interview process and documented the research process extensively, including my rationale for all methodological decisions (Ryan-Nichols & Will, 2009).

Confirmability

In qualitative research, it is assumed that the researcher brings their perspective to the study. Confirmability refers to the data's accuracy and neutrality as confirmed by others (Houghton et al., 2013). The process for establishing confirmability relies on the data being grounded in the participants' experiences, not in those of the researcher (Shenton, 2004). One way to support confirmability in a study is to use bracketing (Peters & Halcomb, 2015). To engage in the bracketing process, I used a reflective journal that allowed me to reflect on every stage of the research process, from defining the why behind my research, the methodology used, the interpretation of the results, and my subsequent learning. In addition to using a reflective journal, I created a mind map of my own biases regarding the topic (see Appendix I). During the process, I examined my assumptions and feelings by asking myself a series of questions whenever the data caused a visceral reaction. Most of my reactions were driven by tensions within my own personal belief system. These questions included:

- What assumptions are participants making in relation to the topic?
- What surprised me about this response? (assumptions)
- What did I find interesting? (positionality)
- What bothered me about this response? (tensions within your belief systems)

Understanding my own bias was an essential part of ensuring the confirmability of my study. As an educator, parent, and employee of the district, I am aware that I have my own opinions and beliefs about using technology as a home–school communication and parent involvement tool. I engaged in the reflective bracketing process to document

any personal bias as I read through the interview transcripts. Reflective bracketing allowed me to reach deeper reflection levels across all stages of my research (Tufford & Newman, 2012). The opportunity for substantial reflection during the research process enhanced my research's sagacity and facilitated a more profound and rigorous analysis and interpretation of the data (Tufford & Newman, 2012).

Summary

The purpose of this generic qualitative study was to expand existing research on the use of technology in schools by exploring parent and educator perspectives on how technology can be used to foster more meaningful home-school communication and parent partnership. In Chapter 4, I provided a detailed description of the study's setting, the study participants' demographics, the procedures for data analysis, the results of the data analysis, including both a-priori and emerging themes, and the evidence for trustworthiness.

This generic qualitative study was conducted in the Inland Empire and High Desert Region of Southern California and included five administrators, four teachers, one counselor, and five parents. Due to the current restrictions of the SARS-CoV-2 pandemic, I conducted all of the interviews over the Zoom virtual meeting platform. Study participants were of varying levels of education, experience, position, gender, ethnic and economic backgrounds.

Data were analyzed using Yin's (2016) five-stage analytic process that included (1) compiling an orderly set of data, (2) disassembling data, (3) reassembling and

arraying data, (4) interpreting data, and (5) drawing conclusions from data. Chapter 4 included a narrative description of the first four stages in Yin's (2016) process.

Epstein et al.'s (2019) six types of involvement framework was used to create interview questions. The framework provided six a priori codes/themes; parenting, communicating, volunteering, learning from home, decision making, and community collaboration; additional themes that emerged from the data were event participation, relationship building, barriers, benefits and considerations, two-way communication, and information dissemination.

I provided a detailed description of the study's trustworthiness by discussing each of Lincoln and Guba's (1985) four key practices to ensure trustworthiness. The four practices used included credibility, transferability, dependability, and confirmability (Morgan & Ravitch, 2018). Careful consideration was given to each to ensure the credibility of the study.

In Chapter 5, I complete Yin's (2016) fifth stage in the analytic process by providing a detailed interpretation of the study findings, by discussing the limitations of the study, by providing recommendations for future research, and by providing the implications for policy that could positively affect social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The implementation of communication between home and school is an essential component for meaningful parent involvement (Meier & Lemmer, 2015; Russell, 2017; Ule et al., 2015). The problem is that although technology offers new avenues for schools to communicate with parents to support student learning meaningfully, many schools only use technology as a pedagogical tool and are not taking advantage of what technology can do in areas of communication and parent partnership (Goodall, 2016, See et al., 2021). The purpose of this qualitative study was to address the gap between practice and research in the area of using technology as a communication tool between home and school by exploring both parent and educator perspectives on how technology can be used to encourage home–school communication and parent partnership (Goodall, 2016, See et al., 2021).

Using a generic qualitative design and Epstein’s (2019) six types of involvement framework, I interviewed administrators, teachers, and parents to gather their perspectives on how educators and parents can use technology to encourage home–school communication parent partnership. The data collected identified themes in the area of home–school communication and parent partnership, leading to increased understanding of how schools can leverage technology to encourage communication and parent partnerships.

This study is significant because it addressed an earlier gap in research and practice identified by Goodall (2016) and See et al., (2021), by exploring how technology can be used not only as a pedagogical tool but also as a tool for two-way communication

between home and school. Understanding how technology can be used as a tool to foster better communication and parent partnership is essential to increasing student achievement. In this chapter, I present a comprehensive interpretation of the findings, discuss the study's limitations, offer recommendations for future research, discuss the implications of the study, and conclude with an overall summation of the ideas presented.

Interpretation of the Findings

When I started this study, we were not in a pandemic, and schools were still struggling to use technology for communication purposes. Earlier researchers had demonstrated that teachers struggled to communicate effectively with parents due to a lack of training, willingness, and confidence (Beecher & Buzzhardt, 2016; Goodall, 2016). The pandemic changed how schooling was delivered overnight, shifting many schools from in-person schooling to remote learning environments. This shift forced educators and parents to start using technology for teaching, learning, and communication. As a result of this shift, every participant in this study had recent experience using technology for these purposes.

Research Questions 1 and 3 asked participants how they felt technology could be used as a home–school communication tool. Participants responded that technology could be used as a two-way communication tool to disseminate information and resources and address language barriers. Similar to the research findings of Thompson et al. (2015), parent participants preferred electronic methods of communication, including school messenger applications, text, and email, over schools' more traditional paper methods. Also, as in Sad et al.'s (2016) study, two-way communication that offered parents

opportunities for participation and feedback was preferred by parents over one-way communication methods that disseminate information. Educators and parents alike felt that the more they could communicate back and forth about a student's progress, the more successful the student became, a finding supported by Epstein et al.'s (2019) earlier research on parent partnership and student success.

As noted by previous researchers, language is often an obstacle in delivering effective two-way communication between home and school (Hornby & Blackwell, 2018). Parent and educator participants agreed but felt that technology could effectively mitigate this barrier. Participants noted several ways in which technology can be used to address language barriers, including audio translation software, written software translation programs such as Google Translate, simultaneous interpretation during meetings using video conferencing breakout rooms, and built-in translation capabilities offered through applications and websites.

Through Research Questions 2 and 4, I asked participants how they felt technology could be used as a tool to encourage parent partnership. Similar to Epstein et al.'s (2019) findings, research participants reported they could use technology to enhance parenting, communicating, volunteering, learning from home, decision making, and community collaboration, but also included event participation and relationship building as ways in which technology could enhance parents' partnership with schools. In the area of parenting, student progress monitoring through learning management platforms, video conferencing, and emailing/texting back and forth were the most cited ways in which educators and parents felt technology enhances their parenting practices and increases

student achievement, a finding supported by earlier researchers Bergman (2015), Hurwitz et al. (2015), and Kraft (2017), who reported that frequent communication of a student's progress increased a parent's ability to parent effectively and raise student achievement.

Administrator participants felt that technology is an innovative way to increase parents' ability to volunteer at the school. No longer constrained by brick-and-mortar environments, parents could lead small group instruction in the virtual classroom through breakout rooms or even remote into a physical classroom and work with a small group of students via a computer. Administrator participants saw technology as a way for parents to work with other parents. Wong-Villacres et al. (2017) defined this type of interaction space as formal and defined by the school and noted that for more effective use, more informal spaces for parents to interact with each other should be created. Teachers and parents struggled to find ways in which parents could use technology to volunteer virtually and saw technology as more of a way to disseminate information on how parents could physically be involved or as a way to increase communication between parents.

Educator and parent participants agreed that technology helps parents create better home learning environments by virtually opening classrooms. Hence, parents gain a better understanding of what students are learning and what teachers expect from them. Due to the stay-at-home orders, the pandemic has provided a unique opportunity for parents to observe and be a part of their student's daily instruction, a benefit of remote learning that both parents and educators agreed on. In addition to interacting and observing in the classroom, educators felt that technology was a way to share information, resources, and training on how parents can support students' learning from

home. Administrators saw a benefit to using podcasts, social media postings, blogs, webinars, and live streams as ways to deliver information and interact with parents.

Decision making should encourage families to be participants in the school's decision-making processes by welcoming and encouraging parents to take an active role in school governance committees, parent organizations, and advocacy groups (Epstein et al., 2019). Study participants suggested that technology increases all parents' decision-making capacity by providing convenient, non-brick-and-mortar ways of participation such as video conferencing, online surveys, electronic polling, live-streamed meetings, and electronic voting. Early studies showed that only 42% of parents polled before the pandemic had participated in school committees and only 5%–6% in a governing committee (Noel et al., 2015). Of those who participated, more were of European descent and operated in higher income brackets (Noel et al., 2015), which allowed them to participate more frequently. Participants of the study noted that by offering online means of participation, more parents were able to participate than in the physical environment because the online environment offered more flexibility, addressed language and transportation barriers, and could be done in more convenient ways for working parents who could now attend meetings from their work locations. This finding was congruent with an earlier finding by Goodall (2014) that technology by nature can help schools break the brick-and-mortar confines of involvement and offer parents alternative opportunities to engage in their student's learning regardless of location and time constraints.

When looking at how technology creates more collaboration within the community, educators and parents agreed that the best use of technology was to electronically share community information, resources, and programs out to parents. Also, it was suggested that technology increases neighborhoods' social capital by offering a space to create parent networks. While not an a priori code, relationship and connection building emerged as a theme from both educator and parent participants alike. Educators saw technology as a way to develop relationships with their stakeholders during the pandemic. Parents saw it as a way to reach out to other parents and the schools for both academic and emotional support during the remote learning environment.

Lastly, both educator and parent participants agreed that technology offers online events and opportunities for parents to participate. Given the nature of the pandemic and the stay-at-home orders, many schools had to cancel in-person events such as school promotions, back-to-school nights, open houses, and award ceremonies. Technology offered a way for schools to conduct these events online in a safe manner. Both parents and educators agreed that when the time comes to go back in person, schools should look at continuing to offer events online so working parents, parents with child-care issues, and parents without transportation would still be able to participate and attend.

Earlier research conducted by Beecher and Buzhardt (2016) and Hornby and Blackwell (2018) suggested that many parents face common barriers to being physically involved at school, including cultural issues, parent work schedules, second language barriers, parents' beliefs about education, poverty, transportation issues, and time constraints. The benefits identified by study participants around using technology as a

home school communication and parent partnership tool addressed many of these barriers. Study participants suggested that technology could alleviate language barriers, solve transportation and work schedule issues, allow parents to be a part of the school's decision-making processes without being physically present, and allowed parents and schools to communicate back and forth. These findings addressed earlier barriers and mirrored earlier researchers who found that technology could provide access to school resources and learning platforms without the time constraints imposed by a typical school day (Sad et al., 2016).

When asked what participants thought were the barriers to using technology, all participants shared concerns about equity. Nationally and locally, while schools have worked hard to get devices and hotspots into the hands of every student, internet connectivity and region-specific resources remain a digital divide that many families have had trouble overcoming (Harwin & Fuyura, 2021). Low socioeconomic areas have poor internet connectivity issues even when hotspots are available for use (Harwin & Fuyura, 2021). In addition to concerns with equity, there were also concerns with educator and parent willingness to learn and use technology, with users not being trained on how to use technology effectively and with users not understanding why technology is a valuable tool for communication, learning, and parent partnership. Educators and parents also shared concerns around the potential for miscommunication when tone, voice, and facial expressions are unable to be read and expressed concerns around privacy and data mismanagement.

The findings of this study support both a social constructivist paradigm and the conceptual framework of Epstein et al.'s (2019) framework for involvement which defines parenting, communicating, volunteering, learning at home, decision making, and collaborating within the community as activities that successfully promote home-school-community partnerships. Epstein et al.'s (2019) framework is built on the foundation of social constructivism, which asserts that learning is a social process where knowledge and meaning are constructed through collaborative experience. The findings of this study support that technology can enhance the 6 activities identified by Epstein et al., that led to successful home-school and community partnerships and that technology can additionally enhance the collaborative experience of between the home, school and the community. Participants were able to identify how technology could enhance each area of Epstein et al.'s (2019) framework and provided personal experience in each area. The parent and educator participants of this study felt that the more they were able to communicate with each other about a student's progress, and the more they were able to be physically involved in the school environment, the better they were able to help that student be successful. This belief supports both Epstein et al.'s (2019) framework and the social constructivist paradigm.

Limitations of the Study

As noted in Chapter 1, this study had several limitations based on design and methodology that may have affected the study findings' transferability (Price & Murnan, 2013). These limitations included sample size, study population, personal bias, and researcher inexperience. The sample size was a limitation of this study and could limit

the study's transferability. There are 307, 470 K-12 teachers in California (Cal Ed Facts, 2021); in this study, I interviewed only five teachers, five administrators, and five parents which may affect the findings' applicability to a larger audience.

The population was another possible limitation of this study. The participants chosen for this study were from Title 1 low-achieving, economically disadvantaged, ethnically diverse districts in California. The study findings may not be transferable to parents, teachers, and administrators from differing regions, ethnicities, or economic backgrounds. Also, this study takes place in a K-8 school district, so findings may not be transferable to the 9-12 school setting. To address this limitation, I had participants complete a demographic survey and purposefully selected participants from various ethnicities, grades, departments, education, and economic levels to maximize the diversity of representation in the study and included parents with students in the 9-12 grade span.

My experience as an educator and parent in the district may have created bias and limitations in this study. I have experienced the district's struggle with parent involvement, low test scores, and technology's pedagogical usage first-hand. To counteract any personal bias, I selected to interview teachers, parents, and administrators from outside of my school. I also used participant checking to ensure the data were grounded in the participants' experience, engaged in reflective bracketing, and documented my process with fidelity. Participants were given a copy of their transcripts, the results from my study, and my interpretation of the results, and were asked to provide

feedback for accuracy or revision. None of the participants provided feedback or suggestions for edit.

My inexperience as a researcher may have created a limitation to this study. To address my inexperience, I used a research design appropriate for the nature of my study. Generic qualitative research is used in various disciplines and is most often used in educational research (Caelli et al., 2003, Yin, 2016). According to Merriam and Tisdell (2016), the purpose of qualitative educational research is to improve practice, which was consistent with my desire to explore how technology encourages home–school communication and parent partnership. I sought expert input and feedback on the data collection instruments used to assure validity and made adjustments to the instrument from the received feedback. I field-tested the questions with a small group of individuals who resembled the target participants (i.e., administrators, teachers, and parents). I made adjustments to the number of questions based on their feedback. I used member checking to ensure participants’ responses were valid and interpreted accurately by giving them a copy of their transcripts, the results, and the interpretation of the findings and asked for suggested edits. In addition to the above measures, I completed the NIH web certification on protecting human research participants.

Recommendations

Sampling size and population were limitations in this study. I used five administrators, four teachers, one counselor, and five parents. I recommend that a more extensive study be conducted to include more perspectives. Also, I conducted this study in a Title 1 school district in California, so the study findings may not be transferable to

parents, teachers, and administrators from differing geographic, ethnic, or socioeconomic contexts, which could be explored in further research to ensure applicability of the findings.

When I initially designed this study, we were not in a pandemic with a stay-at-home order. The pandemic caused an immediate shift from in-person to remote learning and changed the way schools were both delivering instruction and communicating with parents. The shift may have influenced the study findings in instructional delivery and communication. A similar study conducted when in-person learning returns could yield different results and further add to the growing body of literature around using technology as a communication and parent partnership tool.

A concern of participants in this study was others' willingness to use technology as a communication and parent partnership tool. Further research should explore the topic using the technology acceptance model (TAM) as a framework for the study. The TAM model measures user acceptance and willingness to use technology by looking at how users perceive both the ease of use and usefulness of technology, which may affect the user's willingness to use it. It would be interesting to see if the return to in-person learning affects the results of this study and if being back in person changes how willing participants are to use technology.

Implications

The results of this study have the potential to effect positive social change by providing data to district leaders that may inform policy and decision making in the areas of technology, communication, and parent involvement. Understanding how technology

can be used as a tool to encourage home–school communication and parent partnership is important to the work of increasing student achievement and gives educators and district policy makers greater insight into which communication policies and practices actually support better parent partnership, a factor previously show to increase student achievement.

This research study’s critical finding is that parents preferred two-way communication that offered opportunities for parent participation and feedback over one-way communication methods designed to disseminate information. Parents want to be involved; they want to have conversations with administrators, teachers, and other parents. They prefer to receive communication in mediums that allow for a back-and-forth response. As district leaders look for ways to engage parents, they should consider using school messenger applications, email, text, phone, and video conferencing. Frequent home–school communication bolsters student achievement (Kraft, 2017), which increases the neighborhood’s social capital in which students live.

This study found that equity issues are of great concern. While all the schools in the participants’ districts had given devices to every student in need, not every student was issued a hotspot. Internet connectivity remains a digital divide. Even in areas where hot spots were attainable, connectivity issues remained a problem that prevented many students from accessing the remote learning environment. Also, while the students were issued devices, only one school had issued devices to the parents. Given the low socioeconomics of the neighborhood surrounding the district, many parents were without their own devices. They could not access meetings during the school day when their

student was using the only device the family had access to. As districts look to incorporate technology as a teaching, learning, communication, and parent partnership tool, equity issues will need to be addressed (Resta et al., 2018). Leveling the digital playing field can create positive social change by giving traditionally underserved parents more access to school events, teleconferencing, decision-making bodies, online tools for progress monitoring, and information and resources for creating better home learning environments.

Educator and parent participants alike mentioned that training is a consideration when district leaders are looking at implementing technology as a communication and parent partnership tool. Earlier research found that teachers often report a lack of preparation and confidence to engage and communicate with families (Beecher & Buzhardt 2016). Participants of this study noted that before the pandemic, many educator and parents lacked the skill and knowledge to use technology effectively as a communication and parent partnership tool and that while the pandemic had forced the issue, more training to ensure all stakeholders understand the benefits of using technology and how to use the technology tools offered to them would have a positive impact on their usage and could create lasting social change in how communication and parent partnership are enhanced using technology in the future.

Conclusion

As stated previously, the effective implementation of communication between home and school is an essential component for meaningful parent involvement (Meier & Lemmer, 2015; Russell, 2017; Ule et al., 2015). Students whose parents and teachers

engage in two-way communication are more likely to succeed in school (Sheldon & Young, 2015). Technology offers new avenues for schools to communicate with parents to support student learning meaningfully. However, many schools only use technology as a pedagogical tool and are not taking advantage of what technology can do with communication and parent partnerships (Goodall, 2016, See et al., 2021). The purpose of this qualitative study was to address the gap between practice and research in the area of using technology as a communication tool between home and school by exploring both parent and educator perspectives on how technology encourages home–school communication and parent partnership (Goodall, 2016, See et al., 2021).

The problem addressed in this study was that while there was a large amount of research that demonstrated that student outcomes improve when parents are actively involved and engaged in their children’s learning (Castro et al., 2015; Epstein et al., 2019; Goodall & Montgomery, 2014; Kraft & Rogers, 2015; Park et al., 2017; Povey et al., 2016; Wang et al., 2016), schools in the pre-pandemic environment were struggling to find ways to engage parents actively. Barriers to active parent engagement included ineffective communication practices between home and school, lack of timely information regarding opportunities for involvement, parent work schedules, inconvenient meeting times, lack of childcare, language barriers, relational trust issues, and content knowledge deficits (Redford et al., 2019).

This study found that educators and parents are using digital tools now more than ever to provide new opportunities for communication and parent partnership during the pandemic because of the switch to remote learning. Schools are now actively

communicating and engaging with parents through two-way digital communication tools, including social media, school messenger applications, email, text, and teleconferencing. Parents are using Web-based learning management systems to track student progress. Parents are attending parent-teacher conferences, school events, award assemblies, school board, and other decision-making meetings online while at home or work and actively engaging in their students' synchronous instruction while supporting home learning environments through asynchronous means. Through the use of technology, educators and parents are building relationships. There is a renewed focus on adult learning for student achievement. When in-person schooling resumes, parents are hopeful that schools will continue to use technology as a two-way communication and parent partnership tool.

This study can effect positive social change by providing data to district leaders that may inform policy and decision making in the areas of technology, communication, and parent partnership. Understanding how schools and parents are leveraging technology to encourage home-school communication and parent partnership are foundational to its continued use when in-person schooling resumes. A recommendation of this study is to ensure that decisions are made through an equitable lens. District leaders need to understand the neighborhoods in which they serve to ensure that they address equity and stakeholder demographics. More impoverished neighborhoods often have issues with connectivity that hot spots will not address, families may be device deficient, requiring schools to consider giving both the student and the parent a device if they want parents to be actively involved in two-way communication, decision making, progress monitoring, volunteering, and attending school events. Older stakeholders and

English learners may lack current technology and the skills needed to use technology tools for communication and partnership effectively. Being mindful of these considerations and working to address these issues has the potential to positively affect social change by lessening the digital divide for underserved families, by giving parents multiple mediums to engage in two-way communication, and by providing alternative methods to in-person participation that will allow parents to be actively involved in their student's education despite not being able to be in the school building physically.

References

- Alshenqeeti, H. (2014). Interviewing as a data collection method: A critical review. *English linguistics research*, 3(1), 39-45.
- Al-Zoubi, S. M., & Younes, M. (2015). Low academic achievement: Causes and results. *Theory and Practice in Language Studies*, 5(11), 2262–2268.
<https://doi.org/10.17507/tpls.0511.09>
- American Educational Research Association. (2011). Code of ethics. *Educational Researcher*, 40(3), 145–156.
[https://www.aera.net/Portals/38/docs/About_AERA/CodeOfEthics\(1\).pdf](https://www.aera.net/Portals/38/docs/About_AERA/CodeOfEthics(1).pdf)
- Baker, T. L., Wise, J., Kelley, G., & Skiba, R. J. (2016). Identifying barriers: Creating solutions to improve family engagement. *School Community Journal*, 26(2), 161-184.
- Beecher, C., & Buzhardt, J. (2016). Mobile technology to increase parent engagement. *IxD&A*, 28(1), 49-68.
- Beattie, G., & Ellis, A. (2014). *The psychology of language and communication*. Psychology Press.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*. (2), 8-14. <https://doi.org/10.1016/j.npls.2016.01.001>
- Bergman, P. (2015). Parent-child information frictions and human capital investment: Evidence from a field experiment. *CESifo Working Paper Series No. 5391*.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2622034
- Blackboard. (2018). *Trends in community engagement*.
<http://bbbb.blackboard.com/community-engagement-report>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press
- Caelli, K., Ray, L., & Mill, J. (2003). ‘Clear as mud’: Toward greater clarity in generic

qualitative research. *International Journal of Qualitative Methods*, 1–13.

<https://doi.org/10.1177/160940690300200201>

California Department of Education. (2014). *Family engagement framework: A tool for California schools*.

<https://www.cde.ca.gov/ls/pf/pf/documents/famengageframeenglish.pdf>

California Department of Education (2021, April 29). Cal ed facts-Fingertip facts on education: California Department of Education.

<https://www.cde.ca.gov/ds/ad/ceffingertipfacts.asp>

Caño, K. J., Cape, M. G., Cardoso, J. M., Miot, C., Pitogo, G. R., Quinio, C. M., & Merin, J. (2016). Parental involvement on pupils' performance: Epstein's framework. *The Online Journal of New Horizons in Education*, 6(4) 143-150.

Castro, M., Expósito-Casas, E., López-Martín, E., Lizasoain, L., Navarro-Asencio, E., & Gaviria, J. L. (2015). Parental involvement on student academic achievement: A meta-analysis. *Educational Research Review*, 14(1), 33-46.

<https://doi.org/10.1016/j.edurev.2015.01.002>

Chang, R. (2016, August 23). U.S. K–12 teachers reluctant to integrate social media in classrooms. *THE Journal*. <https://thejournal.com/articles/2016/08/23/us-k12-teachers-reluctant-to-integrate-social-media-in-classrooms.aspx>

Cheng, Y.-H., & Chen, Y.-C. (2018). Enhancing classroom management through parental involvement by using social networking apps. *South African Journal of Education*, 38(2), 1–14. <https://doi.org/10.15700/saje.v38ns2a1427>

Chena, Z. X., & Chena, C. C. (2015). The intention of using smart device messages as parent-teacher communication from the view of parents. *Procedia Manufacturing*, 3(1), 5617-5623. <https://doi.org/10.1016/j.promfg.2015.07.755>

Creswell, J. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Pearson.

- Curry, K. A., Jean-Marie, G., & Adams, C. M. (2016). Social networks and parent motivational beliefs: Evidence from an urban school district. *Educational Administration Quarterly*, 52(5), 841–877.
<https://doi.org/10.1177/0013161x16659345>
- Day, E., & Dotterer, A. M. (2018). Parental involvement and adolescent academic outcomes: Exploring differences in beneficial strategies across racial/ethnic groups. *Journal of Youth and Adolescence*, 47(6), 1332–1349.
<https://doi.org/10.1007/s10964-018-0853-2>
- Dillon, R., & Nixon, M. (2019). *Powerful parent partnerships*. Routledge.
- Dodson, R. (2019). Kentucky public school principals' perceptions of social media, computer and smart phone use in schools and how well their principal preparation programs prepare them. *Educational Research Quarterly*, 43(1), 28–50.
- Duggan, M., Ellison, N. B., Lampe, C., Lenhart, A., & Madden, M. (2015). *Social media update 2014*. Pew Research Center.
<http://www.pewinternet.org/2015/01/09/social-mediaupdate-2014>
- Đurišić, M., & Bunijevac, M. (2017). Parental involvement as an important factor for successful education. *CEPS Journal*, 7(3), 137-158.
- Erdener, M. A. (2016). Principals and teachers practice about parent involvement in schooling. *Universal Journal of Educational Research*, 4(12A), 151-159.
<https://doi.org/10.13189/ujer.2016.041319>
- Erol, Y. C., & Turhan, M. (2018). The relationship between parental involvement to education of students and student's engagement to school. *International Online Journal of Educational Sciences*, 10(5), 260-281.
<https://doi.org/10.15345/iojes.2018.05.017>
- Epstein, J., & Sheldon, S. (2006). Moving forward: Ideas for research on school, family, and community partnerships. In C. F. Conrad & R. Serlin (Eds.), *SAGE Handbook for research in education: Engaging ideas and enriching inquiry* (pp. 117-137).

Sage.

Epstein, J. L., Sanders, M. G., Sheldon, S. B., Simon, B. S., Salinas, K. C., Jansorn, N. R., van Voorhis, F. L., Martin, C. S., Thomas, B. G., Greenfeld, M. D., Hutchins, D. J., & Williams, K. J. (2019). *School, family, and community partnerships: Your handbook for action* (4th ed.). Corwin Press.

Elementary and Secondary Education Act of 1965 as Amended Through P.L. 115-224 (2018). <https://www2.ed.gov/policy/elsec/leg/essa/legislation/index.html>

Families in Schools. (2015). *Ready or not: How California school districts are reimagining parent engagement in the era of local control funding formula*. <https://www.familiesinschools.org/ready-or-not-parent-engagement-in-california-lcff/>

Gauvreau, A. N., & Sandall, S. R. (2019). Using mobile technologies to communicate with parents and caregivers. *Young Exceptional Children*, 22(3), 115–126.

Glesne, C. (2015). *Becoming qualitative researchers: An introduction* (5th ed.). Pearson Education.

Goodall, J. (2014). *School–home communication: Texting*. University of Bath.

Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, 66(4), 399-410. <https://doi.org/10.1080/00131911.2013.781576>

Goodall, J. (2016). Technology and school–home communication. *International Journal of Pedagogies and Learning*, 11(2), 118–131. <https://doi.org/10.1080/22040552.2016.1227252>

Gu, L. (2017). Using school websites for home - school communication and parental involvement? *Nordic Journal of Studies in Educational Policy*, 3(2), 133-143. <https://doi.org/10.1080/20020317.2017.1338498>

Hammarberg, K., Kirkman, M., de Lacey, S.(2016) Qualitative research methods: when

- to use them and how to judge them, *Human Reproduction*, 31(3), 498-501, <https://doi.org/10.1093/humrep/dev334>
- Hatch, T. (2014). *The use of data in school counseling: Hatching results for students, programs, and the profession*. Corwin.
- Harwin, A., & Furuya, Y. (2021). Census data show impact on home learning environment. *Education Week*, 40(19), 10–13.
- Heath, D., Maghrabi, R., & Carr, N. K. (2015). Implications of information and communication technologies (ICT) for school-home communication. *Journal of Information Technology Education: Research*, 14(1), 363-396. <https://doi.org/10.28945/2285>
- Herold, B. (2018). Parent involvement; “Trends in community engagement: Text, Twitter, email, call-new expectations for school-to-home communications.” *Education Week*, (24).
- Hornby, G., & Blackwell, I. (2018). Barriers to parental involvement in education: An update. *Educational Review*, 70(1), 109-119. <https://doi.org/10.1080/00131911.2018.138861>
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigor in qualitative case-study research. *Nurse Researcher*, 20(4), 12-17. <http://dx.doi.org/10.7748/nr2013.03.20.4.12.e326>
- Hurwitz, L., Lauricella, A., Hanson, A., Raden, A., & Wartella, E. (2015) Supporting head start parents: impact of a text message intervention on parent–child activity engagement, *Early Child Development and Care*, 185:9, 1373-1389, DOI: [10.1080/03004430.2014.996217](https://doi.org/10.1080/03004430.2014.996217)
- Jaiswal, S. K. (2018). Enhancing parental involvement through technology. *International Journal of Research and Analytical Reviews*, 5(2), 1965-1970.

- Jamshed S. (2014). Qualitative research method-interviewing and observation. *Journal of basic and clinical pharmacy*, 5(4), 87–88. <https://doi.org/10.4103/0976-0105.141942>
- Knight, S. (2013). *Office of faculty excellence presentation: Formulating in-depth interview questions*.
<http://core.ecu.edu/ofe/statisticsresearch/KNIGHT%20Preparing%20Interview%20Guide.pdf>
- Kraft, M. A. (2017). Engaging parents through better communication systems. *Educational Leadership*, 75(1), 58–62.
- Kraft, M. A., & Rogers, T. (2015). The underutilized potential of teacher-to parent communication: Evidence from a field experiment. *Economics of Education Review*, 47(1), 49–63.
- Krutka, D., & Carpenter, J. (2016). Why social media must have a place in schools. *Kappa Delta Pi Record*, 52(1), 6-10.
<http://dx.doi.org/10.1080/00228958.2016.1123048>
- Lareau, A. (2011). *Unequal Childhoods: Class, race, and family life, second edition with an update a decade later* (2nd ed.). University of California Press.
- Lareau, A. (2015). Cultural knowledge and social inequality. *American Sociological Review*, 80(1) 1–27. <http://dx.doi.org/10.1177/0003122414565814>
- Limin, G. (2017). Using school websites for home–school communication and parental involvement? *Nordic Journal of Studies in Educational Policy*, 3(2), 133-143.
<http://dx.doi.org/10.1080/20020317.2017.1338498>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Malone, D. (2015). Culture: A potential challenge for parental involvement in schools. *Delta Kappa Gamma Bulletin*, 82(1), 14-18.
- Meier, C., & Lemmer, E. (2015). What do parents really want? Parents’ perceptions of

- their children's schooling. *South African Journal of Education*, 35(2),1-11.
<http://dx.doi.org/10.15700/saje.v35n2a1073>
- Merriam, S., & Tisdell, E. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.
- Mihaus, P. (2019). *Research and assessment methods*.
<https://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-1195>
- Morgan, D., & Ravitch, S. (2018) *The Sage encyclopedia of educational research, measurement, and evaluation*. Sage.
- Mulligan, G. M., McCarroll, J. C., Flanagan, K. D., & McPhee, C. (2019). *Findings from the fifth-grade round of the early childhood longitudinal study, kindergarten class of 2010-11 (ECLS-K:2011)*. National Center for Education Statistics.
<https://nces.ed.gov/pubs2019/2019130.pdf>
- Noel, A., Stark, P., & Redford, J. (2015, May). *Parent and family involvement in education, from the National Household Education Surveys Program of 2012*. National Center for Education Statistics, <http://nces.ed.gov/pubsearch>
- Olmstead, C. Using technology to increase parent involvement in schools. *Tech Trends* 57, 28–37 (2013).
<https://doi.org/10.1007/s11528-013-0699-0>
- Park, S., Stone, S., & Holloway, S. (2017). School-based parental involvement as a predictor of achievement and school learning environment: An elementary school-level analysis. *Children and Youth Services Review*, 82(1), 195-206.
<http://dx.doi.org/10.1016/j.childyouth.2017.09.012>
- Pate, P. E., & Andrews, P. G. (2006). *Research summary: Parent involvement*.
<http://www.amle.org/TabId/270/ArtMID/888/ArticleID/328/Research-Summary-Parent-Involvement.aspx>.

- Patrikakou, E. (2016). Parent involvement, technology, and media: Now what? *School Community Journal*, 2(29), 9-24
<http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods*. Sage.
- Perrin, A., & Jiang, J. (2018, March 16). *About a quarter of U.S. adults say they are 'almost constantly' online*. Pew Research Center.
<https://www.weforum.org/agenda/2018/03/about-a-quarter-of-u-s-adults-say-they-are-almost-constantly-online/>
- Peters, K., & Halcomb, E. (2015). Interviews in qualitative research. *Nurse Researcher*, 22(4), 6-7.
- Pew Research Center. (2021, April 7). *Mobile fact sheet*.
<https://www.pewinternet.org/fact-sheet/mobile/>
- Povey, J., Campbell, A., Willis, L., Haynes, M., Western, M., Bennett, S., & Pedde, C. (2016). Engaging parents in schools and building parent-school partnerships: The role of school and parent organisation leadership. *International Journal of Educational Research*, 79(1), 128–141.
- Price, J., & Murnan, J. (2013). Research limitations and the necessity of reporting them. *American Journal of Health Education*, 35(2), 66-67.
<http://dx.doi.org/10.1080/19325037.2004.10603611>.
- Redford, J., Huo, H., & McQuiggan, M. (2019). *Barriers to parent-school involvement for early elementary students*. National Center for Education Statistics.
- Resta, P., Laferrière, T., McLaughlin, R., & Kourago, A. (2018). Issues and challenges related to digital equity: An overview. In J. Voogt, G. Knezek, R. Christensen, & K.-W. Lai (Eds.), *Second international handbook of information technology in primary and secondary education* (pp. 987-1004). Springer.
- Rogers, T., & Feller, A. (2016). *Reducing student absences at scale* [Working paper].
https://scholar.harvard.edu/files/todd_rogers/files/reducing.pdf?m=1456421204

- Russell, N. T. (2017). How school districts, school organizations, and teachers use social media to impact parental engagement (Order No. 10264147). Available from ProQuest Dissertations & Theses Global. (1904509463). Retrieved from <http://ezp.waldenulibrary.org/login?url=https://search-proquest-com.ezp.waldenulibrary.org/docview/1904509463?accountid=14872>
- Ryan-Nicholls, K., & Will, C. (2009). Rigour in qualitative research: Mechanisms for control. *Nurse Researcher*, 16(3), 70-85. <http://dx.doi.org/10.7748/nr2009.04.16.3.70.c6947>
- Sad, S., Konca, A. S., Özer, N., & Acar, F. (2016). Parental e-nvolvement: A phenomenological research on electronic parental involvement. *International Journal of Pedagogies and Learning*, 11(2), 163-186. <https://doi.org/10.1080/22040552.2016.1227255>
- Saldana, J. (2021). *The Coding Manual for Qualitative Researchers*. Sage Publications.
- See, B. H., & Gorard, S. (2014). *What do rigorous evaluations tell us about the most promising parental involvement interventions? A critical review of what works for disadvantaged children in different age groups*. Nuffield Foundation.
- See, B. H., & Gorard, S., El-Soufi, N., Lu, B., Siddiqui, N., & Dong, L. (2021) A systematic review of the impact of technology-mediated parental engagement on student outcomes. *Educational Research and Evaluation*. <https://doi.org/10.1080/13803611.2021.1924791>
- Schneider, C., & Arnot, M. (2018). Transactional school-home–school communication: Addressing the mismatches between migrant parents’ and teachers’ views of parental knowledge, engagement and the barriers to engagement. *Teaching and Teacher Education*, 75(1), 10–20. <https://doi.org/10.1016/j.tate.2018.05.005>

- Schwartz, S. (2017). Digital communication tools target ESSA parent engagement Mandate: But tech literacy remains a barrier. *Education Week*, <https://www.edweek.org/ew/articles/2017/04/05/digital-communication-tools-target-essa-parent-engagement-mandat.html>
- Sheldon, S. B., & Jung, S. B. (2015). *The family engagement partnership student outcome evaluation*. Johns Hopkins University.
- Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75. <http://dx.doi.org/10.3233/efi-2004-22201>
- Simon, M. (2011). Assumptions, limitations and delimitations.
- Simon, M. & White, J. (2016). survey / interview validation rubric for an expert panel. https://www.sobtell.com/images/questions/1499792875-20160820132602expert_validation_packet_c.hardy.docx
- Smith, A., & Anderson, M. (2018). *Social media use in 2018*. <https://www.pewresearch.org/internet/2018/03/01/social-media-use-in-2018/>
- Sorsa, M. A., Kiikkala, I., & Åstedt-Kurki, P. (2015). Bracketing as a skill in conducting unstructured qualitative interviews. *Nurse Researcher*, 22(4), 8–12. <https://doi-org.ezp.waldenulibrary.org/10.7748/nr.22.4.8.e1317>
- Technology. (n.d.). In *Collins dictionary*. <https://www.collinsdictionary.com/us/dictionary/english/technology>
- Thompson, B. C., Mazer, J. P., & Flood-Grady, E. (2015). The changing nature of parent–teacher communication: Mode selection in the smartphone era. *Communication Education*, 64(2), 187-207. <http://dx.doi.org/64.10.1080/03634523.2015.1014382>.
- Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work*, 11(1), 80–96. <https://doi->

org.ezp.waldenlibrary.org/10.1177/1473325010368316

University of California. (2019, February 26). *Guidance and procedure: Recruitment and screening methods and materials.*

<http://ora.research.ucla.edu/OHRPP/Documents/Policy/5/Recruitment.pdf>

Ule, M., Živoder, A., & du Bois-Reymond, M. (2015). ‘Simply the best for my children’: patterns of parental involvement in education. *International Journal of Qualitative Studies in Education*, 28(3), 329-348.

<http://dx.doi.org/10.1080/09518398.2014.987852>

U.S. Department of Education, (2019). *Every student succeeds act.*

<https://www2.ed.gov/policy/elsec/leg/essa/index.html>

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

Walsh, B. A., Cromer, H., & Weigel, D. J. (2014). Classroom-to-home connections: Young children’s experiences with a technology-based parent involvement tool. *Early Education and Development*, 25(1), 1142–1161.

Wang, Y., Deng, C., & Yang, X. (2016). Family economic status and parental involvement: Influences of parental expectation and perceived barriers. *School Psychology International*, 37(5), 536–553.

<http://dx.doi.org/10.1177/0143034316667646>

Warren, J., Locklear, L., & Watson, N. (2018). The role of parenting in predicting student achievement: Considerations for school counseling practice and research. *The Professional Counselor*, 8(4), 328-340. <http://dx.doi.org/10.15241/jmw.8.4.328>

Willis, L., & Exley, B. (2018). Using an online social media space to engage parents in student learning in the early years: Enablers and impediments. *Digital Education Review*, 33(1), 87–104.

Wong-Villacres, M., Ehsan, U., Solomon, A., Pozo Buil, M., & DiSalvo, B. (2017, June).

Design guidelines for parent-school technologies to support the ecology of parental engagement. *Proceedings of the 2017 Conference on Interaction Design and Children*, pp. 73-83. ACM.

Yin, R. K. (2016). *Qualitative research from start to finish* (2nd ed.). The Guilford Press.

Yotyodyinga, S., & Wildb, E. (2019). Effective family–school communication for students with learning disabilities: Associations with parental involvement at home and in school. *Learning, Culture and Social Interaction*, 22(1), 100317

Appendix A: Interview Protocol for Teachers

- I. Welcome Greeting and Accommodation Offering
- II. Explanation of the Role of the Researcher
- III. Review of Consent Form
- IV. Participant Questions
- V. Opening Question (to establish rapport): Tell me a little bit about yourself and why you were interested in participating in this study?
- VI. Review definitions of two-way, home–school communication, technology and parent partnership in relation to the study.
- VII. Interview Questions
 1. Describe some experiences you have had using technology as a two-way, home school communication tool.
 2. In your experience as a parent, how do you perceive technology can be used as a tool to foster two-way, home–school communication and parent partnership?
 3. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports parents in creating home environments that encourage student learning?
 4. How do you perceive technology can be used as a tool to foster two-way, home–school communication that is meaningful to parents' ability to engage with a school?

5. How do you perceive technology can be used as a tool to foster two-way, home–school communication that increases parental knowledge of a student’s progress?
6. How do you perceive technology can be used as a tool to foster two-way, home–school communication that addresses language barriers?
7. How do you perceive technology can be used as a tool to foster two-way, home–school communication that provides timely information on involvement opportunities?
8. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports opportunities for volunteering?
9. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports student learning from home?
10. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports decision making?
11. How do you perceive technology can be used as a tool to foster two-way, home–school communication that develops family capacity for leadership in school and parent organizations?
12. How do you perceive technology can be used as a tool to foster two-way, home–school communication that encourages collaboration and coordination within the community about resources, services and programs available to engage and support all families?

13. You have shared with me your perspectives of how technology can be used as a tool to foster two-way, home–school communication and parent partnership, are there any reasons you feel that technology should not be used in this way?
14. In your perspective, are there any barriers to using technology as a home–school communication and parent partnership tool?
15. Is there anything else you would like to share with me on the topic of using technology as a tool to foster two-way, home–school communication and parent partnership?

VIII. Close of Interview

- a. Thank you
- b. Review of member checking procedures
- c. Participant questions

IX. End of Interview

Appendix B: Interview Protocol of Administrators

- I. Welcome Greeting and Accommodation Offering
- II. Explanation of the Role of the Researcher
- III. Review of Consent Form
- IV. Participant Questions
- V. Opening Question (to establish rapport): Tell me a little bit about yourself and why you were interested in participating in this study?
- VI. Review definitions of two-way, home–school communication, technology and parent partnership in relation to the study.
- VII. Interview Questions
 1. Describe some experiences you have had using technology as a two-way, home school communication tool.
 2. In your experience as an administrator, how do you perceive technology can be used as a tool for two-way, home–school communication and parent partnership?
 3. How do you perceive technology can be used as a tool for two-way, home–school communication that supports parents in creating home environments that encourage student learning?
 4. How do you perceive technology can be used as a tool for two-way, home–school communication that is meaningful to parents' ability to engage with a school?

5. How do you perceive technology can be used as a tool for two-way, home–school communication that increases parental knowledge of a student’s progress?
6. How do you perceive technology can be used as a tool for two-way, home–school communication that addresses language barriers?
7. How do you perceive technology can be used as a tool for two-way, home–school communication that provides timely information on involvement opportunities?
8. How do you perceive technology can be used as a tool for two-way, home–school communication that supports opportunities for volunteering?
9. How do you perceive technology can be used as a tool for two-way, home–school communication that supports student learning from home?
10. How do you perceive technology can be used as a tool to fortwo-way, home–school communication that supports decision making?
11. How do you perceive technology can be used as a tool for two-way, home–school communication that develops family capacity for leadership in school and parent organizations?
12. How do you perceive technology can be used as a tool for two-way, home–school communication that encourages collaboration and coordination within the community about resources, services and programs available to engage and support all families?

13. You have shared with me your perspectives of how technology can be used as a tool for two-way, home–school communication and parent partnership, are there any reasons you feel that technology should not be used in this way?
14. In your perspective, are there any barriers to using technology as a home–school communication and parent partnership tool?
15. Is there anything else you would like to share with me on the topic of using technology as a tool for two-way, home–school communication and parent partnership?

VIII. Close of Interview

- a. Thank you
- b. Review of member checking procedures
- c. Participant questions

IX. End of Interview

Appendix C: Interview Protocol of Parents

- I. Welcome Greeting and Accommodation Offering
- II. Explanation of the Role of the Researcher
- III. Review of Consent Form
- IV. Participant Questions
- V. Opening Question (to establish rapport): Tell me about a time when you had a good relationship with your child's teacher. What made the relationship special?
- VI. Review definitions of two-way, home-school communication, technology and parent partnership in relation to the study.
- VII. Review protocol for answering questions in the interview setting.
- VIII. Interview Questions
 1. Describe some experiences you have had using technology as a two-way, home school communication tool.
 2. In your experience as a parent, how do you perceive technology can be used as a tool to foster two-way, home-school communication and parent partnership?
 3. How do you perceive technology can be used as a tool to foster two-way, home-school communication that supports parents in creating home environments that encourage student learning?
 4. How do you perceive technology can be used as a tool to foster two-way, home-school communication that is meaningful to parents' ability to engage with a school?

5. How do you perceive technology can be used as a tool to foster two-way, home–school communication that increases parental knowledge of a student’s progress?
6. How do you perceive technology can be used as a tool to foster two-way, home–school communication that addresses language barriers?
7. How do you perceive technology can be used as a tool to foster two-way, home–school communication that provides timely information on involvement opportunities?
8. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports opportunities for volunteering?
9. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports student learning from home?
10. How do you perceive technology can be used as a tool to foster two-way, home–school communication that supports decision making?
11. How do you perceive technology can be used as a tool to foster two-way, home–school communication that develops family capacity for leadership in school and parent organizations?
12. How do you perceive technology can be used as a tool to foster two-way, home–school communication that encourages collaboration and coordination within the community about resources, services and programs available to engage and support all families?

13. You have shared with me your perspectives of how technology can be used as a tool to foster two-way, home–school communication and parent partnership, are there any reasons you feel that technology should not be used in this way?
14. In your perspective, are there any barriers to using technology as a home–school communication and parent partnership tool?
15. Is there anything else you would like to share with me on the topic of using technology as a tool to foster two-way, home–school communication and parent partnership?

IX. Close of Interview

- a. Thank you
- b. Review of member checking procedures
- c. Participant questions

X. End of Interview

Appendix D: Permission to Use Figures

11-1-19

To: Julie Hirst

From: Joyce Epstein

Re: Permission granted

This is to grant permission to you to use the graphics for our theoretical model of *Overlapping Spheres of Influence* on pp. 152 and 153 in our book:

Epstein, J. L., et al. (2019). *School, family, and community partnerships: Your handbook for action. Fourth edition.*

Thousand Oaks, CA: Corwin Press.

All that we require is that you provide a full reference to the original work on the chart and in your bibliography.



Best of luck with your dissertation.



Joyce L. Epstein, Ph.D.
Director, Center on School, Family, and
Community Partnerships and
National Network of Partnership
Schools (NNPS)



Appendix E: Coding Document Research Question 1

Research Question 1: What are educators' perspectives on how technology can be used to encourage home-school communication?

Codes 	Categories 	Themes
<ul style="list-style-type: none"> • Social Media • Email • Text • Phone Calls • Video Conferencing • Webinar • School Messenger Apps • Personal Messaging 	Two-Way Communication	Home School Communication
<ul style="list-style-type: none"> • Website • Podcast • Electronic Flyers • 3 Minute Stories • Robo Calls • Promotion of Events • Live Streams 	Information Dissemination	
<ul style="list-style-type: none"> • Website • Electronic Flyers • Scan Documents 	Resource Dissemination	
<ul style="list-style-type: none"> • Audio Translation Apps • Written Translation Programs • Zoom Simultaneous Translations • Website Translations 	Address Language Barriers	

Appendix F: Coding Document Research Question 2



Research Question 2: What are educators' perspectives on how technology can be used to encourage parent partnership?

Codes 	Categories 	Theme
<ul style="list-style-type: none"> • Parenting tips • Progress monitoring • Online grade books • Learning management systems • Assignment tracking • Parent teacher conferences 	Parenting	Parent Partnership Tool
<ul style="list-style-type: none"> • Two-way communication • Emails, texts, phone calls • Teleconferencing • School messaging apps 	Communicating	
<ul style="list-style-type: none"> • Zoom instruction • Virtual career day • Soliciting help through school messaging apps • volunteer training • Parents training other parents 	Volunteering	
<ul style="list-style-type: none"> • Share academic resources • Parent training • Parent groups • Observing in virtual • Understanding student expectations • Communication of learning topics • Teach parents the concepts and procedures • Teacher-parent Zooms • Portfolios • Posting of visuals 	Learning from Home	
<ul style="list-style-type: none"> • Video conferencing • Online surveys • Google Forms • Polling • Online elections • Webinars 	Decision Making	
<ul style="list-style-type: none"> • Website postings • Sharing resources electronically • Online referrals • Social media postings 	Community Collaboration	

<ul style="list-style-type: none"> • Online awards assemblies • Online back to school nights • Live streaming 	Event Participation	
<ul style="list-style-type: none"> • Parent networks • Support groups • Middle school transitions • Increased parent/teacher/admin connections 	Relationship Building	
<ul style="list-style-type: none"> • Asynchronous access to information • Convenient • 24/7 access to information systems • Flexible locations • Quick and easy communication • Increases social capital of the community • Solves transportation issues • Solves childcare issues • Solves scheduling constraints • Builds relationships • Allows for more frequent progress monitoring • Increased attendance at meetings 	Benefits	Implementation
<ul style="list-style-type: none"> • Lack of access • Connectivity issues • Parent/teacher/admin lack of skill • Lack of willingness to use • Public negativity • Confidentiality issues • Boundary setting 	Barriers	
<ul style="list-style-type: none"> • Equity • Potential for miscommunication • Stakeholder demographics • Training • Ability to control public input • AI algorithms 	Considerations	



Appendix G: Coding Document Research Question 3

Research Question 1: What are parents' perspectives on how technology can be used to encourage home-school communication?

Codes 	Categories 	Themes
<ul style="list-style-type: none"> • Social Media • Email • Text • Phone Calls • Video Conferencing • Webinar • School Messenger Apps • Personal Messaging 	Two-Way Communication	Home School Communication
<ul style="list-style-type: none"> • Website • Podcast • Electronic Flyers • Robo Calls 	Information Dissemination	
<ul style="list-style-type: none"> • Website • Electronic Flyers 	Resource Dissemination	
<ul style="list-style-type: none"> • Audio Translation Apps • Written Translation Programs • Zoom Simultaneous Translations • Website Translations 	Address Language Barriers	

Appendix H: Coding Document Research Question 4

Research Question 4: What are parents' perspectives on how technology can be used to encourage parent partnership?

Codes 	Categories 	Themes
<ul style="list-style-type: none"> • Progress monitoring • Online grade books • Parent teacher conferences 	Parenting	Parent Partnership Tool
<ul style="list-style-type: none"> • Two-way communication • Emails, texts, phone calls • Teleconferencing • School messaging apps 	Communicating	
<ul style="list-style-type: none"> • Soliciting help through school messaging apps 	Volunteering	
<ul style="list-style-type: none"> • Observing in virtual rooms • Reinforcing learning topics • Teacher-parent Zooms 	Learning from Home	
<ul style="list-style-type: none"> • Video conferencing • Online surveys • Online school board meetings 	Decision Making	
<ul style="list-style-type: none"> • Website postings • Sharing resources electronically • Online referrals • Social media postings 	Community Collaboration	
<ul style="list-style-type: none"> • Asynchronous access to information • Convenient • 24/7 access to information systems • Flexible locations • Quick and easy communication • Solves transportation issues • Solves childcare issues • Solves scheduling constraints • Allows for more frequent progress monitoring 	Benefits	
<ul style="list-style-type: none"> • Lack of access • Connectivity issues • Parent/teacher/admin lack of skill • Lack of willingness to use • Confidentiality issues 	Barriers	
<ul style="list-style-type: none"> • Equity • Potential for miscommunication • Stakeholder demographics • Training 	Considerations	

Appendix I: Bias Mind Map

