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# Administrators Using Technology to Increase Family Engagement

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Running head: ADMINISTRATORS USING TECHNOLOGY

ADMINISTRATORS USING TECHNOLOGY TO INCREASE FAMILY  
ENGAGEMENT

by  
Ashley P. Beasley

A Dissertation

Presented in Partial Fulfillment of the Requirements for the  
Degree of  
Doctor of Education  
In  
Instructional Technology  
In the  
Bagwell College of Education  
Kennesaw State University

Dr. Laurie Brantley-Dias, Chair  
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Kennesaw, GA  
2015

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## **DEDICATION**

I dedicate this dissertation to several important people in my life, first and foremost, to God for giving me the ability to attain this honorable distinguishment. Next, recognition is given to my wonderful husband, Gavin. I could not even begin to imagine being able to obtain any of my accomplishments without you in my life. I am so lucky to have a husband and best friend who I love dearly. Thanks for being so supportive while I was obtaining this degree. You pulled my slack for several years and I truly appreciate it.

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## ABSTRACT

The purpose of this study was to investigate and evaluate what happens when Title 1 administrators implement emerging technologies to facilitate school-home communications. This study explored the affordances and constraints to using technology tools to promote family engagement, determined which characteristics of the tools allowed parents to feel the most informed, measured how many parents attended school events, and evaluated parents' perceptions of invitations to involvement when administration used technology tools to communicate. Epstein's Parental Involvement Framework (2002), Epstein's Overlapping Spheres of Influence (1995), and the Hoover-Dempsey and Sandler Model (1997) served as the theoretical framework. This mixed methods study was conducted at a small, urban, Title 1 elementary school in a Southeastern state. A sequential explanatory design was used. During the quantitative phase a Parent Communication Survey was collected from 51 participants. During the qualitative phase artifacts were collected and focus group interviews were conducted with nine participants. This study revealed affordances and constraints for each of the emerging technology tools. Communication tools that were available on parents' cell phones were the most effective at informing families about school programs and student success. Systematically scheduled communications aided parents in better planning which enabled them to become more engaged. Administration was able to have an impact on parents' perceptions of invitations to involvement through the use of technology tools. This study includes recommendations for future research and implications for practice.

**TABLE OF CONTENTS**

DEDICATION .....	iii
ACKNOWLEDGEMENTS .....	iv
ABSTRACT .....	v
CHAPTER 1 .....	1
STATEMENT OF THE PROBLEM .....	1
Administrators Using Technology to Increase Family Engagement .....	1
Defining Parental Involvement and Family Engagement .....	2
Parental Involvement.....	2
Family Engagement.....	3
Transformation of Mindset and Approach .....	4
U.S. Government Shaping.....	6
Statement of the Problem.....	7
Purpose of the Study .....	8
Conceptual Frameworks .....	8
Epstein’s Parental Involvement Framework .....	8
Epstein’s Overlapping Spheres of Influence .....	10
Leadership as part of the school partnership. ....	12
Hoover-Dempsey and Sandler Model .....	13
Research Questions.....	18
Significance of the Study .....	18
Review of Relevant Terms.....	19
Summary .....	23

Introduction.....	24
Barriers to Family Engagement .....	25
Additional Barriers from the Literature .....	27
Lack of communication.....	27
Time and resources.....	28
Socioeconomic status .....	30
Cultural expectations .....	33
Psychological and psychosocial barriers.....	35
Research on Evidence Based Family Engagement Strategies .....	36
Planning.....	37
Whole School Approach .....	40
Clear and Specific Advice and Guidance.....	41
Research on Communication .....	41
Technological Tools Used to Enhance Communication.....	42
Mass Messaging System-Blackboard Connect .....	45
Mass messaging electronic mail (email).....	47
Blackboard ConnectTxt.....	51
School Website.....	53
Student Information Systems (SIS) - Parent Vue .....	55
School Application (app) .....	56
Conclusion .....	57
CHAPTER 3 .....	59
Introduction.....	59



Research Design.....	60
Action Research .....	60
Mixed Methods .....	61
<i>Rounds of the Data Analysis Process</i> .....	65
Description of Population.....	65
Role of the researcher. ....	66
Phase One: Quantitative.....	67
Sampling.....	67
Instruments .....	69
Data Analysis .....	76
Validity through Triangulation.....	77
Intervention Cycle.....	77
Phase Two: Qualitative .....	81
Sampling.....	81
Instrument.....	84
Data Collection.....	85
Parent focus group. ....	85
PTA questionnaires.....	89
Artifacts. ....	89
Data Analysis .....	90
Parent focus group .....	90
PTA questionnaire .....	96
Parent participation log.....	98

Data Management .....	98
Limitations .....	102
Summary.....	103
CHAPTER 4 .....	104
Introduction and Overview .....	104
Phase One Quantitative.....	104
Description of Survey Demographics .....	104
Data Analysis – Quantitative Phase One .....	109
Examination of Research Questions .....	109
Data Analysis – Phase Two Qualitative.....	117
Parent Focus Groups and PTA Questionnaires. ....	119
Description of Demographics.....	120
Barriers to Family Engagement.....	122
The stages of comfort in feeling welcome at a school setting.....	122
Parents Find it Difficult to be Involved at the School Due to Home and Work	
Commitments .....	126
Language and Cultural Barriers Affects Parental Involvement .....	127
Communication Helps Parents Plan Better.....	129
Communication Tools Available on Cell Phones.....	130
Parents Prefer Asynchronous Communication Tools .....	131
The Ability to Archive Messages is an Affordance for Texts and Emails.....	131
Misinterpretation is a Possible Constraint to Using Printed Messages.....	132
The Brevity of a Text: an Affordance and a Constraint.....	132

Synchronous Tools are Not Preferred Due to Inconvenience .....	133
Communication Tools Not Being Used .....	133
Tools without Update Alerts Are Unused to Their Fullest Potential .....	133
The Tools that are Not Being Exploited.....	134
Conclusion .....	135
Chapter 5.....	136
Introductions .....	136
Summary of Major Findings.....	137
Implications for Practice .....	149
Recommendations for Future Research.....	154
Concluding Remarks.....	155
REFERENCES .....	157
Appendices.....	185

**FIGURES**

Figure 1 Family Engagement as Parent Involvement 2.0 ..... 5

Figure 2. Epstein’s Overlapping Spheres of Influence. .... 11

Figure 3. Hoover Dempsey and Sandler Model..... 14

Figure 4. Initial code set used. .... 92

Figure 5. Data Collection Flow Chart..... 96

**TABLES**

Table 1. Theoretical Framework, Research Question and Instrument Alignment .....	63
Table 2. Data Collection .....	64
Table 3. Rounds of the Data Analysis Process .....	65
Table 4. Decision Criteria for Participation in Parent Communication Survey .....	68
Table 5. Comparison of Sample Demographics to Population Demographics .....	69
Table 6. Survey Language Response Rates .....	69
Table 7. Pre-Survey Return Rate by Date.....	72
Table 8. Post-Survey Return Rate by Date .....	73
Table 9. Representative Survey Items from Parent Communication Survey .....	74
Table 10. Instrument Reliability Chart .....	75
Table 11. Responses to Pre-Parent Communication Survey on Use of Tools.....	79
Table 12. Demographics of Participants for the Focus Group.....	82
Table 13. Schedule of Focus Group Questions.....	83
Table 14. Participation Results of Parent Communication Survey.....	105
Table 15. Participant Profile of Relationship to Student, Age and Marital Status.....	106
Table 16. Participant Profile of Income and Educational Level.....	107
Table 17. Participant Profile of Ethnicity and Home Language Spoken .....	108
Table 18. Participant Profile of Work Status of Respondent and Spouse .....	109
Table 19. Respondents to Paper Flyers keep you Better Informed.....	111
Table 20. Pre and Post Responses for “School uses Technology Well to Encourage Parental Participation in Volunteering” .....	113

Table 21. Pre and Post Responses for “School uses Technology to Invite You to PTA Meetings” .....	113
Table 22. Pre and Post Responses to, “The School uses Technology to Invite Parents to School Programs” .....	114
Table 23. Pre and Post Responses to, “The School uses Technology to Ask Parents to Help with Fundraising” .....	115
Table 24. Pre and Post Responses to, “The School uses Technology to Include/Invite Committees” .....	115
Table 25. Pre and Post Responses to, “School uses Webpages to Inform about School Events” .....	116
Table 26. Pre and Post Responses to, “Parents are Encouraged to Help Improve the School” .....	117
Table 27. Samples from the Administration Communication Log.....	118
Table 28. Blackboard Connect Site Usage During the Intervention Cycle .....	118
Table 29. Blackboard Text Delivery per Month.....	119
Table 30. Demographics of Participants for Focus Group .....	121
Table 31. Participants’ Grade Level of Students, Gender and Home Language .....	122
Table 32. Affordance and Constraints to Technology Tools Used.....	144
Table 33. Comparison of Attendance at Night Events .....	147
Table 34. Results from Parent Participation Log.....	148
Table 35. Planned Topics Disseminated Via Emerging Technology Tools .....	152

## **CHAPTER 1**

### **STATEMENT OF THE PROBLEM**

#### **Introduction**

##### **Administrators Using Technology to Increase Family Engagement**

In an age of educational accountability, transformation and improvement have become inevitable. The need for administrators to guide such transformation has changed the job description. The largely managerial role of administration of the past has shifted to one of instructional leadership today. This shift is accompanied by remarkable changes in what public education requires from administrators. Today, effective administrators concentrate on academic success by breaking down barriers and creating conditions for learning. One such barrier is the lack of family engagement. The ability of a school leader to create a strong community partnership with parents is vital for improving school success. Extensive research supports the connection between parental involvement and improved student achievement in schools (Epstein, et al., 2009; Kressley, 2008; Jeynes, 2003). School leaders are expected to create an atmosphere conducive for student learning which requires increased family engagement.

## **Defining Parental Involvement and Family Engagement**

### **Parental Involvement**

Recently, the all-embracing term “parental involvement” has been used in international literature; however, the term has different meanings and connotations depending on the source (Goodall & Vorhaus, 2011; Constantino, 2003; Epstein, 1992; & Hoover-Dempsey & Sandler, 1995). Many of the theories and research conducted thus far use the term parental involvement (Epstein, 1995; Hoover-Dempsey & Sandler, 1995; Decker & Decker, 2003). According to the mandated No Child Left Behind guidelines, parental involvement is defined as,

... the participation of parents in regular, two-way and meaningful communication involving student academic learning and other school activities, including ensuring that parents play an integral role in assisting their child’s learning, that parents are encouraged to be actively involved in their child’s education at school, that parents are full partners in their child’s education and are included, as appropriate, in decision-making and on advisory committees to assist in the education of their child, and that other activities are carried out which allow parents and the community to intervene and assist in school improvement.” (U.S. Department of Education, 2004, p. 3)

Decades of research have shown that any increased connection between schools and parents is beneficial for the student (Epstein et al., 1992; Hoover- Dempsey & Sandler, 1995; Izzo, Weissberg, Kaspro, & Fendrich, 1999). Parental involvement varies from school to school. Each school plans for and implements their vision of parental involvement, and it is typically seen as an incidental, compliance-driven aspect



of whole-school improvement. The current state of parental involvement consists of random acts and has to surrender to systemic and sustained approaches (Kressley, 2008). While the notion of parental involvement impacting student achievement is not an original idea, a systemic and integrated approach to family engagement represents an innovative and necessary strategy in education reform.

### **Family Engagement**

A genuine version of family engagement calls for parents to become full partners with school staff and other members of the community in the work of creating and sustaining excellent schools (Mapp, 2011). Family engagement broadens the role of families from at-home activities to full partnerships with school staff and other parents and community members in the overall improvement of schools (Mapp, 2003).

This broader definition requires that family engagement be:

a shared responsibility among families, school staff, and community members, where families are committed to actively supporting their children's learning and development, and school personnel and community members are committed to engaging and partnering with families in meaningful and culturally respectful ways; continuous across a child's life span, from cradle to career; and occurring in multiple settings where children learn: at home, at school, and in community settings (National Family, School, and Community Engagement Working Group Policy, 2009, p.2).

Family engagement needs to focus on a holistic approach that sets expectations intended to guide how families, community organizations, and schools engage and

support students. The new direction, moving towards family engagement should create a shared responsibility among all stakeholders for student achievement.

### **Transformation of Mindset and Approach**

Not only is there a need for a terminology shift, but there is also a need for a new approach to engaging parents. The transformation to a systematic approach of family *engagement* begins with a broad reframing of what family engagement looks like. This new mindset offers opportunities for transformational change for the school, the community, the family, and most importantly, for the student. Broadening the role of families and encouraging full partnerships with school staff, parents, and community members may lead to overall improvement of the school effectiveness in its educational mission. The shift to family engagement redefines expectations and allows for a more comprehensive approach to increasing engagement. Figure 1 illustrates the shift from parent involvement to family engagement through awareness of differing terms and concepts.

PARENT INVOLVEMENT	FAMILY ENGAGEMENT
<ul style="list-style-type: none"> <li>■ Parent Involvement is primarily the responsibility of family services staff (or parent involvement specialists, home visitors, or transition specialists)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Family engagement is embedded in the work of all staff members, management systems and leadership priorities.</li> </ul>
<ul style="list-style-type: none"> <li>■ Parent involvement might revolve around outputs—for example, the number of parents who show up at a meeting.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Family engagement focuses on evidence of positive, goal directed relationships, for example, that result in family progress in one (or more) of the seven outcome areas.</li> </ul>
<ul style="list-style-type: none"> <li>■ Parent involvement works with a small % of families involved in leadership opportunities (policy council, parent meetings, special events)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Through ongoing relationships, family members are engaged in a variety of goal directed ways related to Parent and Family Engagement Outcomes.</li> </ul>
<ul style="list-style-type: none"> <li>■ Programs that involve parents collect data from children and families—for example, information about parent participation.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Programs that engage families use child and family data to improve services. These programs help families understand and use child data to support their children's progress and development.</li> </ul>

Figure 1 *U.S. Department of Health and Human Services, Administration /family/familyengparin.htm Children and Families. (2012). Family Engagement as Parent Involvement 2.0. Retrieved from <http://eclkc.ohs.acf.hhs.gov/hslc/tta-system>*

### **U.S. Government Shaping**

In the 1990s, the Goals 2000: Educate America Act set partnerships that were designed to increase parental involvement and participation in promoting the social, emotional, and academic growth of children as a voluntary national goal for all schools (National Educational Goals Panel, 1998). This act aimed to improve school to home partnerships within schools nationwide. Another nationally funded program, Title I, was established to distribute funding to schools and school districts with a high percentage of students from low-income families. This United States Department of Education program specifies and mandates practices of family and school partnership in order for schools to qualify for and maintain funding. Over the years, a noticeable shift in parental involvement language has transformed from an emphasis on ensuring the delivery of equitable and effective programming across Title I districts and schools to an emphasis on trusting parents' abilities to oversee the program's impact on their own child or children (Mapp, 2011).

Throughout this study the terms parental involvement and family engagement are used interchangeably. Family engagement utilizes the theories and research of parental involvement and extends them into a systematic and sustained approach to create a more involved relationship between the school and home. For the purposes of this study, Mapp's definition of family engagement will be used. It includes a calling for parents to become full partners with school staff and other members of the community in the work of creating and sustaining excellent schools, was used (Mapp, 2011).

### **Statement of the Problem**

The problem addressed in this study was the decreasing level of family engagement at Blythe Elementary (pseudonym). Blythe is a Title I school with greater than 90% of the students receiving free or reduced lunch. Teachers reported decreased attendance at school events, lack of parental participation in the Parent Teacher Association (PTA), limited numbers of parents attending parent-teacher conferences, and scarcity of parental support with behavior or academics over the past ten years. Administration has pronounced a decrease in student achievement. Blythe consists of a diverse population of students, one-third of whom are ESOL students in predominately Spanish speaking homes. Over 50% of the population is African-American students.

In a Title I school, students are typically transient, and Blythe has a transiency rate of 64%. Blythe's frequent transfers between schools in the surrounding area are a common occurrence. Ream and Stanton-Salazar (2006) suggest that a growing number of schools across the nation, particularly within large, predominantly minority, urban school districts with high concentrations of students from low socioeconomic backgrounds, (McDonnell & Hill, 1993) are experiencing extensive student mobility (p. 3). Extensive student mobility makes it difficult for schools to connect with parents.

Title I schools typically have lower student achievement and especially need family engagement and partnerships to bridge those associated achievement gaps. Researchers have found that an increased connection between the school and parents is beneficial for the student (Epstein et al., 1992; Hoover- Dempsey& Sandler, 1995; Izzo, Weissberg, Kasprow, & Fendrich, 1999). A meta-analysis of 66 studies reviewed by Henderson and Berla (1994) found that students whose parents were involved had better

grades, more positive attitudes and behavior, higher test scores, better attendance, increased graduation rates, and increased enrollment in post-secondary schools. Not surprisingly, Griffith (1996) also found that an increase in parental involvement led to higher test scores on state tests.

### **Purpose of the Study**

The purpose of this action research study was to use emerging technology tools to increase school-to-home communication and to determine which emerging technologies facilitate better school-home communication and family engagement. For school leaders, the ability to create and implement an effective family engagement model is an essential component of increasing student achievement in the school. Technology provides promising avenues for disseminating information to parents (Constantino, 2003; Decker & Decker, 2003) and creating effectual family engagement.

### **Conceptual Frameworks**

In order to understand the evolution of parental involvement over the years and to gain vast knowledge from the decades of research on this topic, conceptual frameworks are necessary. Three conceptual frameworks were referenced in this study: Epstein's Parental Involvement Framework, Epstein's Overlapping Spheres of Influence, and the Hoover-Dempsey and Sandler Model. The conceptual frameworks were linked to the problem statement, research questions, and methods that directed this study.

#### **Epstein's Parental Involvement Framework**

The most widely used framework guiding parental involvement is Epstein's Parental Involvement framework. This framework helps educators develop comprehensive programs of school and family partnerships (Epstein, 1992; Epstein &

Sanders, 2000) and has become a de facto checklist to guide planning and decisions for family outreach programs (Epstein, 2009). This comprehensive structure was based on research and field-tested tools to help leaders understand the six types of involvement: parenting, communication, volunteering, learning at home, decision making, and collaborating with the community (Epstein, 2009). Those six major types of involvement evolved from many studies and from several years of work by educators and families in elementary, middle, and high schools settings.

The communication portion of Epstein's parental involvement framework was reviewed and used to guide this study. Communication is described as informing families about school programs and student progress through effective school-to-home and home-to-school communications (Epstein, Sanders, & Sheldon, 2009). Communication is considered a key to increasing family engagement (Feuerstein, 2000; Hoover-Dempsey et al., 2005; Sanders, Epstein, Connors-Tadros, 1999), and good communication is at the heart of successful family-school relationships. Researchers have found that technology can increase the means by which parents and teachers communicate (Bernstein, 1998; Davenport & Eib, 2004; Furger, 2006).

In a study conducted by T.J. Watkins (1997) the researcher investigated family engagement patterns in terms of achievement motivation theory. A model was created to test which key factors directly and indirectly influence family engagement. Watkins, in the article, stated "Many parents have reported that they would be more involved in helping their children at home if their teachers communicated more with them or requested their cooperation; these reports indicate that home involvement is an underused education resource" (p. 3). Research suggests that more communication is beneficial,

however establishing clear two-way channels of communication between school and home can be difficult in Title I schools.

Technology may provide a solution by enabling schools to involve families who are difficult to reach and, likewise, empower families to engage schools that are difficult to reach. For a variety of reasons, many parents and teachers find themselves unable to contact each other in a timely manner when needed. Teachers and administrators tend to find it difficult to reach parents due to phone numbers being disconnected, outdated contact information, and parents' inability to communicate because of work restraints. Internet-based communication methods, including email, websites, mass messaging, texting applications, and online portals for grades and attendance, present new opportunities for communication. These technologies may reduce barriers that pose challenges to traditional forms of communication and may aid schools in providing more frequent contact. The creation of new technologies, such as school websites, electronic mail, mass messaging systems, apps, and the like, has enormous potential for improving communication between home and school and thereby potentially increases parental involvement and student achievement.

### **Epstein's Overlapping Spheres of Influence**

In 1995, Hoover-Dempsey and Sandler developed a model to explain why parents get involved in their children's education. Based on Epstein's theoretical model of overlapping spheres of influence, there are three major external contexts in which students learn and grow: the family, the school, and the community (Figure 2). In the ideal partnership, teachers and administrators create more family-like schools with a welcoming environment to engage all families and recognize each child's individuality.



According to Epstein (2002), “When all of these concepts combine, children experience learning communities or caring communities.”

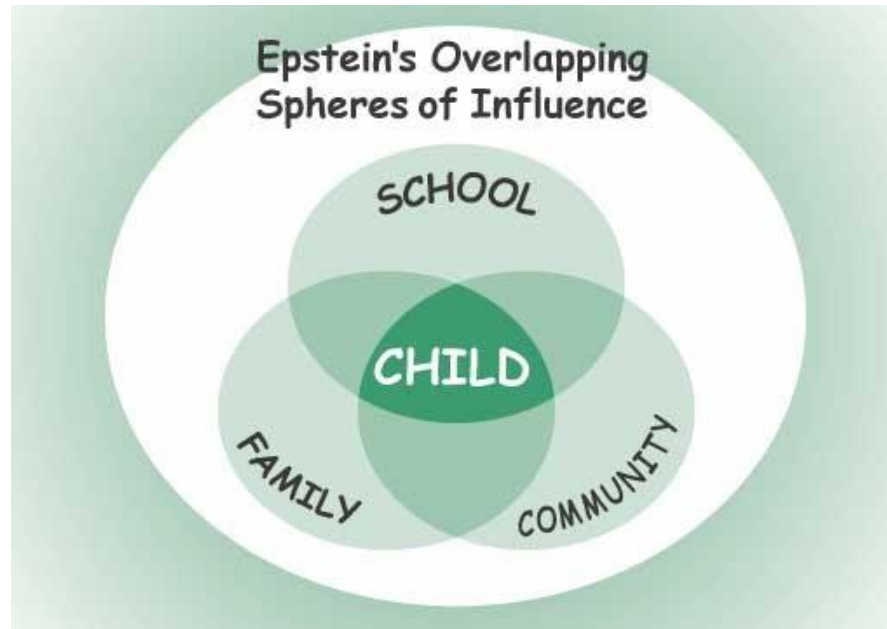


Figure 2. *Epstein's Overlapping Spheres of Influence. Joyce L. Epstein, Ph.D., et al., Partnership Center for the Social Organization of Schools.*

Students are the main characters in their education. As seen in Figure 2, Epstein's model allows the students to be located at the heart. Furthermore, Epstein (2009) states, “The internal model of the interaction of the three spheres of influence shows where and how complex and essential interpersonal relations and patterns of influence occur between individuals at home, at school, and in the community.” School, family, and community partnerships cannot independently construct successful students. Rather, partnership activities should be designed to engage, guide, and motivate students to produce their own successes. The assumption is that if children feel loved and are

encouraged, they are more likely to do their best to learn academically, to learn other necessary skills, and to remain in school. Evidence continues to mount in favor of the notion that when schools, families, and community groups work together to support learning, children tend to do better in school. School administrators are key players in making these connections. Successful family involvement is championed by the school principal and implemented by administrators, teachers, and staff.

### **Leadership as part of the school partnership.**

The principal is the key individual in creating successful parent-school partnerships. School leaders must persuade teachers, students, parents, and community members of the value of working together for the benefit of the school and the students it serves (Epstein & Rodriguez-Jansorn, 2004). Moreover, it takes specific leadership qualities to successfully create a welcoming partnership with parents. Effective principals must also be willing and able to delegate power to stakeholder groups, while simultaneously guiding the process (Gordon & Seashore-Louis, 2009). Such a process of shared decision-making among teachers and parents may produce better decisions and create a sense of ownership and responsibility for the outcomes of those shared decisions (Leithwood, Jantzi, & Steinbach, 1999). According to Stelmach and Preston (2007), parents are currently being asked to contribute to educational decisions that were once left only to the professionals. Encouraging this democratic point of view has led to the voices of parents and non-professionals being heard in making decisions on school reform and gives parents a more powerful place in the educational establishment (Stelmach & Preston, 2007). Leaders must develop other stakeholders to become leaders in order to benefit the students in the largest capacity.

### **Hoover-Dempsey and Sandler Model**

The Hoover-Dempsey and Sandler Model provides a strong theoretical framework from which to examine precise predictors of parental involvement. Hoover-Dempsey and Sandler (1997) are well known for insisting on the importance of the way parents construct their roles for their actual involvement. Summarizing the research findings in this area, Hoover-Dempsey (2007) identifies three main sources of parental involvement, as shown in Figure 3. The first major source of motivation is parents' beliefs that are relevant to involvement, including parental role construction and parental self-efficacy for helping their child succeed in school. Secondly, parents' perceptions of invitations to involvement, including general invitations from the school and specific invitations from teachers and children, are another source of motivation. The third source of motivation for parental involvement consists of personal life context variables that influence parents' perceptions of the types and timing of involvement, including parents' skills and knowledge for involvement as well as time and energy for involvement. According to Hoover-Dempsey and Sandler, parents will be involved if they are confident in their knowledge and skills, have the time to attend outside of family and employment demands, and are invited by their children to participate. This model, as shown in Figure 3, takes into account the characteristics of participation within each level from the viewpoint of the parent or student.

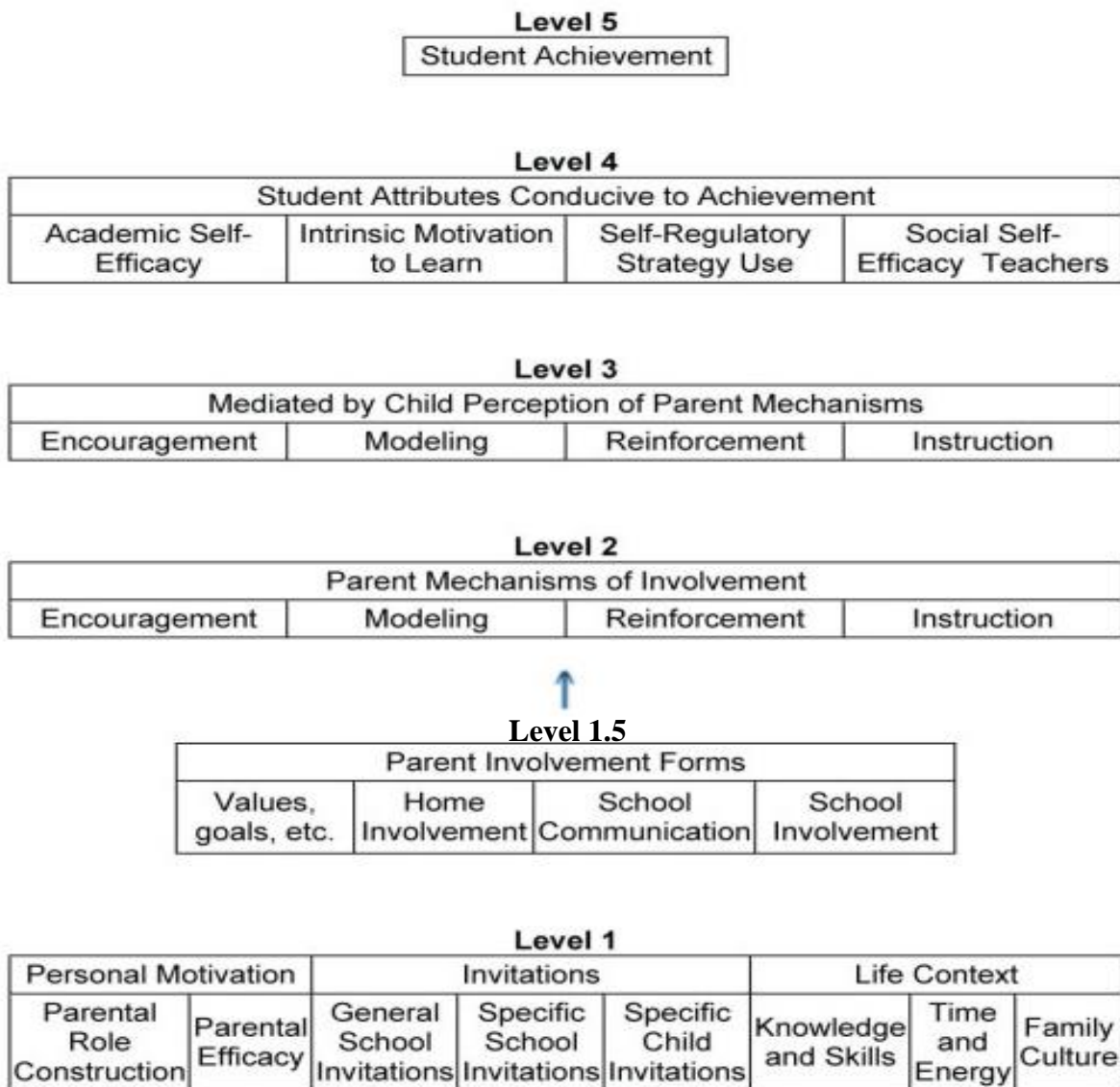


Figure 3. Hoover-Dempsey, K.V., & Sandler, H.M. (1997). *Why do parents become involved in their children's education?* *Review of Educational Research*, 67, 3-42

Level 1 requires parents to make the decision to become involved in their child’s education. At this stage, three main influences impact the variety and frequency of family involvement: parents’ personal motivators, perceptions of invitations to be involved, and life context variables. The two personal motivators identified in the model. The first one is the parental role construction for involvement, characterized as parents’ belief about

what their responsibilities are with regard to their children's schooling. The second motivator is the parents' sense of self-efficacy for helping their children succeed in school, defined as parents' beliefs about whether or not their involvement is likely to have a positive impact on their children's education. This motivator is the parent's job description from his or her own viewpoint.

Life context variables includes parents' understanding of their own skills and knowledge, their perceptions of the time and energy they have for involvement, and their family culture which shapes how parents feel they should be involved in their child's learning. These level 1 factors interact to shape the types and frequency of family involvement. In 2005, the authors revised the model and added level 1.5. This level articulates the diverse ways that parents can become involved. For example, one form of involvement includes parents' clear communication with their children about their personal and family values, goals, expectations, and aspirations for student learning. Another form of involvement incorporates families supporting student learning through involvement activities at home. An additional form of involvement is through effective family-school communication that influences students' academic progress. Finally, the last form of involvement embraces parent participation in school-based activities. Level 2 in the Hoover-Dempsey model highlights what parents can do to positively influence their child's learning behaviors (Hoover- Dempsey & Sandler, 2005). Level 2 of the model posits that parental influence on students is necessary for school success through four specific kinds of activities: encouragement, modeling, reinforcement and instruction. The third level of the Hoover-Dempsey model considers the child's reaction to level 2 parental efforts in order to determine which type of support or involvement is

most effective for the student. Level 4 of the model views students as the authors of their academic success. It describes a set of four student beliefs and behaviors associated with academic achievement: academic self-efficacy, intrinsic motivation to learn, self-regulatory skills, and social dimensions of school success. Finally, Level 5 of the Hoover-Dempsey and Sandler model is the ultimate goal of student achievement. This model implicitly and explicitly assumes that parent involvement, as described at each level of the process, influences and can be predictive of student outcomes.

The model developed by Hoover-Dempsey and Sandler represents decades of research and is a valuable tool for planning a program of improved parental involvement. This model addresses three essential questions: a) why do families become involved, b) what do families do when they are involved, and c) how does family involvement make a positive difference in student outcomes? The research concludes that parents are more involved when they feel welcomed and when they assume that they have the knowledge and skills to be helpful. Finally, their research concluded that parental involvement was influenced by family responsibilities and job demands. Pulling from the decades of research by Hoover-Dempsey and Sandler, the researcher used these findings to plan a comprehensive approach to making parents and guardians feel welcomed and valuable while providing ways to increase their skill and knowledge levels through online materials and face-to-face meetings.

In a study examining the Hoover-Dempsey and Sandler model, Green, Walker, Hoover-Dempsey and Sandler, (2007) found that interpersonal relationships emerged as the single most important force behind parental involvement in a child's education. This study examined the ability of a theoretical model to predict types and levels of parental

involvement during elementary and middle school years. Participants consisted of 853 parents of children in grades 1-6 enrolled in a socio-economically and ethnically diverse metropolitan public school system in the mid-South portion of the United States. Parents were recruited at two time points at different schools by means of questionnaire packets sent home with and returned by children from participating schools. Their study examined the capacity of hypothesized constructs (role construction, personal self-efficacy for involvement, general invitations from the school, specific invitations from the teacher and child, self-perceived skills and knowledge, and self-perceived time and energy) to predict parents' self-described involvement in education-related activities based at home and at school. For both groups of parents, school-based involvement was predicted most notably by invitations from teachers and children. Two constructs, parents' self-perceived skills and knowledge and perceptions of general school invitations, were significantly correlated with outcome variables but did not predict involvement. Furthermore, Green et al., (2007) found that interpersonal relationships emerged as the single most important force behind parental involvement in a child's education.

Epstein's Parental Involvement Framework, Epstein's Overlapping Spheres of Influence, and the Hoover-Dempsey and Sandler model informed this action research. In this study the researcher used technology to increase school-home communication between administration and parents. The researcher used decades of research on family involvement to direct parent/teacher/school communication with an emphasis on the aforementioned frameworks and a distinct focus on level 1.5 communication.

### **Research Questions**

In order to facilitate the work on the use of technology to improve communication and family engagement at Blythe Elementary School, the researcher used several questions that served as guides. The following was an overarching question of this study: What happens when Title I administrators implement emerging technologies to facilitate school-home communications in order to promote family engagement? More specifically, the research seeks to answer the following questions:

1. What are the affordances and constraints to using these emerging technologies to promote family engagement in a Title I school?
2. Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?
3. What impact does the use of emerging technologies to promote family engagement have on family members' attendance at school events?
4. What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?

### **Significance of the Study**

Justification for striving to improve the partnerships between home and school is based on a body of research that identifies and demonstrates positive outcomes of family engagement (Epstein, Rodriguez-Jansorn, 2004; Fan & Chen, 2001; Harris & Goodall, 2009; Henderson & Mapp, 2002). Partnerships between educators, families, and community members can lead to an improved school climate (Epstein, et al., 2002).

This study strived to address an immediate problem at a local context through action research. The data collected provided additional insights into the effectiveness of



current technological tools to increase home-to-school partnerships. Valuable information was gathered on the affordances and constraints of the tools used in this study. Due to the ever-changing technology tools in education, a gap exists in the literature regarding the tools selected to increase home-to-school communications. The technology tools selected for use in this study included Blackboard Connect, the school website, Parent Vue, and a school app. Blackboard Connect and Parent Vue were both resources that are available to this school and were purchased for the school at the district level. The school app was created, free of charge, by a community member. This study provides a useful guide for educators and administrators aspiring to utilize technology-based tools in order to effectively communicate and promote family engagement.

### **Review of Relevant Terms**

*Action research* is the process through which teachers collaborate in evaluating their practice jointly, raise awareness of their personal theory, articulate a shared conception of values, try out new strategies to render the values expressed in their practice more consistent with educational values they espouse, record their work in a form which is readily available to and understandable by other teachers, and thus develop a shared theory of teaching by research practice (Elliott, 1991, p. 65).

*Emerging Technologies* are tools, innovations, and advancements utilized in diverse educational settings (including distance, face-to-face, and hybrid forms of education) to serve varied education-related purposes (e.g., instructional, social, and organizational goals). Emerging Technologies (ET) can be defined and understood in the context of the following five characteristics:

1. ET can be, but are not necessarily, new technologies. ET may represent newer developments (e.g., utilizing the motion sensing capabilities of the Wii Remote to practice surgical techniques) as well as older ones (e.g., employing open source learning management systems at higher education institutions). Newness, by itself, is a problematic indicator of what qualifies as an emerging technology, as older technologies can also be emerging.

2. ET are evolving organisms that exist in a state of “coming into being”. The word evolving describes a dynamic state of change and continuous refinement and development. Existing in a state of evolution, Twitter continuously develops and refines its service, while maintaining its core purpose, and is still considered an emerging, rather than an established, technology.

3. ET goes through hype cycles. Today’s emerging technology might be tomorrow’s fad, and today’s simple idea might be tomorrow’s key to boosting productivity. While it is easy to fall into the trap of believing that today’s innovations will completely restructure and revolutionize the way we learn and teach it is important to remain critical to hype. Technologies and ideas go through cycles of euphoria, adoption, activity and use, maturity, impact, enthusiasm, and even infatuation.

4. ET satisfy the “not yet” criteria. The “not yet” criteria refer to two interrelated issues:

a. *ET are not yet fully understood.* One factor distinguishing ET from other forms of technology is the fact that we are not yet able to understand what such technologies are, what they offer for education, and what they mean for learners,

instructors, and institutions. As a result of ET not being fully understood, a second issue arises:

b. *ET are not yet fully researched or researched in a mature way.* Initial investigations of ET are often evangelical and describe superficial issues of the technology (e.g., benefits and drawbacks) without focusing on understanding the affordances of the technology and how those affordances can provide different (and better) ways to learn and teach at a distance. Additionally, due to the evolutionary nature of these technologies, the research that characterizes it falls under the case study and formative evaluation approaches (Dede, 1996), which, by itself, is not necessarily a negative facet of research, but it does pinpoint our initial attempts to understand the technology and its possibilities.

5. ET are potentially disruptive, but their potential is mostly unfulfilled. Individuals and corporations recognize that a potential exists, but such potential hasn't yet been realized. The potential to transform practices, processes, and institutions is both welcomed and opposed" (Veletsianos, 2010, p. 113).

*Effective communication* is the ability to send, receive, and retrieve information in a continuous, timely, and bi-directional manner.

*Family engagement* is defined as a shared responsibility among families, school staff, and community members, where families are committed to actively supporting their children's learning and development, and school personnel and community members are committed to engaging and partnering with families in meaningful and culturally respectful ways; continuous across a child's life span, from cradle to career; and; occurring

in multiple settings where children learn: at home, at school, and in community settings (National Family, School, and Community Engagement Working Group Policy, 2009, p.2).

*Information and communication technology (ICT)* is any communication device or application, including radio, television, phones, computer, and network hardware and software and the various services and applications associated with them, such as video conferencing and distance learning.

*A needs assessment* is a systematic set of procedures that are used to determine needs, examine their nature and causes, and set priorities for future action.

*Parental involvement* is defined as the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities, including ensuring: that parents play an integral role in assisting their child's learning, that parents are encouraged to be actively involved in their child's education at school, that parents are full partners in their child's education and are included, as appropriate, in decision-making and on advisory committees to assist in the education of their child, and that other activities are carried out which allow parents and the community to intervene and assist in school improvement (U.S. Department of Education, 2004, p. 3).

*School-home communication* will be defined as two-way, meaningful, clear, and ongoing communication between home (parents/guardians) and school (teachers, administrators, counselors).

*School socioeconomic status (SES)* is operationalized as the proportion of the students in each school receiving a free or reduced lunch.

*Title I schools:* Title I, Part A (Title I) of the Elementary and Secondary Education Act (ESEA), as amended provides financial assistance to local educational agencies (LEAs) and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards. Federal funds are currently allocated through four statutory formulas that are based primarily on census poverty estimates and the cost of education in each state (U.S. Department of Education, 2014).

### **Summary**

Research on family engagement has indicated that student achievement increases when parents are involved and connected to the school (Jeynes, 2005b; Epstein & Sheldon, 2002). If family engagement has a direct effect on the achievement of students, then it is imperative for administrators to take a closer look at how they can improve family engagement. Technology has potential for improving communication between home and school. This action research study documented what happens when administrators at a Title I school implement emerging technologies to facilitate better school-home communication in order to improve family engagement.

This study is organized into five chapters. In Chapter 1, the researcher introduces the problem and presents the purpose of the study in conjunction with the research questions. Chapter 2 presents a critical review of the literature pertaining to the research questions. Chapter 3 provides the research design, including data collection and analysis methods. Chapter 4 presents findings of the study, and the conclusions and recommendations are provided in Chapter 5.

## **Chapter 2**

### **LITERATURE REVIEW**

#### **Introduction**

A review of the relevant literature for this present study was approached from a topical perspective. For example, the review of the literature that defined and described various parental involvement practices was obtained by using the main keyword *parental involvement* and sub-keywords such as *family engagement*, *school-home communications*, *assistant principals' impact on parental involvement*, and *technology*. The result of this search provided more articles related to this subject.

Major psychology databases such as ProQuest Education Journals, PsycINFO and EBSCOhost were used for this research. The specific approach involved searching first using the keyword *parental involvement* in the initial box and *technology* in the second box at each of the databases listed above. The search was subsequently narrowed or refined by selecting articles written within the past eight years. This yielded many journal articles on the topic of interest and various related topics. The same approach was also used to obtain technology-based communication articles. In addition, education

databases such as Eric and ProQuest Education were accessed. Some of the journals cited in this literature review include *The Journal of Educational Research*, *Educational Researcher*, *The Education Digest*, *Journal of Economic Education*, *Technology and Learning*, *School Community Journal*, and *the Child Study Journal*. The dates of the journal articles reviewed for this study range from 1974-2007 with approximately 80% of these articles ranging from 1999-2013. This chapter's literature review includes the research on family engagement, the evidenced based parental engagement strategies, communication, and technology tools used to amplify communication. The review of literature surveyed from scholarly articles, books, and other sources provided pertinent information pertaining to the study.

### **Barriers to Family Engagement**

The benefits of involving and engaging families are abundant, but multiple barriers exist that prevent families from becoming involved. Research examining the barriers that affect parental involvement is critical to improving family engagement (Constantino, 2003; Epstein, 1992; Epstein et al., 2009; Fan & Chen, 2001; Harris, 2007; Hoover-Dempsey & Sandler, 1995; Jeynes, 2005; & Laureau, 2000). Knowledge of barriers allows for meaningful conversations and constructive solutions to removing them. Using the search parameters previously stated, the researcher found a limited amount of research (Allen, 2011) that focused on gaining an understanding of parental involvement from the parents' perspective. Most parents have not had a direct voice within the research regarding their involvement in their children's education. It is even more challenging to find research pertaining to parents' perspectives at the elementary level. Due to this limitation, relevant research from Fogle and Jones (2006) pertaining to

a high school was used. Fogle and Jones' (2006) study followed four students from West Philadelphia High School who joined a nonprofit organization called Research for Action and started a project to improve urban public high schools and increase parent participation. Lengthy surveys were conducted with thirteen parents of high school students from two of the Philadelphia Student Union chapters in West Philadelphia. Seven of those parents were interviewed in order to learn more about their responses. Parents were asked what their own participation looked like and what prevented them from participating. The objective was to distinguish how schools treat parents and how parents participate, and to identify barriers to parental participation in education of their children. The researchers identified three reasons why parents may not participate: (1) parents do not receive information far enough in advance to adjust their schedules; (2) parents do not have the time to participate in some activities or meetings due to multiple responsibilities; and (3) cultural barriers make it difficult for some parents to become involved (Fogle & Jones, 2006).

This research serves as a great starting point when developing programs and initiatives to improve and facilitate family engagement. Schools need to ensure information is communicated to parents/guardians in multiple fashions in a timely manner; to recognize that cultural barriers exist in religions, social groups, and even within races; and to understand parents may be active even if not seen by administration on a regular basis. Throughout the literature on family engagement, other barriers are noted.



### **Additional Barriers from the Literature**

**Lack of communication.** Communication between the school and home plays an important role in the success of students. Traditionally, communication between the school and home has been infrequent, occurring at designated times, or when there were concerns regarding a student's behavior. Parental requests for enhancing communication appear frequently in the literature. According to findings from Davis (2000), "The issues and challenges of boosting communication with families include a need for: clear expectations, frequent and positive communication, conveying that the school is a welcoming, caring place, developing appropriate strategies, and getting information into parents' hands" (p. 8).

Parents are looking for more communication from the schools. In a study conducted by Latham (2002), 20 parents of children with disabilities were interviewed regarding their experience or satisfaction with family-school communication. She found a broad range of satisfaction, but noted that parents asked for more communication, clearer communication, and communication on a regular basis. In a study conducted by Hudley and Barnes (1993), African-American parents' beliefs about their relationships with their children's schools were examined to determine how parents perceived their roles as partners, how satisfied they were with both their own and the schools' efforts to build partnerships, and how they believed their efforts related to their children's school achievement and adjustment. Telephone interviews were conducted with 147 parents of African-American children residing within the boundaries of a school district in southern California. One finding from the data was the need for improved school-home communication. Hudley and Barnes (1993) indicated from their research that parents had

to repeatedly ask for more communication between home and school. The parents surveyed were clearly looking for communication as defined by a partnership model of involvement.

Dauber and Epstein's (1993) survey of 2,317 inner-city elementary and middle school parents found that "the strongest and most consistent predictors of parent involvement at school and at home are the specific school programs and teacher practices that encourage and guide parent involvement" (p. 61). These results suggest schools can and should promote communication as a means to increase family engagement. Many of the barriers described, such as time and resources, family culture, and socioeconomic status, complicate or amplify the challenge of two-way, meaningful communication.

At Blythe Elementary School, the school relied heavily on paper-based means of communication with parents and infrequent parent-teacher conferences. Teachers routinely required students to carry home communications concerning classroom assignments, homework, student performance, and special events. Lines of communication between the school and home were often broken due to students hiding or losing information. This led to a loss of faith in the teacher-parent communication channel. According to parents who attended the Title I parent information meeting, they were unhappy with the frequency and clarity of communication they were receiving. The knowledge obtained from parents at this information meeting sparked the need to focus on communication practices at Blythe.

**Time and resources.** Several aspects of parents' life serve as influences to involvement, such as parents' work situations, family circumstances, and resources. Most parents see a main limitation to engagement in education arising from demands on their

time. Many parents conduct juggling acts to manage the multiple demands on their time and resources and are not as involved because of these commitments (Williams et al., 2002). The first barrier is the work situation or work commitments of the parent(s), which is an often-cited reason for the lack of family engagement in schooling. There are three major divisions of work situations that have been identified: single parents, parents with jobs, and parents without jobs (Williams et al., 2002).

The first work situation includes single parents. The family demographics at Blythe include a large percentage of single parent households (49% of the respondents of the Parent Communication Survey had single households, and 80% of those single families were comprised of only a mother). Single parents feel very restricted in terms of involvement and tend to be least responsive to invitations and requests from school. Single parents are particularly disadvantaged by their time constraints and commitments, with teachers and families both reporting limited time for communication (Standing, 1999; Lontos, 1992). Another work situation includes full-time working parents. Full-time working mothers are especially limited due to a lack of time and ability to acquire childcare arrangements. Mothers have traditionally had the primary responsibility for communication with school (Swap, 1987), and today many mothers are in the workforce or enrolled in school or workforce training. When both parents are working full-time there is less time available for both home and school based engagement. Also, low-income parents often have jobs with inflexible schedules that pay hourly wages and have few benefits which increase the potential for a lack of involvement (Newman & Chan, 2007; U.S. Department of Labor, 2005). The last work situation uncovered in the literature includes parents who are unemployed. When parents are unemployed, money

can be an obstacle to involvement, such as the inability to pay a babysitter or the lack of transportation to attend events.

Lack of transportation can also present a challenge to family engagement. Often, lower-income parents do not have the resources to travel to the school and attend meetings or volunteer in the classroom, even when they have the desire. Many urban schools are in neighborhoods that present safety concerns, discouraging those who would walk or use public transportation to attend meetings, especially at night (Baker, 1997; Carey, Lewis, & Farris, 1998). Inflexible work schedules, lack of transportation, and a responsibility for more than one job can contribute to a lack of engagement. However, the issue of time is part of a more complex social and economic picture.

**Socioeconomic status.** A major factor mediating family engagement is socioeconomic status, whether by occupational class or by the level of parental education. Several correlation studies (Sacker, Schoon & Bartley, 2002; Boethel, 2003; Kohl, Lengua, McMahon, 1994, Clark 1893; Lopez 2001) have shown that socioeconomic status (SES) mediates both family engagement and pupil achievement. Research (Abrams & Gibbs, 2002; Epstein, 1995; Lareau, 2000; O'Connor, 2001) consistently demonstrates that rates of parental involvement are lower in low-income communities. Children with less engaged parents often miss out on experiences that could lead to increased academic success. Less engaged parents encounter demographic, psychological, and financial barriers to school engagement. Economic realities often limit families' time available for communication with schools and thereby provide another logistical challenge. Work and home responsibilities often prevents parents from devoting time to their children's schooling (Benson & Martin, 2003; Plunkett & Bamaca-Gomez, 2003; Mapp, 2003).

Additionally, transportation problems and lack of resources associated with lower-income families may hamper parent involvement (Hill & Taylor, 2004). According to Carey, Lewis, and Farris (1998), schools with increased poverty concentrations (based on free/reduced lunch qualifications) and minority enrollments (50% or more) were more likely to perceive the following issues as barriers: lack of parent education to help with schoolwork, cultural or socioeconomic differences among parents and staff members, language differences between faculty and staff, staff attitudes toward parents, and concerns about safety in the area after school hours (U.S. Department of Education, 1998).

Sacker, Schoon and Bartley (2002) conducted a study to determine if educational and psychosocial outcomes are determined early in childhood or if they continue to be influenced by social class throughout the course of the child's life. This study used data from the National Child Development Study and applied two models, a class inequalities model and a contextual-systems model. In their work, Sacker et al. (2002), showed that low SES was associated with material deprivation and also affected negative attitudes and behaviors towards education.

As the previously stated research has shown, children who are constantly in urban environments and from low-income households are at a disadvantage. According to a study performed by Gary Evans (2004), children who live in low-income neighborhoods are at a disadvantage because of their home situation. Their parents make less money and are in the home less often, and these children are more likely to associate with children who are deviant (Evans, 2004). Furthermore, these children have additional social disadvantages because their families do not create a diverse network of affiliations and do

not encourage their children to do so. According to Evans (2004), “Numerous national studies have revealed that low-income American households have smaller social networks, fewer organizational involvements, and less frequent contact with social network members compared to families that are not poor” (p. 79). This demonstrates that not only are these children at an economic disadvantage when compared to their middle-class peers, but they also are more likely to have additional social disadvantages. Additionally, their parents are not there to encourage and support them as often as parents of children with higher economic statuses.

Family engagement is important for the later well-being of students since it conveys to children that parents are interested in their development. In socioeconomically disadvantaged homes, this engagement becomes even more important. Hango (2007) used data collected from the National Child Development Study to determine if social capital produced by greater family engagement could mediate some of the harmful effects that students experience when living in poverty-stricken circumstances. Her research suggested that family engagement does matter, but it depends on the age of the student when involvement and economic hardship are measured, as well as the type of involvement and the gender of the parent involved (Hango, 2007). The age of the student impacts how much family engagement could mediate the harmful effects of low SES. The disadvantaged families in this dataset were able to compensate for some of the detrimental effects of a lack of resources by making up for it through increased involvement (Hango, 2007). Still, the impact of parental involvement was by no means universal across all ages, type of involvement, or parental gender (Hango, 2007). At the same time, parental involvement was not sufficient to completely cancel the negative

association between economic disadvantage and education; instead it acted as a ‘partial’ mediator (Hango, 2007). This study provides a strong backing of the need for increased family engagement, which can in part counteract some of the damaging effects of low SES.

Low-income children are exposed to greater levels of violence, family disturbance, and broken homes than middle-income children. Household income is related to experience of family violence and the incidence of crime within one’s neighborhood (as cited in Evans, 2004). Low-income families often demonstrate increased retaliatory parenting, beginning as early as infancy (as cited in Magnuson, 2008).

**Cultural expectations.** Cultural expectations and perceptions influence the level of involvement of parents in terms of school-based engagement. Each culture has defined the parental roles in the schooling of their children based on values and beliefs. Families can have a strong influence on school outcomes including motivation and academic success. A variety of cultural factors contribute to family engagement. This section will provide an examination of Latino families and how family engagement is affected by cultural expectations and perceptions.

According to Mundt, Gregory, Melzi and McWayne, (2015) “Research has shown that the school-based engagement of Latino families is lower compared with other racial and ethnic groups” (Mundt, et al., 2015). Hispanic parents often demonstrate low levels of involvement in their children’s schools (Ferrer, 2007). Although these parents care about their children’s education, often they do not become involved. This paradox may in part be explained by additional barriers faced by this population that can be exacerbated

by a language barrier and a decreased level of parental education. Parents who speak languages other than English may have limited to fewer opportunities to volunteer in the school, or may feel they are unable to help their children (Simich-Dudgeon, 1993).

Low-income immigrant parents may not participate for additional reasons. For example, language-related communication barriers can involve culture and literacy dimensions. Pena's (2000) case study of an elementary school with a large concentration of Mexican-American families found that even when translation services were provided, numerous parents still did not have sufficient literacy skills in either English or Spanish to understand written information. Some parents also may have questionable immigration status and may be fearful that a school might turn them over to authorities (USDOE, 2001).

Cultural expectations can also influence involvement, as some countries characterize parents as disrespectful for trying to become involved (Mapp, 2003). Work by Crozier and Davies (2007) highlights that many parents from ethnic groupings know little about the education system. Such parents are often seen as indifferent or difficult and are considered by schools to be "hard to reach." Crozier and Davies (2007) suggest that many parental involvement policies are flawed because they fail to recognize ethnic diversity among parents.

In comparison to their middle income counter parts Hispanic families are less comfortable with school staff. A case study by Annette Lareau and Erin Horvat (1999) attempts to address the reason families with more income and education tend to become more involved at school. The researchers observed that white, middle-class families are more comfortable with school staff because they share "social and cultural capital." These



families have culturally supportive social networks, use the same vocabulary as teachers, feel entitled to treat teachers as equals, and have access to childcare and transportation. This allows them "to construct their relationships with the school with more comfort and trust" (Lareau & Horvat, 1999, p. 44).

**Psychological and psychosocial barriers.** Apart from demographic factors, parents' psychological state influences family engagement. A psychological state, such as depression or anxiety, presents barriers to family engagement in schooling. For example, studies consistently show that mothers who are depressed tend to be less involved in preparing young children for school and also exhibit lower levels of engagement over the early years of school (Hill & Taylor, 2004, Perriell, 2015). Maternal depressive symptoms such as a sad mood, negative thoughts, and slowed movements do not need to reach the severity required for a diagnosis of major depressive disorder to interfere with mothering (American Psychiatric Association, 2000; Hammen, 1991). Low-income mothers of infants and toddlers experience depressive symptoms at a rate four times that of middle-income mothers (Brown & Moran, 1997). In some studies, 40%-71% of these mothers report symptoms severe enough to interfere with their mothering, management of stressors, and use of education and welfare-to-work programs (Duncan & Brooks-Gunn, 2000). Maternal symptoms can compound other risk factors for the low-income infant or toddler and lead to abuse, neglect, and lingering developmental disabilities (Lyons-Ruth, Connell, & Grunebaum, 1990).

Self-perceptions also affect parents' school engagement. Negative feelings about themselves may hinder parents from making connections with their children's schools. Parents' confidence in their own intellectual abilities is the most prominent predictor of

their school involvement (Eccles & Harold, 1996). A factor that may be especially important in this regard is the experience of poverty. In addition, poverty has direct effects on parents' mental health and self-perceptions through increased stress resulting from the struggle to make ends meet and indirect effects on parent involvement in the schools (Hill & Taylor, 2004). For example, lower family income is linked to higher rates of depression, and depressed mothers tend to be less involved in the early years of children's schooling (Hill & Taylor, 2004; Inaba et al., 2005). These barriers are only some of the barriers that low-income parents face.

### **Research on Evidence Based Family Engagement Strategies**

Schools' administrators are an essential part of successful family engagement programs. Studies conducted by Wynn, Meyer, and Richards-Schuster (2000) support the idea that collaborative teams and collaborative processes are a key to the success of increased family involvement in the education of children. Administrators must manage collaborative teams and ensure a systematic approach to family engagement. According to Ferguson (2005), the school's administrator plays a key role in creating a school culture where family engagement is valued. Strong leaders can create a cohesive partnership among the school's stakeholders.

Research (Iyers, 2000) on effective schools identified characteristics of effective principals which include a principal who is strong, is purposeful and involved, provides effective monitoring and supervision, possesses leadership skills, maintains students discipline, practices greater cooperation, and is effective at parental involvement. Efficient administrators understand that the foundation of their work and their school's success is the ability to communicate effectively. At the same time high levels of parent

involvement have a positive effect on administrator effectiveness; in other words, administrators who reach out to parents and community members are more successful than administrators who do not (Stronge & Catano, 2008; Cotton, 2003; Fullan, Bertani, & Quinn, 2004). When principals foster effective communications on an ongoing basis, people understand what an effective principal stands for (Catano & Stronge, 2008; Cotton, 2003; Leithwood & Riehl, 2003). Successful administrators use communication to build strong relationships, and they strive to improve their own communication and listening skills because they value the feedback and ideas they receive (Cotton, 2003; Leithwood & Riehl, 2003). Good communication is crucial to meeting school goals (Marzano, Waters, & McNulty, 2005).

To cultivate engagement programs, administrators need to review effective engagement strategies (U. S. Department of Education, 2014). As a means to supporting family engagement and children's learning, it is crucial that programs implement strategies for developing partnerships with families (Henderson & Mapp, 2002). Hoover-Dempsey and Sandler (1997) suggest that schools and communities can better engage families by working actively to welcome parent involvement and by developing programs that enhance parents' efficacy for involvement in their children's schooling. The first process in methodical execution is the planning piece.

### **Planning**

Epstein's *School, Family, and Community Partnerships Handbook for Action* identifies five important steps schools can take to develop more positive school, family, and community connections: create an action plan, obtain funds and other support, identify starting points, develop a three-year outline and a one-year action plan, and

continue planning and working (Epstein et al., 2002, p. 18). These five important steps that any school can take to develop more positive school, family, and community connections were developed based on the trials, efforts and insights of many schools across the country (Epstein, et al., 2002, p. 18).

The planning cycle, when implemented successfully, will create a lasting, comprehensive program. An action team for partnerships (ATP) is an essential structural component to the planning phase (Epstein et al., 2002, p.18). The action team guides the formation and the assimilation of all family and community associations within a single unified plan and program. The ATP should include a minimum of three teachers from different grade levels, three parents with children in different grade levels, a community member, and one administrator. A team with at least six members allows for responsibility delegation such that members are not overburdened (Epstein et al., 2002). Members should serve for two to three years. Sufficient time and social support must be given to the ATP members in order for team members to meet, plan, and conduct activities that are selected for each type of involvement. Support from the principal and financial assistance is needed to allow the ATP members to guide and support the work of the school's ATP (Epstein et al., 2002).

After creating an ATP and gaining the funding, time, and social support needed, a needs assessment must be administered and analyzed to identify starting points. Family engagement interventions are more likely to be effective if they are informed by a comprehensive needs analysis and targeted to particular groups of parents (Lopez, Scribner, Mahitivanichcha 2001; Brooks, 2008; Statham, et al., 2010). A needs assessment is particularly important for ethnic minority parents, disadvantaged parents,

and fathers (O'Mara et al., 2010). A needs assessment, which focuses on the outcomes to be attained rather than the process, gathers data by means of established procedures and methods designed for specific purposes. This data allows for set priorities and determines solutions so that ATP members can make sound decisions.

According to Paul Mccawley (2009), there are seven critical components of a needs assessment plan:

1. Write objectives: What is it that you want to learn from the needs assessment?
2. Select audience: Who is the target audience? Whose needs are you measuring, and to whom will you give the required information?
3. Collect data: How will you collect data that will tell you what you need to know?  
Will you collect data directly from the target audience or indirectly?
4. Select audience sample: How will you select a sample of respondents who represent the target audience?
5. Pick an instrument: What instruments and techniques will you use to collect data?
6. Analyze data: How will you analyze the data you collect?
7. Follow-up: What will you do with information that you gain? The needs assessment has to result in decision-making. (p. 4)

A collection of the school's current practices of partnership, along with the views, experiences, and desires of teachers, parents, administrators, and students, are obtained to formulate a three-year outline and a one-year action plan. From the ideas and goals composed, the ATP can continue planning and devising an inclusive method to improve the haphazard approach to engagement.

### **Whole School Approach**

The research on evidenced based family engagement strategies note the importance of designing approaches that will be implemented school wide. Successful school-family partnerships cannot be created through the work of a single person or program (Dyson, Beresford, Splawnyk, 2007). To be effective, involvement efforts must become more collaborative, more inclusive, and more culturally relevant (Gomez & Greenough, 2002; Center for Community Child Health, 2007; Kumpfer, Alvarado, Smith, & Bellamy, 2002). Interventions should be tailored to meet parental needs based on the results of the needs assessment (Statham, Harris, & Glenn, 2009; Kane, 2007) and should match the needs and profile of the families and parents, rather than providing a general one-size-fits-all type of support (Statham, 2010). While there are many structures and processes to develop effective partnership programs, these are just a framework, for each site has distinctive families and needs. Epstein et al.,'s (2002) research shows that “good programs will look different at each site, as individual schools tailor their practices to meet the needs and interests, time and talents, and ages and grade levels of students and their families” (p. 12). Many researchers have suggested that schools will need to reevaluate traditional models of involvement and include families in discussions of how they would most like to be involved if they are going to be successful in engaging diverse families (Mapp, 2002; Trumbull, Rothstein-Fisch, Greenfield, & Quiroz, 2001; Voltz, 1994). Moore and Laskey (2001) pointed out that the process of building effective partnerships should be fluid and ever-changing. As the needs of families change, methods of communicating and overcoming obstacles will most likely need to be adapted.

### **Clear and Specific Advice and Guidance**

Parents want easily accessible information about what their children are learning in school and the progress they are making (Lewin & Lucking, 2008). Information for parents should be clear and concise regarding the content and what is expected of the parents. Lack of effective communication was found to hinder parental involvement (Musti-Roa, 2004). Teachers often provide parents with suggestions containing merit but lacking specificity. Unfortunately those parents who are unable to act on the vague information are labeled as unhelpful or uncaring (Musti-Rao, 2004). Lack of family engagement does not mean the parent does not care, but often indicates the parent does not understand how to effectively become involved.

Title I guidelines (U.S. Department of Education, 2014) help to provide clear and specific communications. A written compact must be developed each year indicating how all members of the school community, including parents, teachers, principals, students, and concerned community members, agree to share responsibility for student learning. This document sets expectations and clarifies what families and schools can do to help children reach high academic standards. The purpose of this agreement is to help parents and teachers reach a consensus on the responsibilities of the individuals that influence student achievement. Overall, if the compact is taken seriously and implemented effectively, it will ensure that there will be support for the academic success of the students by enhancing effective communications between school and the home.

### **Research on Communication**

Parent and community relationships are strengthened by effective two-way communication (Marzano et al., 2005). The literature explored (Marzano et al., 2005;

Moore & Laskey, 2001; Adams & Christenson, 2000) repeatedly validates the importance of ongoing communication between the school and home as a major component of family engagement. Moore and Laskey (2001) emphasize two-way communication as a key element in successful school partnerships. In regard to communication between families and schools, Adams and Christenson (2000) found that improving school-home communication was the most effective method of enhancing trust.

Susan Swap's book *Developing Home-School Partnerships: From Concepts to Practice* provides a "how to" section, where specific guidelines and suggestions are offered for implementing school-home partnerships. According to Swap, (1993) there are three key indicators that effective two-way communication is being established:

- More families are involved.
- Families are involved in a wider variety of ways over a significant period of time.
- The engagement is experienced on both sides as constructive and purposeful. (p. 39 )

Swap states that there is no single formula for reaching out to parents. Each school should decide on the activities and structures that are suited to the school's mission and local context.

### **Technological Tools Used to Enhance Communication**

In aligning with Epstein's type of involvement, communication, schools need to design effective forms of school-to-home and home-to-school communications about school programs and children's progress. Traditional methods of communication such as face-to-face meetings have been found to be effective (Decker & Decker, 2003);



however, these methods require time that both working parents and teachers may lack. Different technological formats could be applied in order to successfully achieve the goal of improved communication. Teachers and administrators can communicate with parents through a variety of means including newsletters, emails, translated materials, web postings, telephone calls, home visits, videos or photo albums that depict a day in the class, and face-to-face communication (Carlisle et al., 2005). Technology provides promising avenues for disseminating information to parents (Decker & Decker, 2003).

A study was commissioned by Becta (British Educational Communications and Technology Agency), at the University of Warwick, to conduct a review of information and communication technologies (ICT) (Aubrey & Dahl, 2008). A meta-analysis was conducted through multiple databases along with consultations from people, organizations, and websites. Becta (2008) identifies four ways in which ICT can contribute to improved family engagement: providing a convenient means for parents to access up-to-date information about their child's learning, enabling parents to be more engaged with their child's learning, supporting more flexible working arrangements for staff, and enabling information to be captured more efficiently as part of learning and teaching processes that exploit technology (Aubrey & Dahl, 2008). ICT enables new forms of communication between schools and parents: email and text messaging to communicate with parents, school websites displaying key information for parents and pupils, e-portals and online reporting which allow for parental monitoring of their children's progress, punctuality, and performance learning platforms (Aubrey & Dahl, 2008).

Bauch (1989) first applied technology to school communication and coined the term “transparent school model”. This model is based on the premise that technology will make connections between the school and the home easier or more clear and transparent. The Transparent School Model uses computer-based voice messaging to exchange messages between parents and teachers. Results indicated that when implemented correctly, interactions between parents and teachers increase, parent attitudes are more positive, and student academic achievement increases. Research on an autodialing and data-based management phone system was conducted in 1989 at Lawrence Middle School in Nashville, Tennessee (Bauch, 1989). The system, called Compu-Call, automatically placed phone calls to any or all parents. Messages were recorded by a school user and were delivered to parents. The computer placed the calls and kept records of calls completed. The TransParent School Model was implemented in January of 1989 with the following results (Bauch, 1989):

- There were about 315 families in the school community, and the TSM accounts for 70 - 110 daily contacts between teachers and parents. Calls from home showed a 580% increase over all other parent/teacher contacts during one test period.
- Parents initiated contacts with the school about six times more often than they did before the model started.
- Two groups of parents were studied in detail. One was a "low calling" group who seldom used the services of the model; the other was a "frequent user" group who used the system very often. Students from the "frequent user" homes showed a significant increase in homework completion. Parents also perceived that it was

the model that produced this change, and 93% noticed other improvements in their child's attitudes, skills, and responsibility.

- There was no difference in SES between the low and frequent users of the system.
- About half of both frequent and infrequent users reported no previous involvement with the school. The dramatic increase in parent/teacher contact seems to demonstrate that parents in urban settings will respond to the model, while they were not involved in the more traditional involvement opportunities

The research on utilizing technology for school-home communication provides insights for schools to optimize successful implementation. Schools invest time in staff development and money for technology, yet the Decker and Decker (2003) study indicates that schools may not gain a promising return for their investment. Their research suggests that legislators must also succeed in placing technology in the hands of parents of school-aged children, that educators must teach the appropriate technology skills to enhance communication, and that administrators must provide professional development on up-to-date technology while encouraging the use of technology for communication between parents and teachers. While technology is only a tool, it is a very powerful tool with a variety of solutions to an assortment of problems. It is not a quick fix for family engagement but a great starting point to work on a welcoming environment through continuous, two-way communication.

### **Mass Messaging System-Blackboard Connect**

Mass communication service providers, such as Blackboard Connect, have offered school officials an efficient means by which to communicate with stakeholders. Blackboard Connect allows for a school official to call a toll-free telephone number,

record a message for a selected stakeholder group (e.g. parents of tutoring students) or all students, and select the day and time to send the recorded message. The message could be recorded in multiple languages so that all parents could receive the information in their native tongue rather than strictly in English. Delivering the message to parents in their native language could send a strong message of respect and cultural sensitivity (Blackboard Connect, 2015). Support for the school could increase tremendously among the different language groups as a result. Through Blackboard Connect 5, released in mid-2011, the message could also be sent as a mass-communication email, mass-communication text message, Facebook post, tweet, and/or RSS feed, which could increase the likelihood of getting the message conveyed to the intended audience (Blackboard Connect, 2015).

Mass messaging systems are used to reach families, teachers, and staff by voice, SMS text, or email. Staff members can type messages which are instantly translated into one of 52 different written languages or into one of 18 languages that are converted into a spoken voice message (Blackboard Connect, 2015). This system seamlessly integrates with student information systems and can be used for either the entire student body or with particular student groups. Messages may be sent immediately or can be scheduled for a future date or time. This allows for a systematic approach to communicating with families.

Another important feature of Blackboard Connect is the ability to track message delivery (Blackboard Connect, 2015). The messages sent are noted as *failed to send*, *sent*, or *delivered* (which indicates it was confirmed as received). Technologies, such as automatic mass phone calls, have most often been used to deliver widespread emergency

information, such as school closings, to parents (Dyrli, 2009). Mass messaging calls are also used to inform parents, students, and staff of delays and cancellations, fees due, daily absences, upcoming events, deadlines, safety concerns, and information about upcoming events and programs (Blackboard Connect, 2015).

### **Mass messaging electronic mail (email)**

Email has been and continues to be one of the most preferred methods of communication between school and parents (DeVoe, 2009). The main benefits of email include instant communication, records of exact correspondence, and the ability to communicate asynchronously. All of these features can support the correspondence between families and schools. Bernstein (1998) found that email is cost effective, reaches parents when sometimes notes do not, can be less formal than letters sent home, increases responsiveness to the community, promotes positive public relations, and helps identify and transform a group of parents into a group of technology advocates.

Blackboard Connect mass messaging via email has several components that enable two-way communication between the school and home. Schools have the option of allowing email replies by changing a setting in the message delivery options which allows responses to selected emails (Blackboard Connect, 2015). Emails may also be personalized in the advanced options which may aid in the parent's perceptions of invitations (Blackboard Connect, 2015). Email groups can be set up to broadcast a message among groups of teachers, parents, community members, and others. It is probably the fastest technology-based mode of communicating either one-to-one or one-to-many.

Parent-teacher email communication at the elementary and secondary levels represents a growing form of computer-mediated communication (CMC) in the instructional context. Parent-school email embodies a significant change in parent-school communication. Traditionally, parent-school communication has been infrequent, has had to occur at designated times (i.e., conferences), or has occurred only in regards to problems with children (Epstein, 1995; Nichols & Read, 2002; Shinn 2002). Email communication has been applauded as a family engagement resolution because CMC makes teachers more accessible and communication more convenient, leading to reported increases in parent-teacher communication (Branzburg, 2001). Literature on computer-mediated organizational communication confirms that when email use is frequent, face-to-face interactions increase as well (Conrad & Poole, 1998). The ultimate goal of email is to supplement rather than replace face-to-face interactions.

In contrast, research applying social information process theory (SIP) to analyze parent-teacher relationships revealed that email may not improve the quality of parent-teacher relationships (Branzburg, 2001; Skipp & Campo-Flores, 2003). Whereas some parents and teachers who communicated via email developed relationships with each other, in most instances, parent-teacher email exchanges were not relational in nature. In order to build quality relationships, which both the Hoover-Dempsey and Sandler model and Epstein's framework supports, teachers must become proficient in the use of messages that build relationships and increase school-home communication.

A number of articles have been written in the educational literature about parent-teacher email communication (Thompson, 2008). However, often the writers (Edwards, Qing & Wahl, 2007; Stoms, Grottum & Lycke, 2007; Timmerman & Kruepke, 2006)

simply advocate the use of computer mediated communication (CMC), suggesting that email improves both the quantity and quality of parent-teacher communication and relationships by opening up a continuing dialogue between parents and teachers (as cited in Thompson, 2008). Yet research to support these claims is lacking; more importantly, research aimed at understanding the dynamics of parent-teacher email is clearly lacking (Thompson, 2008).

**Affordances and constraints.**

*Ease of access.* Accessibility and convenience are two advantages that email has over face-to-face and written communications (Riel & Levin, 1990). Electronic communication technology can support development of communications that transcend time, schedules, presence, and availability. The use of electronic communications allows relatively easy access to 24-hour, nearly unlimited exchanges of information that often do not take place in real time. Parents and teachers can transmit and access information instantly, whenever and wherever they are, with the appropriate hardware, software, and Internet connection (Radin, 2013). In Walther's study (1995) he noted that use of electronic communications enabled participants to have control of the time and the content of their communications. Connecting asynchronously allows for both parents and teachers to take time to form thoughts and respond at a time and place that is satisfactory to each party (Thompson, 2008).

*Frequency of communications.* The use of email creates frequent opportunities for positive communication with parents due to the asynchronous connectivity. This is especially true for working parents (Butler, Uline, & Notar, 2009; Tobolka, 2006). According to Wellman (1999), frequency of electronic contact and use of several types of

electronic media results in stronger partnerships. Weekly emails regarding events and assignments can help make a difference in classroom success, and it also can give parents a feeling of greater ownership (Tobolka, 2006).

***Increased Visibility.*** Hassini (2006) found that email is a way for shy individuals, who would otherwise be hesitant to approach a staff member, to be involved in discussions. Email can identify peripheral individuals (Cross, Borgatti, & Parker, 2002) by inviting their questions and discussions through the keyboard as opposed to face-to-face and one-on-one conversations (Riel & Levin, 1990). Some parents may be reluctant to come to school to meet a teacher due to embarrassment or lack of confidence that the meeting will be a success (Comer & Haynes, 1991). Just as online social groups provide opportunities for people to be visible beyond their work or geographical location (Butler et al., 2009), email provides opportunities for parents and students to be visible beyond the constraints of the classroom and the home (Radin, 2013).

***Equity and misinterpretation.*** Constraints to using email for school-home communications arise with equity and access. Not all families have access to email capabilities; therefore, those without email access are at a disadvantage. Another constraint to using email for school-home communications arises with respect to tone and misinterpretation (Walther, 2008). Byron (2008) stated that emails communicate emotion and that typically those emotions are misinterpreted more negatively than senders intend. This can be especially problematic as the need for immediate communication is often negative in content (Thompson, 2008). Often teachers use email to communicate behavior concerns or academic concerns with parents. Those emails tend to remain brief,



addressing minor concerns that require little explanation (Thompson, 2008). Such misinterpretations have big implications for school-home relationships.

### **Blackboard ConnectTxt**

The use of text messaging as a classroom tool has been eliciting interest (Cheung, 2008; Markett et al., 2006; Thomas & Orthober, 2011). Text messaging, a way to exchange brief messages with a limited number of characters with other cell phone users, has become a worldwide phenomenon (Kroski, 2008; Librero, Ramos, Ranga, Trianona & Lambert, 2007). Blackboard ConnectTxt provides schools with a secure way to send SMS (short message service) text about updates and reminders to parents. The Blackboard ConnectTxt platform empowers schools to create a dialogue using two-way text messaging, allowing parents, students, staff and citizens a way to receive important information from community leaders and an easy avenue to respond.

Texts may be sent out to a mass group or as individual messages to parents through the student information systems used in the school setting. Blackboard ConnectTxt allows for two-way communication by the use of features such as enabling schools to send and receive texts through a short message service. To make it easy for parents to participate, text messages can also be sent with short codes, keywords, QR codes, surveys, and RSVP prompts that allow parents to partake in immediate two-way communication.

A few researchers have discussed the role of text messages in mass notification systems—systems that send out the same message to hundreds or thousands of recipients (Downing, 2011; Naismith, 2007). Downing's study (2011) examined K-12 parents' attitudes about their school district's mass notification service. Survey data were collected

from 146 parents with at least one child who attended a school in the district. Most parents surveyed wanted their district to expand its mass notification service from landline phone only to also include email and text-messaging notification. In addition, most parents were open to receive certain non-emergency messages through the service.

Ho, Hung, and Chen's research (2012) on using theoretical models to examine the acceptance behavior of mobile phone messaging to enhance parent-teacher interactions articulates several suggestions for school authorities interested in adopting mobile phone messaging as a parent-teacher communication medium. To implement a messaging system successfully, communication and training prior to implementation is necessary to allow teachers to understand the usefulness and benefits of the communication system. In addition, teacher attitudes can effect adoption of a new messaging system. Therefore, administration should provide encouragements that attract teachers to use the system and facilitate its rapid adoption and use.

**Affordances and constraints.** SMS is attractive with respect to teacher-parent communication because mobile phones allow access anywhere and anytime. SMS addresses a key problem with email communication, namely access. Even when disadvantaged populations have no computer, they are very likely to have a cell phone. Furthermore, while SMS allows senders to submit messages at any time, the receiver can exercise control over when they read and respond to the messages (Baron, 2008). This allows an asynchronous method of communication much like email. Parents value text messages from schools, since the messages are condensed and to the point (DeVoe, 2009). Text messages can also be helpful to a school when communicating to a large group of people during an emergency situation (DeVoe, 2009). Text messaging allows

for the ability to bypass jammed phone lines and instantly enables schools to communicate with parents in multiple languages.

One limitation to using Blackboard ConnectTxt pertains to outdated contact records for families of students. If parents' contact information is out of date that disables the school's ability to contact the parents and use this valuable tool in updating parents on school programs and student success. At schools with low socioeconomic statuses, there tends to be a larger percentage of parents with disconnected numbers and more frequent changes to phone numbers. Oftentimes at Title I schools, when phone numbers are disconnected or changed, parents do not update school records. The lack of updated information negates the positive impact that text messages could have on communications from the school.

### **School Website**

The school website is one of the more recent technologies administrators have used to communicate with families. Each school has a designated school website that is maintained by a staff member or a professional webmaster. These webpages provide general school/district/teacher information, contact information, news, current events, school board information, procedures and policies, and all sorts of other information. The literature suggests that the structure and content of a web site should be carefully planned in order to reach the target audience. In order to increase family engagement, a school must consider parents as the main audience. School websites can be used to provide information to parents who are unable to attend school meetings. The following components of a school website are considered family-friendly (Lunts, 2003):

- a welcome message for parents-a warm greeting with an invitation to journey through the school web pages;
- school mission statement;
- “what’s new?” section- inform parents about upcoming and past events.
- school history section- consists of highlights of school history;
- frequently asked questions section- including school hours, rules for school visitors, school handbooks, etc.;
- how to contact section-contains information about the school location (can include a map) and school telephone directory and email contacts;
- faculty and staff showcase section-include images of administration and teachers;
- extra-curricular activities section-displays students’ artwork and include a calendar of sports event;
- media center link- include educational resources available for students and parents;
- only for parents (PTA) section- information about events organized for parents or entire families, including links to other organizations that support families; and
- community information section- links about the community, local businesses, the school system, weather.

Aside from the communication of information, an additional important element of the school website is to elicit two-way communication from home-to-school. Some features that are included on websites to extract this two-way communication include polls, surveys, forms, RSVP requests, forums, and comments. The purpose of these tools is to

engage family members and keep an open line of communication. This aligns with Epstein's Framework of six types of involvement. Type 2 is communicating, designing effective forms of school-to-home and home-to-school communications about school programs and children's progress.

**Affordances and constraints.** School websites can provide parents with easy access to a plethora of information. By posting documents such as a calendar of events, updates on classroom and homework assignments, newsletters, and curriculum related materials on websites, educators can provide a means for parents to be connected and informed of school events 24/7. A constraint to using the school website for school-home communications arises with equity and access. Not all families have access to Internet connected computers or devices, therefore putting those without access at a disadvantage. According to the Pew Research Center, 70% of U.S. households have a computer with broadband connection to the Internet (Perrin & Duggan 2015). While a large percentage of families have access, this research shows that not all families have the same equity to accessing the Internet.

### **Student Information Systems (SIS) - Parent Vue**

Another information delivery tool used is student information systems. Student information systems (SIS) are software products that allow schools to maintain information about students. Attendance and grades are the most common types of information contained within SIS (United States Department of Education, 2008). The information in a SIS is typically made available for parents to view which improves communication with parents (Perkins & Pfaffman, 2006; Telem & Pinto, 2006). These systems allow parents access to a wealth of information about their child's grades and

school activities 24 hours a day 7 days a week (Bird, 2006). Parents can log on to the SIS system with their computer or smart phone from almost anywhere. SIS can track student progress by showing parents their child's averages for each subject and their individual scores on assignments (Bird, 2006). According to Bird (2006), the use of SIS can increase parental involvement by providing parents with updates as to what is going on at school. The clear message from the National School Public Relations Association (2011) was no surprise: parents do not want to wait until the end of a marking period to learn their child is struggling. SIS provides parents with current status regarding their student's grades and attendance. This communication tool allows parents to have up to date information that can be used to adjust academic or attendance problems.

**Affordances and constraints.** SIS allows parents to have instant, around the clock access to grades and attendance. The ability to access this information asynchronously is valued by users. Unfortunately there are equity issues because parents who do not have Internet access are not able to retrieve the information regarding grades and/or attendance. Another constraint comes from classroom teachers not updating grades frequently, which impedes parents' use of this tool.

### **School Application (app)**

According to the National School Public Relations Association, smart phone applications (apps) are an up and coming method of establishing the school-home connection (2011). Through the use of smart phone apps, parents have instant access to school related information. The school app immediately links parents to a teacher's blog, lunch menus, the school's contact information (along with a link to call the school), and educational websites. Some schools are using their existing website as the springboard

for developing these useful applications, which can encourage better parental involvement (National School Public Relations Association, 2011). Although the app is typically seen as a convenient source for obtaining information, it can be also used to elicit two-way communication. The school can elicit communications by sending out notifications to parents who download the app. The school app can bring forth two-way communication using surveys, rating prompts, reviews, direct links to email address, and a contact us button which automatically calls the school.

**Affordances and constraints.** The benefits of a school app include notifications features that allow schools to send out important information as a pop-up notification. Parents are able to access the notification at any time and at any place. A limitation to using the school app as a communication tool includes access and equity. Parents who do not own a Smartphone would not have access to the school app.

### **Conclusion**

Communication between schools and families is essential for building trusting relationships that foster family engagement (Rogers & Wright, 2007; Young, 1999; & Waller & Waller, 1998). With the advancement of terminology and practices relating to family engagement, there must also be a change in administrative approaches to achieving full partnerships. For school leaders, the ability to create and implement an effective family engagement model is an essential component of increasing student achievement in the school. School leaders must use research, such as the Hoover-Dempsey and Sandler (1995) model, which suggests that parents' positive perceptions of invitations to involvement cultivate active parent participation in schools. While the researcher drew upon this literature to develop the measures of parent involvement, this

study focused only on the final motivation for involvement, addressing parent perceptions of general invitations from the school to become engaged in the education process. The suggestions from this model indicate that parents' perceptions of school inform their decision to get involved, which ultimately impacts academic achievement. Furthermore, this model suggests that if parents perceive invitations for involvement from the school and sense a welcoming environment at the school parents will be more likely to engage in the education process. Furthermore, technology has the potential to play an important role in influencing parents' decisions regarding their engagement. This study explored how technology tools could be used to promote two-way communication that impacts parents' perceptions of involvement. The study intended to improve communication strategies used at the school to increase parental engagement.



## **CHAPTER 3**

### **METHODS**

#### **Introduction**

For school leaders, the ability to create and implement an effective family engagement model is an essential element to increase student achievement in the school. At Blythe Elementary family engagement had been on the decline. The purpose of this action research study was to use emerging technology tools to increase school-to-home communication and to determine which emerging technologies facilitate better school-home communication and family engagement and to specifically improve the strategies used at Blythe. The following questions guide this study: What happens when Title I administrators implement emerging technologies to facilitate better school-home communications in order to improve family engagement? More specifically this study seeks to answer the following questions:

1. What are the affordances and constraints to using these emerging technologies to increase family engagement in a Title I school?
2. Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?

3. What impact does the use of emerging technologies to promote family engagement have on family members' attendance at school events?
4. What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?

In order to explore multiple aspects of parental perceptions and family engagement, a mixed methods approach was used. This chapter provides an overview of the research design. First, a brief description of the participants and context is included. Next, a description of the overall design of the mixed methods study which consists of two parts: Phase 1, a Quantitative Cycle and Phase 2, a Qualitative Cycle. Finally, an outline of the procedures used to collect the data and an explanation of the methods incorporated in the data analysis are provided.

## **Research Design**

### **Action Research**

Action research can best be thought of as continued, disciplined inquiry to inform and improve practice (Schmuck, 2009). Action research is a self-reflective examination, undertaken by active participants in order to improve practices, their understanding of those practices, and the environment in which those practices are carried out (Lewin & Lucking, 2008). Since action research is initiated to solve an immediate problem through a reflective process of problem solving, this research design is useful in a school setting. In this study, one of the goals from Blythe's school strategic plan was to increase family engagement. The Title I program requirements also included a focus on building the school's and parents' capacity for strong family engagement. In an effort to improve upon

the existing parental engagement capacity, it was necessary to reflect on the effectiveness of existing strategies.

This study used the model for action research projects devised by Glanz et al. (1988). The six steps used in an action research project were: 1) focus selection; 2) data collection; 3) interpretation and analysis of the data; 4) action implemented; 5) reflection; and 6) continuations with modifications. Kurt Lewin described action research as “a spiral process of data collection to determine goals, action to implement goals, and assessment of the result of the intervention” (Bargal, 2006, p. 369). As research exposes and continues the inquiry, new decisions are made based on the previous findings of research. The research spiraling process proves valuable for participants through their own development. In action research, data collection methods range from conventional quantitative and qualitative approaches to ethnographic storytelling and autobiography (Manfra & Bullock, 2014). Since the goal of action research is to effect desired change in order to generate knowledge and empower stakeholders, both qualitative and quantitative measures were employed in this study. The research design makes use of mixed methods and the six step format in Glanz et al. (1988). In Chapter One the focus and reasons for this study are articulated. In the following sections, the mixed methods framework, the participants, the data collection and analysis methods as well as the intervention cycle, and the tools are described.

### **Mixed Methods**

According to Larkin, Begley, and Devane (2014), the mixed methods approach has the potential to explore contextual understandings that require multiple perspectives. Mixed methods research combines quantitative and qualitative methods in the same

research inquiry. This research method uses quantitative and qualitative research methods, either concurrently (independent of each other) or sequentially (findings from one method inform the other), to understand a phenomenon of interest (Venkatesh, Brown, & Bala, 2013). During this study, a sequential design was used. Parent Communication Surveys (pre and post) were used to collect quantitative data. This data was then analyzed and used to inform the qualitative data collected through focus groups. The data sources used were specifically created to answer the research questions and are listed in Table 1.

Creswell and Clark (2007) suggested four major types of mixed methods designs: (a) *triangulation*, which merges complementary qualitative and quantitative data to understand a research problem; (b) *embedded*, which uses either qualitative or quantitative data to answer a research question within a largely quantitative or qualitative study; (c) *explanatory*, which uses qualitative data to help explain or elaborate quantitative results; and (d) *exploratory*, which involves the collection of quantitative data to test and explain a relationship found in qualitative data or vice versa. The exploratory design of mixed methods was used to allow qualitative data to explain significant results from the quantitative data (Creswell & Clark, 2007). The key characteristic of this mixed methods research is the sequential combination of quantitative and qualitative methods within a single research inquiry. For this study, the types of data, the timing of collection, and which parties collected the data are detailed in Table 2.

Table 1

*Theoretical Framework, Research Question and Instrument Alignment*

Research Question	Theoretical Framework	Component of Theoretical Framework	Instrument
Overarching Question: What happens when Title I administrators implement emerging technologies to facilitate school-home communications in order to promote family engagement?	Epstein's Parental Involvement Framework	Communication	Administration Communication Log
	Epstein's Overlapping Spheres of Influence	Family and School Partnerships	Parent Communication Survey- 6a, 6b, 6c, 6d, 6g, 6h, 7h, 14f, 14g
	Epstein's Overlapping Spheres of Influence	Family and School Partnerships	Focus Group- 3, 9, 22, 24
1. What are the affordance and constraints to using these emerging technologies to promote family engagement in a Title I school?	Epstein's Overlapping Spheres of Influence	Family and School Partnerships	Focus Group- 5, 10, 18, 19, 20, 21, 22, 23
2. Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?	Epstein's Parental Involvement Framework	Communication	Parent Communication Survey- 6b, 6c, 6d, 6f, 7e, 8, 13, 14
			Focus Group- 2, 10, 12, 13, 14, 16, 20, 21
			PTA Questionnaire- 5, 9, 13, 18, 23, 28
3. What impact does the use of emerging technologies to promote family engagement have on family members' attendance at school events?	Hoover-Dempsey and Sandler Model	Perceptions of Invitations	Attendance Logs
4. What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?	Hoover-Dempsey and Sandler Model	Perceptions of Invitations	Parent Communication Survey- 6a, 6e, 6g, 6h, 7f
			Focus Group- 4, 8
			PTA Questionnaire- 29

Table 2

*Data Collection*

When was the data collected?	What kind of data was collected?	Who collected the data?
February 20-27	Parent Communication Survey- Pre (quantitative)	Homeroom teachers distributed surveys.  Students brought the parent survey to the office and placed it in a box
February	Administration Communication Log (qualitative)	Administration
March	Administration Communication Log (qualitative)	Administration
April	Administration Communication Log (qualitative)	Administration
April 28 8:00 am & 5:00 pm	Focus Group in English (qualitative)	The researcher administered the focus groups, audio recorded, and collected hand written notes.
April 29 8:00 am	Focus Group in Spanish (qualitative)	The researcher administered the focus groups, audio recorded, and collected hand written notes
May 11-15	Parent Survey- Post (quantitative)	Homeroom teachers distributed surveys Students brought the parent survey to the office and placed it in a box

The mixed methods data analysis process was broken down into three rounds. Each round of analysis was used in conjunction with previous rounds in order to guide the study. Table 3 shows the breakdown of each round.

Table 3

*Rounds of the Data Analysis Process*


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Round 1
<ul style="list-style-type: none"> <li>• Analyzed Parent Communication Pre Survey (qualitative data analysis, use data to guide Focus Group questions)</li> <li>• Analyzed Administrative Communication Log (qualitative data analysis, use data to guide Focus Group questions)</li> <li>• Analyzed PTA Questionnaire (quantitative data analysis, use data to guide Focus Group Questions)</li> </ul>
Round 2 (all Round 1 material was used to analyze Round 2 data)
<ul style="list-style-type: none"> <li>• Analyzed Administrative Communication Log (qualitative data analysis, use data to guide Focus Group questions)</li> </ul>
Round 3 (all Round 1 & 2 data was used to analyze Round 3 data)
<ul style="list-style-type: none"> <li>• Analyzed Focus Groups (qualitative data analysis, was used to answer research questions)</li> <li>• Analyzed Parent Communication Post Survey (qualitative data analysis, was used to answer research questions)</li> </ul>

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**Description of Population**

The participants in this study fell into one of two categories. The first category encompassed parents or guardians of students at Blythe who completed the Parent Communication Survey. The second category consisted of staff member participants and included the assistant principal and school clerk. The assistant principal scheduled the deployment of technology tools to communicate efficiently with the goal of impacting parental perceptions and thereby increasing family engagement.

Blythe Elementary was a small school consisting of 430 students, 2 administrators, 47 certified staff members, and 28 classified staff members. Teachers and administrators at Blythe Elementary school have noted the continued decline of family

engagement and a drop in student achievement over the last few years. This has been measured by a decrease in the level of participation and attendance of school events.

Blythe was identified as being a Title 1 elementary school because there was greater than 90% of students receiving free or reduced lunch. The majority of students reside in four apartment complexes. Each of these complexes zoned for Blythe are more than 4 miles away from the school and are located on busy roads, making walking to school an unsafe option. One-third of the population were ESOL students in predominately Spanish-speaking homes. Approximately 60% of the population was composed of African American students. The remaining students were composed of a mixture of Caucasian and students classified as Other. Blythe has a transiency rate of 64%, which is a typical characteristic of a Title I school.

**Role of the researcher.** The role of the researcher was to research, collect, and analyze data. The researcher was the primary collector and interpreter of data. The researcher served also served as the assistant principal at Blythe for two years prior to the study being conducted and continued to do so throughout the year of data collection for this body of work. The assistant principal/researcher truly understood the issue at hand but that allowed for the researcher to advocate for a particular issue (Yin, 2009). It is important for all researchers involved in a study to demonstrate that their position does not bias the study in any way (Marshall & Rossman, 2011). Although it is impossible to eliminate the researcher's preconceived theories, beliefs, and perceptual lens, it is imperative that the researcher avoids the negative consequences of these biases (Maxwell, 2013). The following strategies were implemented to reduce the impact of researcher bias: triangulation of data and methods, member checks, peer review, and



researcher reflexivity (Merriam, 2009). Throughout the course of this study, the researcher kept a journal where written memos that included detailed notes about data collection and data analysis were recorded. These journal entries involved aspects which were relevant to this study and had a minimum of one entry per week. This journal assisted the researcher in keeping thoughts from the study in context while not losing any relevant information throughout the study. To ensure internal validity, the raw data were reviewed by an expert in the field and assessed on whether the findings were plausible based on the data. Additionally a colleague reviewed the coded segments along with the researchers' code book for inter-rater reliability.

Because the researcher was the assistant principal in this study, she took on a participant-observer role (Creswell, 2014). As the researcher, the focus was on the implementation of the study-design, the collection and analysis of data, and on the interpretation of the data. As the assistant principal, the researcher's focus was on improving communications between the school and home. The activities of the researcher and assistant principal included phone calls, school website updates, scheduling of electronic communications, and face-to-face conversations with parents to build relationships.

### **Phase One: Quantitative**

#### **Sampling**

The G\*Power calculator was used to calculate the sample size and power needed for the study (Faul, Erdfelder, Buchner, & Lang, 2009). Assuming a 2-tailed paired samples t-test with an effect size of 0.5 (medium), a significance level of  $p = 0.05$ , and a power = 0.80, a sample size of 204 would be needed. I decided that acquiring a sample

size of 300 for the pre and post Parent Communication Survey would account for attrition as well as allow for an adequate sample to determine effect size. The pre-Parent Communication Survey (Appendix A), along with consent for participation, was sent to the parents/guardians of 293 students. Table 4 shows the decision criteria used to determine which parents received the Parent Communication Survey.

Table 4

*Decision Criteria for Participation in Parent Communication Survey*

Breakdown of Eliminations	Number of Students/Families
Total Enrollment at Blythe	435
Students Enrolled as of August, 2014 (Starting Pool)	397
Number of Families at Blythe (Final Pool After Sibling Removal)	293

Of the 293 parents/guardians who received the survey, 101 participants (34%) responded with a completed survey and signed consent. The post-Parent Communication Survey (Appendix B) was sent to the 101 parents who completed the pre-Parent Communication Survey. Of those 101 parents/guardians, 51 (50%) chose to participate. The target sample size of 204 was not met. Due to the limitation, all surveys that were completed and returned were included in the study, and convenience sampling was used. Convenience sampling is the most widely used of all sampling techniques, but researchers should generalize results with extreme caution (Merriam, 2009). As noted in Table 5, the convenience sample demographics were consistent with the population demographics to some degree.

Table 5

*Comparison of Sample Demographics to Population Demographics*

Demographics of Students	Parent Communication Survey (with Pre and Post Results)	Ideal Purpose Sample %
African American	41%	60%
Caucasian/Other	16%	10%
Hispanic	43%	30%

The response rate by language for the Parent Communication Surveys is detailed below in Table 6.

Table 6

*Survey Language Response Rates*

Language	Pre-Parent Communication Survey		Post-Parent Communication Survey	
	Sent	Returned (n, %)	Sent	Returned (n, %)
English	215	n=67, 31%	67	n=29, 43%
Spanish	54	n= 29, 54%	29	n=21, 72%
Portuguese	24	n=8, 33%	8	n=1, 13%

**Instruments**

***Parent communication survey.*** A survey was used to collect responses and make generalizations from a sample group to make inferences about a larger population concerning various attitudes, characteristics, and behaviors (Creswell, 2003). A sample survey was the ideal type of data collection procedure for the first part of this study so

that the administration team could assess their current practices and obtain a baseline about parents' perceptions.

The Parent Communication Survey was adapted from "The Parent Survey of Family and Community Involvement in the Elementary and Middle Grades" (Epstein & Sheldon, 2007). The original survey consisted of 80 items to assess family attitudes about the school, to assess family practices of involvement in their child's education, to assess school practices to inform and involve families, and to assess information desired by families about children, classes, schools, community services, homework patterns, family background and experiences. Some components of the original survey were either deleted or modified to meet the needs of Blythe Elementary (see Appendix H). A section for open-ended comments was included as well. The Parent Communication Survey had an estimated completion time of 15-20 minutes and was written at a 6.3 Flesch-Kincaid grade level such that most adults would be able to comprehend and complete it. The survey was translated from English into Spanish and Portuguese, which are the languages spoken by the parents participating in this study. In order to determine the validity of the altered Parent Communication Survey, content validity was used. The researcher's dissertation committee members, who have content knowledge in this area, reviewed the items to determine how appropriate they were in answering the study's research questions.

Parent Communication Surveys (Appendix A & Appendix B) were given to classroom teachers for distribution to the selected parents via their students. All surveys were placed in a legal size envelope addressed to parents of the child. In February the pre-Parent Communication Survey was provided to each family who had a student

enrolled at Blythe Elementary School as of August, 2014 who met the selection criteria outlined in Table 4. Parents were asked to complete and return the survey to the school within two-weeks. Students returned completed surveys to a box in the front office. 101 completed pre-surveys were returned, and seven more surveys were returned in which the parents declined to participate.

The post-Parent Communication survey was sent to all parents who completed the pre-survey and whose students were still enrolled as of May, 2015. It was distributed via classroom teachers. The post-Parent Communication Survey was sent to the 101 parents who completed the pre-Parent Communication Survey, and 51 parents chose to participate in the post-Parent Communication Survey. Table 7 and 8 reports the Parent Communication Survey return rate for both the pre- and post-survey.

Table 7

*Pre-Survey Return Rate by Date*

Pre- Parent Communication Survey Return Rate by Date		
Date	# Returned	# Complete
2/23/15	41	31
*2/24/15- 2/26/15	0	0
2/27/15	37	28
3/3/15	14	10
3/4/15	8	3
3/5/15	15	12
3/6/15	2	2
3/9/15	15	15
Totals	132	101

*\*Note: snow days, students were out of school*

Table 8

*Post-Survey Return Rate by Date*

Post- Parent Communication Survey Return Rate by Date		
Date	# Returned	# Complete
5/11/15	12	7
5/12/15	6	2
5/13/15	7	3
5/14/15	4	2
5/15/15	2	1
5/19/15	29	27
5/20/15	15	2
5/21/15	7	7
Totals	82	51

**Reliability**

Reliability refers to the extent to which research findings can be replicated (Merriam, 2009). The Parent Communication Survey used a Likert-type scale; therefore, the Cronbach alpha formula was used to report reliability in terms of internal consistency of scores on items. The original instrument was implemented using a research sample of 243 teachers and 2,115 parents in 15 inner-city elementary and middle schools in Baltimore, Maryland. Alpha ( $\alpha$ )parents scales ranged .44 to .91, resulting in an estimated reliability mean of  $\alpha = .81$ . In addition, the survey also produced low standard errors of measurement. The original survey was modified to fit the needs of the study, and

Cronbach's alpha ( $\alpha$ ) supported internal consistency among a group of items combined to form a single scale. Two groups of items were measured: the communications and perceptions section that includes twenty-two questions, and the barriers section that includes eight questions. Those groupings established how well the different items complement each other in their measurement of different aspects of the same variable. The alpha for the adapted Parent Communication Survey scales ranged from .56 to .94, resulting in an estimated reliability mean of  $\alpha = 0.81$ .

The researcher did not have a large enough sample to perform a factor analysis. Survey items addressing parent engagement were grouped into 3 different scales: Internet Availability, Communications and Perceptions, and Barriers to Involvement. A representative sample item for each of the 3 scales is provided in Table 9.

Table 9

*Representative Survey Items from Parent Communication Survey*

Scale	Representative Item
Internet Availability	Does your family have an Internet connected computer or tablet?
Communication and Perceptions	My child's school uses technology to tell me what skills my child needs to learn in Math.
Barriers to Involvement	I do not have time due to work conflicts.

Cronbach's alpha measure of internal consistency was calculated to check for the reliability of the survey sections (see Table 10). Generally, an alpha value greater than 0.7 is an indicator of a reliable instrument. The Cronbach's alpha for Communication and Perceptions (0.84), and Barriers to Being Involved (0.82) proved to be reliable, while the Internet Availability (0.59) was semi-reliable. Question 8 on the Parent Communication



Survey had the lowest reliability (0.56) score, suggesting that items included on that scale are not measuring the same thing and thus should be reevaluated for future studies.

Table 10

*Instrument Reliability Chart*

Factor Scales	Survey Items	Breakdown of Questions	Cronbach Alpha	
			Pre	Post
Internet Availability	Part II. Internet Availability Information	1-5	0.3357	0.5999
Communication and Perceptions	Part III. Communication and Perceptions	6	0.8874	0.9436
		7	0.9119	0.9490
		8	0.5640	0.7758
		9	0.7072	0.8272
		10	0.7827	0.7145
Barriers to being Involved	14	14	0.8706	0.8288

To determine survey reliability an item analysis was ran to determine if the questions vary enough to measure different facets of the characteristic, yet still relate to the same characteristic (Litwin, 1995). An item analysis helped the researcher evaluate the correlation of related survey items with only a few statistics. Cronbach's alpha measure indicates how well the set of items measured a single characteristic. The parts

within each question were remarkably consistent. One question caused the researcher to review a component to determine if that single component was problematic. On question eight in the post analysis, “Do you believe that using the following communication tools keeps you better informed about school programs and the success of your student(s)?”, the portion on text messages was very influential. If that particular portion was omitted from the overall question 8 (post), the reliability drops from 0.78 to 0.52.

### **Data Analysis**

Parent Communication Surveys were used to collect quantitative data regarding parents’ perceptions of the school, use of technology tools, and family demographics. The survey was used in a pre- and post-design to determine the impact that implementation of emerging technology tools had on parents’ perceptions of invitation. This survey obtained a measurement before implementing the technology tools (pre) and after implementing tools (post) after so that comparisons could be made. An ID was assigned to families in order to collect and link identifying information (participants who have pre and post test results). Only the researcher had access to identifiers including the responses of individual subjects and securely handled the password protected file which could link individual participants with their responses. This document was stored separately from data documents to prevent anyone outside of the project from connecting individual subjects with their responses.

Data was analyzed using a paired sample t-test. The function of a paired sample t-test is to statistically validate the difference in the means of two or more groups on a dependent variable (Howell, 2007). Surveys were used in this study to glean information from data and analyze in order to make generalizations from the study group (Glesne,

2006). Survey data were used to answer the overarching research question: What happens when Title I administrators implement emerging technologies to facilitate better school-home communications in order to improve family engagement? and the sub question: What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?

### **Validity through Triangulation**

According to Merriam (2009) "Probably the most well-known strategy to shore up the internal validity of a study is what is known as triangulation" (p. 233).

Triangulation involves using multiple methods of data collection and allows for comparisons and cross-checking of data. For this study, data triangulation occurred through the collection of data from multiple subjects, and methodological triangulation was employed via the use of multiple collection methods including interviews, surveys, and field notes. Surveys, interview data, and documents were the data sources analyzed, and each contributed to the findings elucidated from this research.

### **Intervention Cycle**

The intervention cycle began immediately after receiving the completed pre-Parent Communication Surveys. The individual responses from the Parent Communication Surveys, sixty-four per participant, were entered into an excel spreadsheet. The researcher looked for patterns in the data to determine an action plan for strategically implementing technology tools to increase family engagement. First, in order to understand access capabilities of Blythe families, the question regarding Internet availability on cell phones was analyzed. Ninety-three (out of 101) respondents indicated they had Internet access on a cell phone, seven did not, and one person did not answer

this question. At this point, it was noted that the parents had the accessibility of using technology tools to communicate.

Our next plan of action was to determine which tools parents used and what barriers prevented them from being actively engaged. Just over 70% of the parents surveyed noted they had used the school app fewer than three times; in addition, only 11% of parents indicated they had used Parent Vue more than twice, as noted in Table 11. Pre-survey data was used to assess parents' knowledge of using technology tools. Our pre-survey revealed 21% of the parents did not know how to use the tools. A look back at the research on family engagement also guided the intervention cycle.

These initial results allowed Blythe to focus on those two tools with a multi-pronged approach; with informal questioning in order to acquire more information from parents and by setting up informational/training sessions. A training session was held in March to communicate information about the school app, to teach parents the capabilities of the app, and to show parents how to download it. In April an additional session was held to share the Parent Vue system, where information was provided on how to gain access, the benefits of using Parent Vue, and troubleshooting tips for error messages.

When reviewing the data the researcher discovered that language was a barrier to families being involved. This led to the understanding that a dedicated amount of time should be spent on overcoming that obstacle. Language was noted as being a barrier to becoming involved in their child's education by 22% of respondents. Due to this data, all phone calls, flyers, and emails sent home were translated into Spanish and Portuguese.

Table 11

*Responses to Pre-Parent Communication Survey on Use of Tools*

	Email	Phone Call	Text	Paper	Parent Vue	App	Website
Never	32.7%	19.8%	20.8%	6.9%	20.8%	46.5%	23.8%
1-2 times	29.7%	23.8%	23.8%	23.8%	12.9%	23.8%	35.6%
3-4 times	13.9%	19.8%	18.8%	25.7%	2%	5%	12.9%
5 or more times	14.9%	28.7%	23.8%	32.7%	8.9%	5.9%	12.9%
Did not answer	8.9%	7.9%	12.9%	10.9%	10.9%	18.8%	19.8%

In addition to concentrating on the tools with little use and addressing the language barrier at Blythe, a systematic approach to communicating with all parents was put in place. The following were actions taken to systematically communicate:

- Promoted all PTA events, spirit nights, and important dates on the school website at least 2 weeks in advance (in two formats, as a post to the blog and on the calendar on the website).
- Used Blackboard Connect to promote all school events by email, text, and phone call message.
- Promoted the use of Student Vue for our 4<sup>th</sup> and 5<sup>th</sup> Grade parents during PTA events and any school gatherings.
- Promoted the use of the new Blythe App and sent notifications about important dates and events to all subscribers.

- Invited parents to attend quarterly Math Mania sessions. During Math Mania parents learned about ways to help their child with the new math standards and went into their child's classroom during a math lesson.
- Provided parents with general knowledge of expected performance levels in Math and Reading. This prompted conversational engagement between the classroom teacher and parents regarding their student's academic level.
- Offered Technology Tools sessions (based on needs assessment data collected) to assist parents in becoming familiar with the communication tools being used.
- Asked parents to volunteer at the school through the use of [www.signupgenius.com](http://www.signupgenius.com) (an online sign up format).

The final component of the intervention cycle was the Administration Communication Log. The Administration Communication Log was used to analyze the types of messages sent home, for both the subject matter of the communication and to determine which of Epstein's six types of involvement the communication aligned with. This data was then used to inform future communication decisions. Data was collected from the following sources: Blackboard Connect, Manage App, my email account, my text now account, and the school's website. This data was used to help administrators determine which types of technology based sessions were needed at future PTA events, what types of questions needed to be asked at the focus group meetings, and which types of technology tools aided in two-way communication at Blythe. The collected data showed that parents consistently used technology tools with high-delivery rate, two-way communication; follow-focus group questions were created to determine why these tools were more convenient. Follow-up questions during the focus groups addressed these

preliminary findings. The collected data furthermore demonstrated that minimal delivery rate tools with limited two-way communication were not highly used, indicating either a need for training support or that these tools were not optimal for parents at Blythe.

Technology sessions were scheduled, as needed, based on data collected.

### **Phase Two: Qualitative**

#### **Sampling**

The nine individuals who agreed to participate in the focus group were parents of students who attended Blythe Elementary School. The researcher originally intended on using stratified purposeful sampling—a mini-reproduction of the population. Before sampling, the population was divided into characteristics of importance for the research. In this particular study the population was divided based on the student's ethnicity. Since 60% of the population is African American, 30% Hispanic and 10% Caucasian or Other than the ideal sample from this population would contain similar ethnic proportions. Unfortunately the researcher was unable to obtain enough participation to implement stratified sampling, convenience sampling was used in order to include all participant responses. A convenience sample Table 12 shows the ethnic proportions of our stratified random sample of 9 individuals.

Table 12

*Demographics of Participants for the Focus Groups*

	Indicated Interest in Participating	Focus Group Participants	Blythe Demographics
African American	51%	45%	60%
Caucasian or Other	18%	22%	10%
Hispanic	31%	33%	30%

Parents indicated interest in participating in a focus group session by checking a box on the Parent Communication Survey. Additionally, parents who indicated interest in any other fashion, such as by phone call or email, were also documented and recruited. These parents or guardians who expressed interest in participating (n=33) in a focus group session were contacted by the researcher by means of a telephone call to schedule their preferred time. Of the 33 people who expressed interest in participating in a focus group, 26 were spoken to directly by phone, while a message was left with the remaining seven. Participants were initially given four date and time options to select from. There was a variety of morning, afternoon and evening sessions with scheduling options included in Table 13. Participants indicated which session they would like to attend. Flyers in English and Spanish (Appendix C) were sent home with students of participants two days before their scheduled session to remind parents about their chosen focus group session.

After the first four sessions were conducted the researcher initiated other recruitment strategies to increase the number of participants. Snowball sampling, a



technique for finding research subjects, where one subject gives the researcher the name of another subject, who in turn provides the name of a third, and so on, was used (Vogt, 1999). This proved to be an unsuccessful strategy during this study with zero participants. The researcher also sent out a mass email with an office 365 document attachment. This document provided the email recipients with the opportunity to sign up for one of the eight scheduled focus groups unfortunately, this approach yielded zero interested parents. Since a small number of parents indicated an interest in participating, all who interested participants were invited to attend.

Table 13

*Schedule of Focus Group Options*

English		Spanish	
Date & Time	<i># of participants</i>	Date & Time	<i># of participants</i>
4.28.15 8:00-9:00 a.m.	4	4.29.15 8:00-9:00 a.m.	2
4.28.15 5:00-6:00 p.m.	0	6.01.15 5:00-6:00 p.m.	0
5.06.15 1:00-2:00 p.m.	2	6.03.15 11:00-12:00 a.m.	0
6.01.15 10:00-11:00 a.m.	1		

According to Barnett (2002), determining how many focus groups are needed for a study is more difficult than establishing the number of participants per group. The number of focus group sessions conducted were mediated by factors such as the purpose and scale of the research, as well as the heterogeneity of the participants (Morgan, 1993). A diverse range of participants is likely to necessitate a large number of sessions (Wong,

2008). The researcher used common sense, financial resources and availability of participants as guiding principles. Another guideline was the concept of saturation (Cameron, 2005), which suggests that researchers continue conducting focus group sessions until they reach a point of saturation, in which there is repetition of themes and no new information is shared. Although there was limited participation in the focus groups, there was a point of saturation during this study in which there were repetition of themes and no new information shared.

Since focus group samples are usually small and purposively selected, they do not allow for generalization to larger populations (Khan, Anker, Patel, Barge, Sadhwani, & Kohle 1991). According to Khan et al., (1991), it is not appropriate to treat the findings from focus group discussions as though they were findings from quantitative research. While the focus-group discussion provided possible insights and explanations, the researcher did not assume the focus group discussions accurately represented the responses of the entire population. In order to combat the external validity or generalizability of focus group findings, a triangulation of data collection methods was applied in this study. While the focus group methodology is burdened with many constraints, Myers (1998) suggests that these constraints “do not invalidate focus group findings; in fact, it is these constraints that make them practicable and interpretable” (as cited in Sagoe, 2012, p. 8).

### **Instrument**

**Focus group questions.** The focus group questions were created by aligning the theoretical frameworks and the instruments used for data collection. Questions were purposefully created for the focus groups to get more in depth answers than could be

obtained on the Parent Communication Survey and to answer the research questions in this study. In particular the questions asked during the focus group sessions included discussions on the affordances and constraints to using the selected technology tools, the parents' perceptions of invitations (which were difficult to fully understand on the Parent Communication Survey), and parents opinions and viewpoints of Blythe.

**PTA questionnaires.** The PTA questionnaire was the last instrument created in this study. It was designed to gather responses from a large number of participants to supplant the data collected during the focus groups. The PTA questionnaire asked for specifics on the number of times parents accessed the emerging technology tools, the affordances and constraints to using those tools, and which elements of the tools allows parents to feel the most informed.

### **Data Collection**

**Parent focus group.** A focus group is an in-depth group interview on a topic with a group of people who have knowledge of the topic (Merriam, 2009). Focus groups have the potential to generate data that may not surface in individual interviews or survey research. These focus group discussions are often used as a complement to a quantitative study, helping to address such questions such as “why?” or “how?”. In this study, focus group discussions were used in conjunction with quantitative methods which resulted in a much greater value than either method used alone.

Focus groups have increasingly gained popularity as a qualitative research method (Sagoe, 2012). There are many reasons for the efficiency and attractiveness of the focus group, which is described in this section. One major benefit of focus groups is the authority role of the moderator in guiding and ensure that conversations stay on track

(Sagoe, 2012). The participants provide information around topics specified by the researcher. During this study the face-to-face involvement encouraged engagement by participants without allowing one individual to control the discussion and permitted the moderator to accurately assess true participant involvement. According to Kitzinger (1995), an additional beneficial feature of focus groups is interaction amongst participants, which allows participants to highlight their world view, the language they use about an issue and their values and beliefs about a situation. Focus groups serve both the researcher and the participant simultaneously (Sagoe, 2012). Participant benefits include the opportunity to be involved in decision making processes (Race, Hotch, & Parker, 1994), the opportunity to be valued as experts, and the opportunity to work collaboratively with the researcher (Goss & Leinbach, 1996), which can be empowering for many participants. Race et al., (1994) describes that focus group participants feel included in a “forum for change,” and our participants at Blythe articulated similar sentiments both during and after focus group sessions.

Another major strength of focus groups is the dynamic nature of the methodology (Sagoe, 2012). During focus group sessions the researcher modified topics that were covered in prior sessions before fieldwork was complete. This kind of iterative improvement is not possible with surveys, interviews and other quantitative research methods, as they are conducted using structured questionnaires administered at one point in time and are not changed during the data gathering process.

Focus groups were included in this study with the understanding that the data collected would not be collected in isolation and that the literature on strengthening focus groups would guide the implementation. Adequate planning was put in place to improve

the validity and reliability of the focus group component of this research. Research has indicated that neutral locations can be helpful for avoiding either negative or positive associations with a particular site or building (Powell & Single, 1996). For this reason, the researcher chose a venue that was convenient and neutral to participants and tried to provide a relaxed environment to promote openness and a willingness to talk, two factors that are vital to a successful focus group (Barnett, 2002). In addition, prospective participants were reminded two days before their scheduled focus group meeting to ensure participation. Participants were informed about how long the group discussion would last and were assured that the time frame would be adhered to. Telling people in advance of the ending time is likely to increase commitment and willingness to participate (Barnett, 2002).

The four focus groups sessions were designed in such a way that a broad range of information was obtained. During this study the goal was to identify and explore people's reactions to specific issues by holding a focus group. Each of the focus groups had between two and six participants. Pre-designed focus group questions (Appendix D) were used as a discussion guide for the focus groups. Semi-structured, open-ended questions were used to guide the interview with a mixture of both more structured and less structured interview questions. The questions used were in random order, and all questions were used flexibly. The questions, which shed light on the various components of parental involvement identified in Epstein's model, pertained to the participants' perceptions of the school, the communication tools they used and preferred, and characteristics of communication tools that made them more or less desirable.

There were seven parent focus groups scheduled: four in English and three in Spanish. Of those seven focus groups scheduled only four were held, three in English and one in Spanish. There were zero participants at four of the scheduled focus group sessions; therefore, they were not conducted. The focus group session held in Spanish was translated by the school's parent liaison who was familiar with the participants. All focus groups were facilitated by the researcher. The focus groups were held in the school's parent resource room, a naturally occurring setting familiar to the participants (Bogden & Bilken, 2007). Refreshments were made available for parents to enjoy before and during the session.

Focus group participants were asked to read and sign the Consent for Participation Form (Appendix E) and complete a short questionnaire (Appendix F) to acquire demographic information about the participants. The duration of each focus group was around one hour. The dialogue was recorded via an auditory application, and handwritten notes were documented by an individual who did not participate in the focus group discussion. All participants were assured orally and in writing that their identity would remain confidential. When the focus group conversations were transcribed, *parents were given a number to maintain confidentiality. Each parent answered the question by first stating their assigned confidential number.* The digital audio recordings were transcribed for analysis. Qualitative reports are typically rich with participants' experiences and participants' own words, which provides the researcher with an understanding of the problem (Hoepfl, 1997). Verbatim transcriptions of recorded interviews were used to provide the best base for analysis. Participants were provided with transcripts of each interview for their review, additions or clarifications, and approval.

Parents/guardians were offered incentives for participating in the focus groups. During each focus group session there was a drawing for two gift cards to local places. Participants were aware of the incentive for attending, as this was mentioned on the Parent Communication Survey requesting participation and on the reminder letter sent home to parents. Focus groups are unique from other data gathering processes in terms of the investment that must be made by the individual (Stewart, Shamdasani, & Rook, 2007). From a realistic aspect, it would be next to impossible to conduct focus groups without incentives in various situations. The primary function of the incentive was to get the participants to show up for the focus group.

**PTA questionnaires.** Parents were asked to complete a quick, 24 item questionnaire (Appendix G) when they attended a PTA event that was scheduled during the intervention cycle. There were three PTA events during the intervention cycle where questionnaires were collected. During the first event, seven questionnaires were collected; at the second event, two questionnaires were collected. The researcher had a table located in the front lobby to elicit participation. Once parents completed the PTA questionnaire they entered into a raffle for a gift card. The questions asked were used to determine which type of technology tools the parents were using. The questionnaires also gave greater detail about the factors of ease and limitations to using these emerging technology tools.

**Artifacts.**

***Administration communication log.*** Administration documented a descriptive and analytical set of field notes that kept a record of school-home and home-school communications. These records included the date of correspondence, the subject matter,

the delivery options and, if possible, the delivery rate and the response rate. Some technology tools that were used allowed for detailed information regarding the number of times the communication was opened or received. Data were collected from Blackboard Connect and Manage My App. This documentation helped address the overarching research question: What happens when Title I administrators implement emerging technologies to facilitate better school-home communications in order to improve family engagement? This document was compiled during the entire study from February to May. Items were recorded monthly on the communication log.

***Parent participation log.*** The researcher asked all attendees to sign in at the three scheduled events during the intervention cycle. The purpose of the parent participation log was to keep a record of the number of attendees. These records included the activity title, as well as the date of the event, and asked the attendee to indicate all of the ways that they were notified of the event. A sign in table for parents was located in the front lobby as attendees arrived at Blythe. Parents simply signed in and circled, from a list of all emerging technologies used at Blythe, the tools that were used to communicate about that particular event. Not all parents signed in at each event.

### **Data Analysis**

**Parent focus group.** Inductive thematic analysis, used in qualitative research, was used to gather data to build concepts in this study (Merriam, 2009). This method emphasizes organization and rich description of the data set. ATLAS.ti was used to store, sort, and retrieve qualitative data. This thematic analysis went beyond counting phrases or words in a text and identified implicit and explicit ideas within the data. The first phase in thematic analysis allowed the researcher to become familiar with the data. The



process of creating codes was both pre-set and open. Before beginning data collection and the coding process, the researcher began with an a priori list of pre-set codes. Note-taking was a crucial part at this stage in order to begin developing potential codes (Braun & Clarke, 2006). A pre-set typically has between 10 and 50 codes. The initial codes in this study (Figure 4) were derived from the conceptual framework, research questions, the researcher's prior knowledge of the subject matter and subject expertise. These start codes were recorded in a codebook along with a definition and example. The researcher used these initial codes during the coding process.

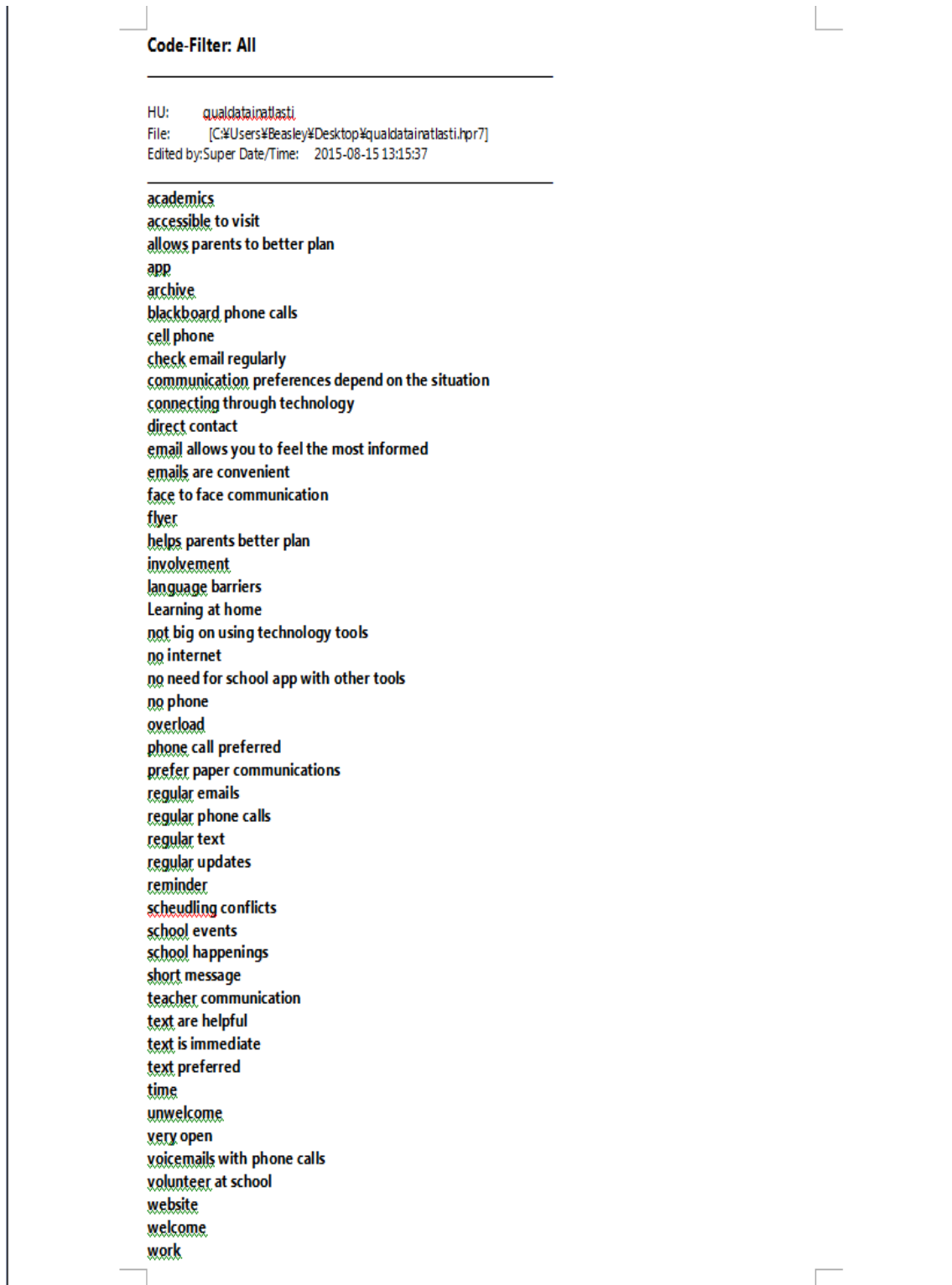


Figure 4. *Initial code set used.*

Data analyses commenced immediately after completion of the first set of interviews and was done in conjunction with data collection (Merriam, 2009). During the second phase, after the focus groups were conducted, the written form of the data was reviewed to create emergent codes. These emergent codes were those ideas and concepts that emerged from initial coding and were different than the pre-set codes. While reviewing the transcripts of the focus groups the researcher began to hand code and mark data that addressed the research questions. Notations about bits of data that were interesting, potentially relevant, or important to the study were made in the margins. All documents were hand coded before entering them into a data management and analysis system. This part of the coding process consisted of identifying segments or complete thoughts in the data set. These segments were units of data which were a potential answer or part of an answer to the research questions (Merriam, 2009). The researcher was uncertain about what was meaningful during this phase of the coding. As one unit of information was compared with other units of information, the reoccurring regularities in the data became meaningful (Merriam, 2009). This process began while reading the first interview transcript. The coding process evolved and was a cyclical process where codes emerged throughout the research process. Codes that persisted across more than one transcription were retained. This process of deriving meaning consisted of the researcher striving to refine codes by adding, subtracting, combining, or splitting potential codes. For example, the following codes were merged: *volunteering* and *volunteer at school* was merged into *volunteering*; *welcoming, makes me feel welcome* and *other families feel welcomed* were merged into *welcome*. Throughout the coding process, full and equal

attention was paid to each data item because that helped in the identification of unnoticed repeated patterns.

In order to facilitate the management and analysis of the data the researcher used ATLAS.ti to import primary documents. This program was designed specifically to support the qualitative researcher (Friese, 2012). ATLAS.ti provided the researcher with a platform to track notes, annotate quotes for analysis purposes and create codes based upon that analysis (Gagnon, 2014). Additionally, ATLAS.ti provided the researcher with an analytical and visualization tool to interpret the data collected.

During the next phase the researcher used pieces of data in ATLAS.ti to initiate the construction of the categories stage of analysis. Coding was the primary process for developing categories within the raw data by recognizing important moments in the data and encoding it prior to interpretation. Categories were renamed or become subcategories. Once a preliminary set of categories were derived from the data, the categories were then fleshed out and made more robust by searching through the data for relevant information. Notes written in the margins were reread and groups of comments and notes that seem to go together helped to establish new categories. Analytical coding was created from interpretation and reflection on the meaning of the data collected. This recursive process continued through all transcripts, keeping in mind prior established groupings and checking to see if they were present in the second set. A list of categories were reviewed and the researcher began to focus on broader patterns in the data and combined coded data with proposed categories. During the latter stage, the researcher avoided discarding categories even if they were initially insignificant. At this point the researcher searched for data that answered the research questions.

After final categories were reviewed, the researcher began the process of writing the final report. While writing the final report, categories that made meaningful contributions to answering the research questions were retained. The researcher presented the dialogue connected with each category through a thick, rich description of the results. The thematic analysis was used to convey the complex story of the data in a manner that convinced the reader of the validity. The write up of the report contained enough evidence that themes within the data were relevant to the data set. Extracts were included in the narrative to capture the full meaning of the points in analysis. Figure 5 details the iterative process of establishing, maintaining and creating new codes to analyze qualitative data from focus groups.

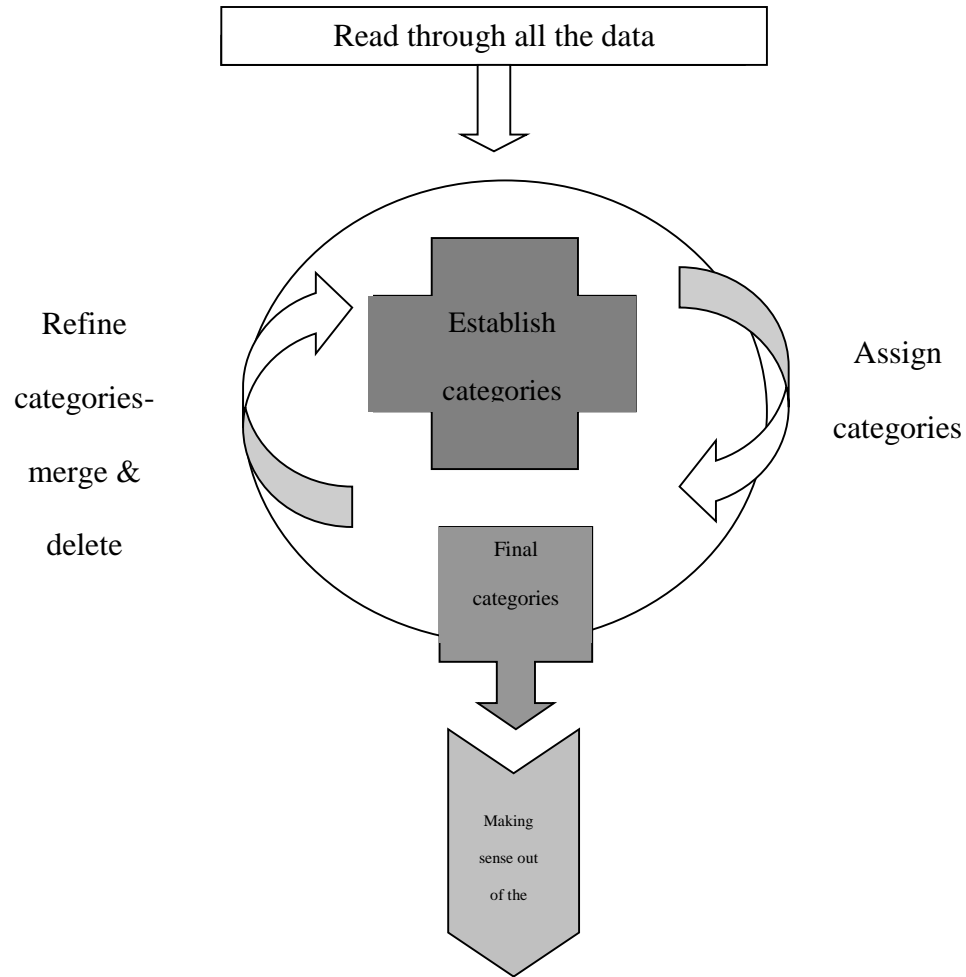


Figure 5. *Data Collection Flow Chart.*

**PTA questionnaire.** The data from the PTA Questionnaire was used to determine if parents were using the technology tools specifically to determine what makes the tools easy to use and what impeded the use of the tools. A set of codes emerged from reading and analyzing the data from the PTA Questionnaires. These emergent codes were those ideas, concepts, and relationships that came up in the data. In the researcher's journal, codes that persisted across more than one PTA Questionnaire were retained. Data analysis continued immediately after the first set of PTA Questionnaires were collected

and were analyzed in conjunction with data collection. This process continued through all PTA Questionnaires, while keeping in mind the list of groupings that were extracted from the focus groups and checking to see if they were present in this data set. The patterns and regularities become the categories into which succeeding items were sorted. The goal was to construct categories that captured some recurring pattern that span across the data sets. Data from the set that had a recurring pattern were noted. During this phase data was analyzed in conjunction with previously coded data to answer the research questions.

**Administration communication log.** The researcher recorded a descriptive and analytical set of field notes that kept a log of school-home communications. The Administration Communication Log was used to analyze the types of messages sent home, which included the subject matter of the communication and indicated which of Epstein's six types of involvement the communication aligned with. Using that data allowed for future communication decisions to be made based on the facts obtained. Data was collected from Blackboard Connect, Manage My App, the school website, and the researcher's email account and text now account. This data aided in administrators' decisions, such as, which types of technology based sessions were needed at future PTA events, what types of questions needed to be asked at the focus group meetings, and which types of technology tools aid in two-way communication at Blythe. The technology tools with the greatest delivery rate and two-way responses from parents were consistently used and focus group questions were asked to determine what makes those tools more convenient. The technology tools with minimal delivery rate and nominal two-way responses illustrated which tools parents needed support or training on, or

proved the compatibility of the selected tools with the parents at Blythe. Follow up questions during the focus groups addressed these preliminary findings.

**Parent participation log.** Data collected from the Parent Participation Log was analyzed on a monthly basis immediately after an event was held. The information gathered at each event included several data points: a total number of attendees at each event and data on how each attendee was notified of the event. The data was collected to determine if parents were receiving communications from all tools.

In reviewing the data collected it was noted that contact information was seldom up-to-date in our system based on parents not receiving all types of communications. A number of parents (24%) were missing important information, such as phone numbers or email addresses, because the parents had not updated their phone numbers or because their phone numbers were not put in the system when the student was registered. The researcher was able to verify that one student's mother registered him but did not include contact information for the dad. Whenever contact information was incorrect or missing the enrolling parent was asked to update their child's registration card to make those corrections or additions. The school clerk would then update the information in the system. The researcher also posted directions on how parents could edit their Blackboard Connect account on our school website. The researcher sent out an email, text, and app notification as well as called parents to get the message out regarding making those corrections.

### **Data Management**

An intentional, well-thought out plan to organize, analyze, and store data was important in this study due to the preponderance of data collected. For this study all



interviews were recorded using two devices. The primary recording instrument was the researcher's personal cell phone. The secondary recording instrument was the researcher's school-issued iPad. Having two recordings allowed for an extra measure of protection in case of recording failure. The audio recordings were stored on the cloud at Dropbox.com and on the recording devices. All files were stored in password protected areas to ensure confidentiality. Each participant was assigned a pseudonym as part of the study. The audio files were transcribed through a transcription service called Rev (www.rev.com). Rev has a high standard of criteria for transcription of data, such as 98% accuracy rate, highly confidential security procedures, and quality checks. All data were imported into ATLAS.ti for single source management and codification of the data.

**Trustworthiness.** According to Merriam (2009), "All research is concerned with producing valid and reliable knowledge in an ethical manner" (p. 209). Trustworthiness of a research study is important to evaluating its worth (Lincoln & Guba, 1985). It is impossible to completely eliminate the researcher's preconceived belief and alter the lens from which things are viewed so the researcher must acknowledge their positionality and implement strategies to reduce the impact of bias. In order to establish trustworthiness a researcher must establish credibility, transferability, dependability and conformability.

**Credibility.** Credibility is confidence in the truth of the findings. The trustworthiness of a qualitative study depends on the credibility of the researcher. The burden of producing a study that has been conducted and reported in an ethical manner lies with the individual investigator (Merriam, 2009). Sufficient time at the setting to learn and understand the culture at Blythe was obtained while serving as the researcher and assistant principal. The researcher spent adequate time observing different aspects of

the school's culture and building relationships with the community. Also, member checks took place throughout the data analysis process to ensure credibility. Copies of transcribed interviews were provided to the participants for their review and approval.

***Transferability.*** Transferability is showing that the findings are applicable in other contexts. According to Lincoln and Guba (1985), trustworthiness refers to the "truth value" of a study's findings or how accurately the investigator interpreted the participant's experiences. Rich, thick description, "an emic or insider's account" was used to enhance the possibility of the results being transferred to another setting (as cited in Merriam, 2009, p. 227). The goal of the researcher was to provide enough description so that the reader could determine if their situation matched the research, and whether the findings could be transferred.

***Dependability.*** Dependability shows that the findings are consistent and could be repeated. An external audit was conducted to ensure dependability. This study was examined by the researcher's committee members who were not part of the research process (Lincoln & Guba, 1985). Although that does not meet Lincoln and Guba's definition (1985) of an external audit, the committee's review led to additional data gathering and the development of stronger articulated findings through continuous feedback. The committee's review measured the sufficiency of the data and provided the feedback needed to make changes that would increase dependability. Merriam writes that external validity "is concerned with the extent to which the findings of one study can be applied to other situations" (Merriam, 2009, p. 223). Lincoln and Guba (1985) postulate that it is the investigator's responsibility to ensure that sufficient contextual information about the fieldwork sites is provided to enable the reader to make such a transfer (as cited

in Shenton, 2004). Contextual information about the school site was included in this study. Lincoln and Guba stress the close ties between credibility and dependability, arguing that a demonstration of the credibility goes some distance in ensuring dependability (Lincoln & Guba, 1985).

***Confirmability.*** Confirmability is the degree to which the findings of a study are shaped by the respondent, not by researcher bias, motivation, or interest (Lincoln & Guba, 1985). An audit trail was produced to show transparent description of the research steps taken throughout the entire study. These records were kept to identify exactly what was executed during the study. The audit trail, a method suggested by Lincoln and Guba in 1985, allowed for an outside researcher to authenticate the findings of a study by following the trail of the researcher (as cited in Merriam, 2009). The audit trail provides validity based on the researcher's ability to convincingly show the process of data collection. A trail of research methods was created so that the readers could judge the quality of the research based on the appropriateness of the methods employed. Raw data, such as field notes and documents (sign in sheets) were collected and included in the audit trail. Data reconstruction and synthesis products, including the structures of categories, findings and conclusions, as well as a final report tying the results to the literature review was recorded to show transparency.

Triangulation was also used to ensure conformability during this study. Triangulation involves using multiple data sources to ensure the account is comprehensive and well-developed. Using multiple methods helped facilitate a deeper understanding of this study. Methods triangulation was applied to check the consistency of findings by different data collection methods, of both the qualitative and quantitative

data. Triangulation of sources examined the consistency of different data sources from within the same method (focus group interviews, administration communication log, and parent participation log).

The four criteria proposed by Lincoln and Guba (1985) were considered in the pursuit of a trustworthy study (Shenton, 2004). The series of techniques used helped to ensure quality qualitative research. Although not every technique was used for each criteria, trustworthiness was established by using components of each criteria such as credibility, transferability, dependability, and confirmability.

### **Limitations**

The limitations of this study include the minimal parent participation. There was minimal participation in the Parent Communication Survey. About 1/3 of the parents participated in the pre-survey but only 1/2 of those parents participated in the post-survey. With a response rate of 17%, an accurate sample of the parents at Blythe was not collected. Low response rates increase the potential for bias and threaten the study validity (Cook, Dickinson, & Eccles, 2009). In addition there was low participation in the parent focus groups. Nonetheless, the study was conducted to gain understanding of people's experiences with in-depth insights and the smaller groups produced intense or lengthy discussions about experiences at Blythe. For example, in this study, parents of children at Blythe Elementary had much to share and voiced strong opinions when talking about this specific elementary school and their family's experiences. Furthermore, they often wanted to share tips and information with other participants. Because of their passion and experience, it was wise to allow for smaller groups to enable participation by all attendees.

Another limitation of this study involved the willingness of participants to truthfully express their opinions during the parent focus groups, questionnaires, and the Parent Communication Survey. The responses during the parent focus groups were also open to interpretation, and the researcher's interpretation may not have been accurate. In an effort to overcome these limitations, the researcher constantly worked to establish a rapport with the participants. The researcher also asked the participants to review the transcriptions and make necessary edits to ensure that accurate data was collected. Lastly, the researcher of the study also served as the assistant principal at the study site and has vested interest in the outcome. Member checks, inter-rater reliability, and peer review contributed to reducing the researcher's bias.

### **Summary**

In summary, this chapter examined methods in the quantitative and qualitative research model, particularly the use of a critical action research methodology. This action research study allowed for exciting opportunities to engage stakeholders in constructing new understandings about education. This section provided detailed information regarding the research design and why it was selected and the research questions guiding this study. Finally, the role of the researcher, the research sample and the rationale for sample selection, the instruments, and the data gathering procedures, along with limitations to the study were articulated.

## **CHAPTER 4**

### **ANALYSIS OF DATA AND FINDINGS**

#### **Introduction and Overview**

The purpose of this action research study was to use emerging technology tools to increase school-home communication and to determine which emerging technologies facilitate better school-home communication and family engagement. This chapter reports the findings from the research study outlined in chapter 3 and articulates the results from each of the four research questions as well as the overarching question.

#### **Phase One Quantitative**

The quantitative data consisted of the pre- and post-Parent Communication survey. Included in the quantitative findings are a description of the survey demographics and a data analysis section aimed at answering the study's research questions. The survey demographics provide several descriptive statistics about the participants as well as the quantitative findings from the survey. The research questions serve as a guide for the researcher to organize the findings.

#### **Description of Survey Demographics**

The Parent Communication Survey instrument received 101 participant responses on the pre-test. As surveys were returned to the front office, the researcher reviewed each

survey for completeness. If the survey was not completed, it was returned to the student and the student was then asked to have their parents fill it out at its entirety. Although 101 parents completed the pre-test, the post-test was only given to 95 respondents; six parents who completed the pre-survey were no longer eligible to participate because their child/children had withdrawn from Blythe Elementary. Fifty-one of those 95 parents who received the post-survey completed it. Table 14 lists the participation results of both the pre- and post- Parent Communication Survey.

Table 14

*Participation Results of Parent Communication Survey*

	Pre-Parent Communication Survey (Feb 2015)	Post-Parent Communication Survey (May 2015)
Surveys Sent Home	293	96
Returned & Completed	101	51
Ratio	34%	53%

Study participant demographics are listed in Table 15. The majority (78%) of respondents to the Parent Communication pre- and post-Survey were mothers (n=40). The bulk of the participants (76%) fell in two age groups, 30-39 and 40-49. With regard to marital status, the largest group of participants were married (n=25, 49%).

Table 15

*Participant Profile of Relationship to Student, Age, and Marital Status*

<b>Demographic Characteristics</b>	<b>N</b>	<b>Percentage</b>
<b>Relationship to Student</b>		
Mother	40	78%
Father	7	14%
Grandmother	2	4%
Stepfather	1	2%
Uncle	1	2%
<b>Age Range</b>		
Under 30	8	16%
30-39	24	47%
40-49	15	29%
50-59	2	4%
60 or above	0	0%
Unanswered	2	4%
<b>Marital Status</b>		
Divorced	9	18%
Married	25	49%
Single	15	29%
Widowed	1	2%
Unanswered	1	2%

Table 16 details the education and income strata of the study participants. The bulk of respondents (63%) had household income less than or equal to \$30,000 per year. Only 37% of the respondents obtained a post-secondary education.



Table 16

*Participant Profile of Income and Education Level*

<b>Demographic Characteristics</b>	<b>N</b>	<b>Percentage</b>
<b>Income</b>		
Under \$20,000	15	29.4%
\$20,000-\$30,000	17	33.3%
\$31,000-\$40,000	8	15.7%
\$41,000-\$50,000	2	3.9%
\$51,000-\$60,000	1	2.0%
\$61,000-\$70,000	3	5.9%
\$above \$71,000	3	5.9%
Unanswered	2	3.9%
<b>Education</b>		
Some High School	9	17.6%
High School Diploma	22	43.1%
College (undergraduate degree)	12	23.5%
College (graduate degree)	7	13.7%
Unanswered	1	2.0%

Table 17 lists the ethnicities and primary language spoken at the homes of the study participants.

Table 17

*Participant Profile of Ethnicity and Home Language Spoken*

<b>Demographic Characteristics</b>	<b>N</b>	<b>Percentage</b>
<b>Ethnicity</b>		
African-American	21	41%
Asian	2	4%
Caucasian	4	8%
Hispanic	22	43%
Other	1	2%
Unanswered	1	2%
<b>Home Language of Participants</b>		
English	27	53%
Other	2	4%
Portuguese	1	2%
Spanish	21	41%

The employment status of the study participants and their spouses are listed in Table 18. Just over half (57%) of the respondents were employed full time, while 20% were only employed part-time. Of those that listed a spouse, 44% were employed either full or part-time.

Table 18

*Participant Profile of Work Status of Respondent and Spouse*

<b>Demographic Characteristics</b>	<b>N</b>	<b>Percentage</b>
<b>Work Status of Respondent</b>		
Employed full time	29	56.9%
Employed part time	10	19.6%
Manage home	9	17.6%
Retired	0	0%
Unemployed	3	5.9%
<b>Work Status of Spouse</b>		
Employed full time	20	39.2%
Employed part time	2	3.9%
Manage home	4	7.8%
Retired	0	0%
Unemployed	1	2.0%
Not applicable	24	47%

**Data Analysis – Quantitative Phase One****Examination of Research Questions**

The Parent Communication Survey results were analyzed to provide answers to the research questions for this study. Data analysis is presented by research questions.

*Overarching Research Question: What happens when Title 1 administrators implement emerging technologies to facilitate school-home communications in order to promote family engagement?*

The researcher examined parents' perceptions before and after implementation of the intervention of a systematic technology approach for parent communications. The average score for question 6, "My child's school uses technology to....," was 24.42 before implementation and 26.24 afterwards. Parents rated each of the eight components in question 6 by using a scale of strongly agree (1), agree (2), disagree (3) and strongly

disagree (4). Those eight components consisted of questions related to volunteering at school, sending home news about happenings at the school, discussing what skills a child needs to learn in math and reading, inviting parents to attend PTA meetings, inviting parents to a program at the school, asking for help with fundraising, and providing opportunities for parents to be included in committees. A paired t-test of these means ( $p = 0.32$ ) was conducted, and they were not statistically different from each other. There was a small effect size between the pre-test ( $M = 1.65$ ,  $SD = .75$ ) and post-results ( $M = 1.75$ ,  $SD = .88$ ) with .13 (Cohen, 1988).

***Research Question 2: Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?***

McNemar's test for marginal homogeneity was used on each of the seven communication tools listed in Question 8. This test examines whether the proportion of respondents who responded favorably changed between the pre- and post-surveys. The only significant finding came from the pre- and post- results from question 8, "Do you believe that using the following communication tools (paper flyers) keeps you better informed about school programs and the success of your students?" On the pre-Parent Communication Survey only 1 person answered no. On the post-survey there was a significant shift of respondents, with 7 people answering no. Results revealed that the intervention cycle showed a small effect on parents' belief of the flyer informing them of school programs and student success between the pre-test results ( $M = 1.0$ ,  $SD = 0.20$ ) and the post test results ( $M = 1.2$ ,  $SD = 0.38$ ).

For this question on the pre-survey, 80% of the respondents thought that paper flyers kept them better informed. The post-implementation survey indicated only 75% still felt that way, as seen in Table 19. The null hypothesis of no difference between these two proportions was rejected ( $p = 0.03$ ), indicating a decrease in the perception that paper flyers kept the participant better informed between pre- and post- implementation.

Table 19

*Respondents to paper flyers keep you better informed?*

Survey	No	Yes	Total	Proportion Yes
Pre-	7	33	40	33/41
Post-	10	30	40	30/40

Question 9 on the Parent Communication Survey asked “How many times per month do you use each tool?” Each tool was listed (Blackboard Connect Email, Blackboard Connect Phone Call, Blackboard Connect text, Paper, Parent Vue, School App and Website) and rated on the following frequencies of visit per month (never, 1-2 times, 3-4 times, 5 or more times). For the test of marginal homogeneity for responses with more than two categories Bhapkar’s test from SAS, Version 9.3 Proc Genmod was used. These tests did not produce significant findings. For the Parent Vue tool, the prevalence of missing data prevented meaningful analyses. Due to the limited number of responses on the Parent Communication survey, combined with only 31% percent of respondents having a 4<sup>th</sup> or 5<sup>th</sup> grade student (since Parent Vue is only available for

parents of 4<sup>th</sup> and 5<sup>th</sup> grade students) there were only 16 responses about the Parent Vue question.

Question 10 on the Parent Communication Survey asked “Which tools do you use to initiate communication or to respond to communications sent from the school?”

Bhapkar’s test from SAS, Version 9.3 Proc Genmod was also used on this question.

Again, no significant results were found. For the school app, the prevalence of missing observations prevented meaningful analyses.

***Research Question 4: What are parents’ perceptions of invitations to involvement when administration uses technology tools for communication?***

The researcher first assessed how parents felt about school use of technology to ask and encourage volunteers for events. Pre-survey results showed that 80% of respondents agreed with this statement (see Table 20). Post-survey results indicated a shift to 86%. McNemar’s test for marginal homogeneity was used to test whether the proportion of respondents who responded favorably (success) changed between the pre- and post-surveys.

Table 20

*Pre and Post Responses for “School uses technology well to encourage parental participation in volunteering”*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	18	35.3%	24	49%	+13.7%
Agree	23	45.1%	18	36.7%	-8.4%
Disagree	8	15.6%	2	4.1%	-11.5%
Strongly Disagree	2	4%	5	10.2%	+6.2%
Total	51	100%	49	100%	

Table 21 explores the statement, “School uses technology to invite you to PTA meetings.” Parents agreed more with this statement pre-survey (88% agree) than in post-survey (78% agree). McNemar’s test was used.

Table 21

*Pre and Post Responses for “School uses technology to invite you to PTA meetings”*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	32	64%	25	50%	- 14%
Agree	12	24%	14	28%	+4%
Disagree	5	10%	7	14%	+4%
Strongly Disagree	1	2%	4	8%	+6%

To further gauge parental perception of involvement, parents were asked if the school uses technology to invite them to school programs. Again, the pre-survey results

showed higher levels of parental agreement regarding this statement (84% vs. 78%), as seen in Table 22.

Table 22

*Pre and Post Responses to, “The school uses technology to invite parents to school programs”*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	32	64%	25	50%	- 14%
Agree	12	24%	14	28%	+4%
Disagree	5	10%	7	14%	+4%
Strongly Disagree	1	2%	4	8%	+6%

Parents were also asked about their perceptions of the use of technology for school fundraising. Post-implementation results differed little from the pre-survey. An exception was that 4 respondents strongly disagreed after, while no respondents disagreed before, as seen in Table 23.



Table 23

*Pre and Post Responses to, “The school uses technology to ask parents to help with fundraising”*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	23	46%	22	44%	- 2%
Agree	22	44%	21	42%	-2%
Disagree	2	4%	3	6%	+2%
Strongly Disagree	0	0%	4	8%	+8%

The researcher then asked how much parents agreed with the statement, “My child’s school uses technology to include opportunities for parents to be included in committees, such as Title 1, or Student Council”. As noted on Table 24, the pre-percentage for the strongly agree and agree statements were 82% and increased to 86% on the post-survey.

Table 24

*Pre and Post Responses to, “School uses technology to include/invite committees”*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	22	44%	18	36%	- 8%
Agree	19	38%	25	50%	+12%
Disagree	8	16%	4	8%	-8%
Strongly Disagree	1	2%	3	6%	+4%

Parents were asked about their perception of the school's use of a website to inform them about school events. The pre- and post-surveys revealed no change in the percentage of parents who agreed or strongly agreed (88%), but those that strongly agreed increased from 40% pre-survey to 54% post-survey, as seen in Table 25.

Table 25

*Pre and Post Responses to, "School uses web pages to inform about school events"*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	20	40%	27	54%	+14%
Agree	24	48%	17	34%	-14%
Disagree	6	12%	4	8%	-4%
Strongly Disagree	0	0%	3	6%	+6%

The last question asked regarding parents' perceptions of invitations to involvement dealt with parents being encouraged to help improve the school. Parents were asked to indicate how well they agreed with the following statement, "Parents are encouraged to play a role in helping this school to be a better place." This item was meant to assess the general feeling of inclusion before and after implementation. There was very little change between pre- and post-survey at any level of response, as seen in Table 26.

Table 26

*Pre and Post Responses to, "Parents are encouraged to help improve the school"*

	Pre (N)	Pre %	Post (N)	Post %	Difference Pre/Post
Strongly Agree	26	52%	26	52%	0%
Agree	21	42%	21	42%	0%
Disagree	3	6%	1	2%	-4%
Strongly Disagree	0	0%	2	4%	+4%

### **Data Analysis – Phase Two Qualitative**

**Artifacts.** The administration communication log and parent participation logs were analyzed monthly throughout the intervention cycle to guide future decisions regarding systematic communication. A sample of the data gathered from the administration communication log can be seen in Table 27.

Table 27

*Samples from the Administration Communication Log*

Date	Event/Subject	Type of Involvement	Delivery Rate by Communication Tool		
			Phone Call	Email	Text
2/5	Valentine's Dance	Community	93%	84%	88%
3/27	2 <sup>nd</sup> Grade Math Mania	Learning at Home	91%	86%	86%
3/5	International Night	Community	93%	84%	90%
4/1	Attendance Policy	Communication	94%	85%	87%
5/1	Career Day	Volunteering	89%	88%	84%

The data collected on the administration communication log shows number of texts, emails, and dial outs sent through Blackboard Connect during the intervention cycle. There was an equal number of texts, emails, and dial outs which show that the systematic scheduling of communications was adhered to. Table 28 shows the breakdown of delivery rates by month. Overall, there was an average delivery rate of 90.25% for entire intervention cycle.

Table 28

*Blackboard Connect Site Usage during the Intervention Cycle*

Text Messages Sent	Emails Sent	Phone Call Dial Outs
33	36	42

Table 29 provides specific information about the delivery of texts messages. This data was collected from Blackboard Connect. An improvement in scheduling communications is evident even during the intervention cycle.

Table 29

*Blackboard Text Delivery per Month*

	February	March	April	May
# of Texts Sent	575	842	1725	1835
# of Parents Who Opted Out	54	80	155	103
# of Invalid Numbers	18	19	38	42
Total	647	941	1,918	1,980
Delivery Percentage	89%	89%	90%	93%

**Parent Focus Groups and PTA Questionnaires.** The transcribed focus group interviews and PTA questionnaires were imported into ATLAS.ti for management and codification of the data. During the first cycle of coding the transcript was read and text was coded using descriptive coding techniques. The initial open coding process generated 48 codes, which were then defined in a codebook. The codebook was used to re-read the transcripts and further analyze the initial open coding. In the second cycle of coding, axial coding was implemented to merge codes and nine codes were collapsed. Finally, codes with shared characteristics were grouped into 14 categories, also known as ‘families’. The results were organized into four themes. Those themes ranged from

barriers to family engagement, to how the tools help parents, to reasons why some tools are not exploited.

### **Description of Demographics**

The nine individuals who agreed to participate in the focus groups were parents of students who attended Blythe Elementary School. There were 39 participants who expressed interest in participating, but only nine actually participated. Table 30 shows the demographic breakdown of interested participants and actual participants in comparison to the overall demographics of Blythe students. The majority of the focus group participants spoke English as their first language. Of the nine participants, 67% of the participants were female, while 33% were male. There was an uneven mixture of grade levels represented; the majority of the participants (42%) were parents of 1<sup>st</sup> grade students. Parents of third graders represented 33% of the group, while parents of kindergarten, second grade, and fifth grade consisted of 8% each. The only grade level without representation was fourth grade. 78% of the participants spoke English as the primary language at home, while 22% spoke Spanish at home.

Table 30

*Demographics of Participants for Focus Group*

	Indicated Interest in Participating	Actual Participants	Blythe Elementary Demographics
African American	20 (51%)	4 (45%)	60%
Caucasian or Other	7 (18%)	2 (22%)	10%
Hispanic	12 (31%)	3 (33%)	30%
Total	39 (100%)	9 (100%)	100%

Table 31 provides an in-depth look at participants involved. It shows a clear picture of the characteristics of each member of the focus groups.

Table 31

*Participants' Grade Level of Student, Gender, and Home Language*

Participants' Pseudonyms	Grade Level of Student	M/F	Home Language	Focus Group #
Carmen	1 <sup>st</sup>	F	English	1
Pam	3 <sup>rd</sup> & 5 <sup>th</sup>	F	English	1
Roger	3 <sup>rd</sup>	M	English	1
Ann	1 <sup>st</sup>	F	English	1
Fiona	K	F	Spanish	2
Selena	1	F	Spanish	2
Bryan	1 <sup>st</sup>	M	English	3
Roman	2 <sup>nd</sup>	M	English	3
Karen	3 <sup>rd</sup>	F	English	4

**Barriers to Family Engagement**

**The stages of comfort in feeling welcome at a school setting.** A typical parent at Blythe Elementary School typically goes through stages of comfort when engaging with staff members at the school. In the beginning, parents tend to feel unsure and intimidated. Over time with repeated exposure most parents gain confidence and feel welcome. Even though parents eventually feel comfortable in the school setting they are likely to experience setbacks along the way. Negative interactions with staff members or frustrating school policies can result in parents feeling less welcome. That unwelcome feeling may become a grudge held, where the relationship is either never amended or resolved to restore those feelings of being welcomed.



*At first parents feel unsure and intimidated.* Any time people deal with new situations there are typically feelings of unsureness and intimidation. Information gathered from the parents who attended the focus group reported that when they first became a part of Blythe they felt unsure and intimidated. During a focus group session Ann stated, “What I’ve discovered is the more I’ve come here to school, the more I’ve actually wanted to show up.” As evidenced by what Ann commented on, once parents pushed through their initial feelings of being unsure and increased their interactions at the school setting they became more and more comfortable as time progressed.

*Parents gain confidence over time.* The parents who were involved in the focus groups had previously experienced those feelings of intimidation, yet there were all able to push through those feelings while gaining confidence over time. Based on the discussions of the parents who attended the focus groups they were able to overcome these feeling with increased exposure in the school setting. Unfortunately, there is no exact formula or one size fits all guide to predicting when parents will feel welcome. The researcher was able to uncover some things that ultimately led to the parents feeling welcome at Blythe. Positive staff interactions, the amount of time parents spent at the school, and invitations to involvement were noted as influences in terms of increasing parents’ confidence over time.

Several comments were made regarding positive interactions between parents and staff members. Parents mentioned that they felt welcome based on staff members’ exchanges. Parents perceived positive interactions as an important factor in gaining confidence. During a focus group session Carmen stated, “Every time I come to the school, walk down the halls, everybody's, Hey, how are you doing. You're feeling

welcomed that way.” Carmen felt a sense of hospitality from simple greetings from multiple staff members. Karen also echoed similar sentiments during a focus group session. Karen declared that, “everyone is always very warm and welcoming right from the moment you walk into the school.” All parents involved with the focus groups equated a sense of warmth with the interactions they experience with staff members when arriving at school. 78% of the parent participants routinely drop off and pick up their students in the car rider line each day. Unfortunately, not all parents are able to transport their students routinely and therefore lack those positive interactions on a daily basis. Based on the entire school’s population, 29% of the students were considered car riders during the time of this study. Since the other 71% of parents are not car riders and most likely do not frequent the school regularly, they did not have the privilege of receiving those positive daily interactions habitually. With those limited experiences it is much more likely that any negative experience will outweigh limited positive experiences.

Another key element to increasing parents’ confidence involved the overall amount of time spent at the school. Parents discussed how their feelings evolved over time with continued experiences at the school setting. Bryan avowed, “This is what I’ve discovered, the more I’ve come here to the school, the more I’ve actually wanted to show up.” Bryan was uncomfortable at first, but was able to overcome those feelings throughout his two years at Blythe. When his twin students entered Kindergarten he was unsure of himself in the school setting. After attending almost every event during the school day and in the evenings he became familiar with the staff members and felt like he belonged. This established the concept that both parents and staff members take a vital role in affecting parents’ perceptions of feeling welcome.

The last element to increasing parents' confidence over time included invitations to involvement. The dialogue during the focus groups included multiple accounts of parents acknowledging how comforting it was to have staff members ask them to become involved. There was mention of increased communications through emerging technology tools on a regular basis about events, things happening at school, and ways to learn more about their child's academic success. Carmen stated, "I am constantly being asked to come and help out, which makes me feel welcome." Participants also noted that the school has multiple ways to ask for involvement, and each of those reminders tell the parents that the school wants them to be involved. Roger added a meaningful response by saying: "The multiple ways the school reaches out to parents with technology increases the number of parents who hear those invites." The focus group participants affirmed that the communications via the technology tools used made parents feel welcome. Roger acknowledged that, "The emails, even the automated phone calls inviting [parents] out to the different events that are going on [made parents feel welcome]." According to the focus group participants, the systematic communication allowed parents to feel informed about the happenings at Blythe and ultimately feel more involved and welcomed. Since not all parents are able to visit the school routinely it is evident that technology tools allow for disseminations of communications to a larger audience.

*Parents may have experiences that temporarily or permanently alter their perception.* Parents' perceptions of the welcoming environment may be altered based on various occurrences. There are bound to be ups and downs when working with a large number of humans. One example of an experience that had the potential of altering perceptions was mentioned during a focus group session. Roger discussed an incident while answering the stem question that asked if the participants felt welcome at Blythe. Roger replied, "I'm going to say yes [about feeling welcome], but only if it's already scheduled. Just from my experience." After further dialogue it was determined that Roger was referring to a specific situation where he dropped by one day to just pop in to the classroom. He was not allowed to go to the classroom because it was not a preset appointment. At that point in time, he felt unwelcomed. After he learned about the policy and thought about the implications of interrupting class time he understood why he was denied classroom entry. He appreciated that these policies were put into place to protect instructional time. This is just one example of how easily parents' opinions regarding feeling welcome can change.

### **Parents Find it Difficult to be Involved at the School Due to Home and Work Commitments**

One consistent message revealed during focus group sessions was a shortage of time in parents' overscheduled day. Roman mentioned that his work requirements are demanding: "I work six days a week, twelve hours a day, so I come [to the school] when I can." Parents spoke of commitments that took priority, such as working or being a caregiver at home. Included in these codings of time barriers were discussions of parents not having the time to come to the school, not being able to attend events due to busy

schedules, and being a single parent working a full time job. Several parents conversed about the demanding work schedules or household requirements that limit their involvement.

Another condition limiting parents' involvement at school events were scheduling conflicts. Pam mentioned the work requirements but also stated, "Scheduling conflicts keep me from attending events on Thursday, and most night events are scheduled on Thursdays." Several other parents expressed similar sentiments. Other parents discussed various other scheduling clashes including sports and Boy Scout meetings. Both scheduling conflicts and lack of time available due to work or being a caregiver at home are barriers to family engagement at Blythe Elementary School.

### **Language and Cultural Barriers Affects Parental Involvement**

Language and cultural barriers are a common challenge in schools with a large population of parents whose home language is not English. During the focus group session parents were asked to discuss why some parents would not be involved at Blythe and Selena said, "It was more of a language barrier, they feel a certain fear of approaching the school due to the language barrier." Parents suggested having a class designed for parents who speak English as a second language. They noted that the class would make them feel welcome because of the extra effort put in place based on their needs.

Parents confirmed that while most communications sent home (flyers, emails, phone calls and text messages) were translated into Spanish and Portuguese, some technology tools were not used to communicate translated messages (website, school app, Parent Vue). Not all tools are being used to communicate translated messages for various

reasons. Texting and the school app alert has a limit on the number of characters that can be sent, therefore sending all 3 translations at one time is not a possibility. The Parent Vue tool does not have the capability of selecting a language per student, it only has a default language of English with no translation options. Not all website postings have been translated into alternate languages for a variety of reasons. Unfortunately based on the data collected few parents were accessing the school website, therefore the time involved in translating every message posted had not been warranted. Instead the parent liaison focused on translating messages and delivering them in the fashion most used by parents and guardians, which included flyers, emails and phone calls.

Although the administrators at Blythe persistently try to communicate with parents in their home language, parents do not always feel the value of those efforts. Based on conversations during a focus group session, which included Spanish speaking parents, parents and school staff see providing these translations through different lenses. Parents appear to see it as an expectation, a service that should be provided. Fiona acknowledged that, “the school should take a step forward to reach out even more in every language to explain even more that their [parent’s] involvement would benefit their children.” Parents suggested focusing on other translations besides typical communications including school events, fundraisers, PTA news, etc., and redirecting those multi-language communications to emphasize the importance of how parental involvement benefits students. On the other hand staff members feel as though they are doing all that they can to show hospitality and are going above and beyond what is required. Based on several informal conversations with staff members at Blythe, the staff members view these translations as an added bonus.

An additional constituent dealing with language barriers was the culture differences between Hispanic culture and other cultures. For most Hispanics, present time is far more valuable than the future. That was apparent in the communication styles that were observed during the focus group with Hispanic parents. First, both attendees, who arrived separately, were both over 30 minutes late. During the conversations both participants remained in close proximity to each other, the translator and to the researcher.

In a casual conversation with another Spanish speaking parent, which happened outside of the focus group, the researcher was told that parents had not been receiving some communications translated into Spanish, and did not receive notifications of specific important topics. The researcher reviewed the administration communication log immediately following that conversation to determine if there was an error with messages being sent out in multiple languages. The researcher then confirmed that all messages that were mentioned were, in fact, sent out. In discussing the conflicting perceptions with the school parent liaison, who is of Hispanic decent, she noted that based on her personal experience the cultural differences regarding the importance of time impede organizational skills and the ability to prioritize important dates. In this particular case the parent thought that the school was not communicating with them, when in actuality elements of the Hispanic cultural may have impeded this parent from retaining the information.

### **Communication Helps Parents Plan Better**

Parents noted that the variety of tools that were used to consistently send reminders helped parents plan better. They appreciated the systematic approach to each

communication tool used. Parents liked the predictable schedule of communications: two weeks prior to the event parents received a flyer; one week prior to the event parents received a phone call; the day before the event parents received an email, and on the day of the event parents received a text. Each of these tools worked in combination to alert the parents of upcoming events and was a constant reminder. Based on the communication log, approximately 90% of the parents were receiving the text messages, about 50% were receiving the emails, and 80% were hearing the automated phone messages. As mentioned earlier parents felt the reminders were a continual sign of invitation, noting that they felt that the school wanted parents to be aware and involved. Roman noted that same sentiment by saying, “the constant reminders are telling me, hey, we want you here, come please. We keep saying this because we want you here.” Although several parents remarked that all of the communications were an overload, they acknowledged that it was a needed overload that helped them plan better. Ann articulated, “It’s an overload, but it's an overload needed.” Parents mentioned how one technology tool would remind you, but they would tend to forget and then a few days later another communication was sent, with up to six communications per message there were always reminders. Parents were better able to plan and remember with the constant reminders.

### **Communication Tools Available on Cell Phones**

Technologies parents want to use, or already use in everyday life are more successful communication tools for the school setting. Parents at Blythe constantly noted having their cell phones on them at all times. Since cell phones were already consistently used it is no wonder that the tools that were available to be used on the cell phones



deemed to be more convenient and widely used. Any communication tool that can be operated on a smart phone was more likely to be used by parents at Blythe Elementary School.

### **Parents Prefer Asynchronous Communication Tools**

Parents remarked that asynchronous communication tools were more suitable than synchronous tools. Asynchronous tools allowed for real-time communication in a different-time, different-place mode. Many parents noted the convenience factor of both asynchronous tools used, text and email. These two tools made it easy for parents to respond and assisted them to do so at their convenience. Parents mentioned that emails and texts not only allowed them to respond at a suitable time, but that they also permitted them to formulate a well thought-out response. Roger acknowledged that, “responding to emails and texts allows me to think about a response and I am able to respond when it is easy for me, I am also able to correctly write out my response.” While sending and receiving messages asynchronously was a valuable asset to the tools, the ability to formulate well versed responses was an important component as well.

### **The Ability to Archive Messages is an Affordance for Texts and Emails**

Another benefit to using texts and emails included parents’ ability to archive messages. This allowed parents to review the archived communications as needed at any point in time. Carmen affirmed that, “she likes to have proof to go back and say, did I say that, or to review a message and consider if it was explained well enough.” Being able to review messages for content, clarifications, or to review as needed was a valued component of both the texting and email tools used.

**Misinterpretation is a Possible Constraint to Using Printed Messages**

Although texts and emails are beneficial because they are asynchronous there were some constraints regarding misinterpretation discussed for them as well. One caution to using messages in print was the opportunity for misunderstanding. Written messages lack tone, emotion, facial expressions, body language, and eye contact. For this reason, written messages can lead to misinterpretation, misconception, and even deception. Bryan indicated “an email can be misinterpreted.” When communications are misinterpreted it negates the initial purpose for the interaction at Blythe, which is building relationships through communication tools.

**The Brevity of a Text: an Affordance and a Constraint**

Text messages were noted as being a time saving tool since texts only allow short communications between the sender and recipient. In a busy world parents like the ability to receive the information, and some prefer it in concise form. Text brevity was a plus for some of the parents who attended the focus groups. Karen declared, “The text messages are nice, they are short and to the point.” Although most parents thought the brevity of the text message was an asset of the tool others thought it was a constraint. Carmen mentioned, “Text messages don’t allow the school to send out enough information.” The limited number of characters allowed on a text message impeded the school from sending out very detailed text messages to parents. The brevity of the text message was seen as both an affordance and a constraint to using the tool. The important message to gather from this divided response was that the variety of tools used allowed parents to determine which tools worked best for their communication needs based on their particular lifestyle.

### **Synchronous Tools are Not Preferred Due to Inconvenience**

Although telephone calls are a communication tool that can be used on the cell phone they require people to connect synchronously. The parents discussed the difficulty of stopping what they are doing to answer the phone when it rings. Roman affirmed that he drives in his vehicle for work and can't answer the phone while driving. While telephone calls allow for direct contact, which assist in building relationships between home and school, the synchronous nature of the communication is not always convenient. Parents noted that the automated Blackboard Connect phone calls do not require the caller and receiver to connect synchronously. The automated calls can be left as a message because that does not hinder the communication being that it is a one-way message.

### **Communication Tools Not Being Used**

#### **Tools without Update Alerts Are Unused to Their Fullest Potential**

Parents in the focus groups noted that the communication tools that are the least used are missing one common feature, notifications or updates. Tools that do not alert parents of updates, such as the school website, are often unobserved. With the school website, there is no routine posting and therefore parents did not automatically know when a new post or any additions were added to the website. Parents indicated that they do not check the website on a consistent basis. Bryan remarked, "I never visit the school website, I know that I don't have to because I receive the same information from the phone calls, texts and emails that you guys send out." During the intervention cycle it was noted that parents were not accessing the school website. From that point forward when the website was updated other communication tools (text, email, and the school

app) were used to send out direct links to the updated post on the website. Karen quantified our actions by saying, “I try to frequent the school website but am not always diligent about doing so, but I have received some school notices [alerting me to check the updated webpage] now that the school app is on my phone.” Parents also noted that when an email or text alert was used to communicate a new website posting it was a valuable reminder. This technique of using a short concise communication through an alternate tool to guide the parent to a different source more suited for in-depth communications (website) was particularly effective and appreciated. With the various other methods of communicating with parents the school website tends to be the least used due to the lack of notifications, but once notifications were used via other tools parents were able to fully benefit from the more detailed website postings.

### **The Tools that are Not Being Exploited**

The school app and Parent Vue tools failed to gain any traction during the intervention period amongst parents at Blythe. During the focus groups the majority of the parents involved noted that they were not aware of the school app while a couple of the parents knew about the app but had not downloaded it. Pam voiced that Blythe should “put more of that [information about the school app] out there so we know about the app. We could have gotten a reminder, don’t forget to download the app.” Unfortunately out of the 9 participants in the focus groups only one parent knew about the Parent Vue online system. Carmen stated, “I just don’t understand it [Parent Vue]”. Both tools had great potential for connecting school to home but parents never took advantage of those invaluable resources.

### **Conclusion**

With regard to the quantitative data, a statistically significant finding was the difference between pre- and post- data about parents' perceptions regarding being informed from paper flyers. More parents thought that paper flyers had the potential to keep them informed pre-survey than post-survey. The researcher used the qualitative data gleaned from the focus groups, combined with the quantitative data to answer the research questions.

Many major themes emerged while analyzing the qualitative data. These included identifying barriers to family engagement, noting that communication tools on cell phones were more widely used, and identifying characteristics of tools not utilized. The first theme identified was barriers to family engagement, which included parents feeling intimidated, parents' time constraints limiting involvement, and language barriers. The second theme that emerged encompassed communication tools that helped parents plan better. The third major theme included the communication tools on cell phones, such as email and texts, and why they were more widely used and preferred. The last major theme identified the characteristics of tools not being used.

## **Chapter 5**

### **DISCUSSIONS, IMPLICATIONS AND RECOMMENDATIONS**

#### **Introductions**

The purpose of the mixed methods action research outlined and described in this body of work was to address the need to investigate the new technology approaches used for the purpose of increasing communication between the school and home and to determine which emerging technologies better facilitated home-school communication and family engagement. For some time, Blythe Elementary had been experiencing a decrease in parental engagement as measured by participation at school events. The researcher explored how technology enabled schools to involve more families which in turn enabled families to engage schools in new ways. These communication methods, which included email, websites, mass messaging, texting applications, and online portals for grades and attendance, presented new opportunities for school-home communication. The hypothesis established stated that these technologies would reduce barriers that pose challenges to traditional forms of school-home communication and thereby aid schools in providing more frequent communication.

In order to facilitate the study the researcher used several questions to guide the study. The overarching question was, What happens when Title I administrators implement emerging technologies to facilitate school-home communications in order to promote family engagement? More specifically, the research seeks to answer:

1. What are the affordances and constraints to using these emerging technologies to promote family engagement in a Title I school?
2. Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?
3. What impact does the use of emerging technologies to promote family engagement have on family members' attendance at school events?
4. What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?

This chapter denotes a brief overview of the problem, states the purpose of the study and research questions, and provides a review of the study design. This chapter concludes with a summary of major findings, implications for practice, limitations, recommendations for future research, and concluding remarks.

### **Summary of Major Findings**

#### **What happens when Title I administrators implement emerging technologies to facilitate school-home communications in order to promote family engagement?**

When administrators implement emerging technologies to facilitate school-home communications, there is an increased opportunity to reach a much larger audience. With these emerging technologies, administrators are able to contact all parents who have access to those technologies; therefore, invitations are not limited to the parents who

enter the school building. During the focus group sessions, parents noted that they felt a sense of invitation to become involved due to the continual technology communications. Previous research, based on the Hoover-Dempsey and Sandler (1995) model, suggests that positive parents' perceptions of invitations to involvement cultivate parent participation in schools. During this short study at Blythe, the attendance records indicated that parent participation at school events was higher during the year of study. An attendance comparison was conducted between the same exact events over a two year time span.

The communications were seen as invitations to involvement, as a constant reminder that the school wanted parents to be involved, and as a tool to help parents plan better. The frequency of communication had a tangible influence on family engagement. During focus group sessions, parents acknowledged that the constant reminders, which were systematically sent out on various platforms, helped their families become more engaged. Parents stated that receiving the information far enough in advance allowed them to take part by adjusting their schedules. These findings aligned with the discoveries of Fogle and Jones' (2006) study that reported parents were not participating because they did not receive information far enough in advance. The systematic scheduling of constant reminders enabled parents to plan ahead in order to be involved.

This study informed school administration on what frustrated the family members or what caused them to feel unwelcome and address it. Administration was able to gather this information because of the relationships that were built through the increased communications and focus group sessions that pursued parental input. Focus group data revealed that there was a common complaint amongst participants. Participants noted that



some policies in place seemed unfair or unnecessary. The majority of the complaints centered on policies regarding visitors in the school building. The first complaint involved visitors coming to the school. Parents noted that they felt an unwelcome feeling when entering the school because of the locked front doors. The locked doors were intimidating, and the questioning from the “gatekeeper” regarding the intentions of their visit continued to intensify those feelings. Parents also stated that once they were finally inside the building, they were then asked to sign in and obtain a visitor’s pass. Some parents noted that they were approached by staff members if they did not have the visitor’s pass or if the visitor’s pass was not visible. These interactions amongst parents and staff members made the parents feel like they were burdening the staff by visiting the school. The other specific complaint regarding visiting the school dealt with scheduling a visit. Parents were often upset that they were unable to just show up and walk down to their child’s classroom or observe their child without any notice given to the classroom teacher.

Obviously from the school personnel’s standpoint, all of these policies were put in place to provide a safe environment for our students and to protect valuable instructional time. After learning about the parents’ frustrations, the researcher realized that there was a need to use the emerging technology tools to alert parents about particular school policies. The policies selected included early check out guidelines, attendance regulations, visitors in the building, and procedures for volunteering or visiting the classroom. These communications were shared with the intention of being transparent and proactive. Administration wanted all parents to be aware of the policies well before they found themselves frustrated in the front office because they were unaware of the

policies. Each of the policies, which were clearly and thoroughly explained with justifications, were sent to all families by all emerging technology tools. The dissemination of the policy updates decreased the number of instances where parents were upset in the front office due to being unaware of a particular policy. The front office staff noted that parents were more familiar with the policies and tended to be more supportive with the increased communication about the guidelines and justification for having those guidelines in place. In this study, administration was able to implement emerging technologies to reach a larger audience, increase participation at school events, and learn about and address parental frustrations regarding school policies. The emerging technologies facilitated school-home communication, which consequently allowed more parents to feel welcome thereby increasing family engagement.

In order to move towards a more comprehensive partnership, there needs to be a shift to forming open channels of two way communication. While this study increased the communications from the school-home the next step would be to increase partnerships by improving the home-school communications. School administration needs to continue to reframe their approaches to communicating through the use of emerging technology tools. Once the emerging technology tools used in this study became more widely used, parents would become more familiar with the tools' capabilities and would be able initiate communications through those tools.

One approach that was not addressed in this study was the use of online meetings. Online meetings have the potential to increase family engagement by alleviating some time and transportation barriers. Skype, an application software that uses a webcam to

conduct virtual meetings, is an emerging technology tool that can be used to increased family engagement. This would be one way to increase two-way communications.

**What are the affordances and constraints to using these emerging technologies to promote family engagement in a Title I school?**

First and foremost, when implementing something new, there are four main elements that influence the spread of the idea: the innovation itself, communication channels, time, and a social system (Rogers, 2003). Roger's Diffusion of Innovation theory states that any type of change takes time to implement (Rogers, 2003). When reviewing the impact of the different emerging technology tools there were some notable differences in implementation time frames. The more widely accepted emerging technologies, such as, mass emails, mass phone calls, mass texts, and the school website, had been used consistently for two years at Blythe Elementary School. Those tools were further along in the implementation stage and quite possibly approaching the confirmation stage (Rogers, 2003). Since these tools are used on a regular basis, most families, if not all families, had adopted these tools over the past two years. The laggards, about 16% of the population, are those who will be the last in the social system to adopt these innovations (Rogers, 2003).

The least successful emerging technology tools included the Parent Vue online portal and the school app. The Parent Vue online portal was rolled out to the parents of fourth and fifth graders the year before the study began, but was only accessed by seven parents during that first school year. The school app was introduced at Blythe immediately after the Pre-Parent Communication Survey was conducted. Prior to the innovation cycle, parents were not aware of the app and had not developed a favorable or

unfavorable attitude towards it. The communication regarding the school app during this study consisted of the researcher and other staff members at Blythe sharing one-way information mainly through mass media networks, such as text messages, phone calls, emails, and flyers. Due to the limited time of intervention during this study, there was little discussion about the school app from other members in the community.

At the end of the study, there were 61 downloads of the school app. Since the completion of the study, the researcher has continued to use mass media to share information regarding the school app and has increased the interpersonal channels to boost awareness. The front office clerks continue to have face to face exchanges about the school app with parents as they enroll their child. All staff members are encouraged to promote the school app during any interactions with parents. Since the study has concluded, there have been an additional 101 downloads of the school app. At the close of the study there were 11 parents using Parent Vue. The number of users increased from seven to 11 during the study. Since the conclusion of the study there was a continued focus on promoting the benefits of the tool along with other information sessions to teach parents how to use tool.

Diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas and technology spread through cultures (Rogers, 2003). The previous paragraphs describe the “how” and “what rate” of these emerging technologies at Blythe. Next, the researcher will discuss the components that determined the “why” of these emerging tools. The affordances and constraints, revealed by both the qualitative and quantitative data, to each of the emerging technology tools are best described in Table 32. As noted, the most appealing affordances for all of the tools was the ability to connect

asynchronously and to access the tool from a cell phone. The consistent constraint for each tool was possibility for lack of access and equity. This was continually brought up during the focus group sessions as possible constraints for others, but was not an issue for any of the participants. Based on the Parent Communication Survey, 90% of the respondents surveyed have Internet access on a computer, and 92% of the respondents have a Smartphone. There is a common belief that the digit divide is rapidly narrowing due to the lowering cost of computers and Internet access in the U.S. society (Warschauer, & Matuchniak's 2010). However, Warschauer and Matuchniak (2010) reflected on inequalities in technology usage: "Gaps in home access to digital media are substantial and inequalities in technology usage and outcomes are even greater" (Warschauer, & Matuchniak 2010).

Table 32

*Affordance and Constraints to Technology Tools Used*

Technology Tool	Affordance	Constraint
Text	Asynchronous tool, Brevity of message, On cell phone, Ability to archive messages	Brevity of message, outdated contact information, Equity, Access
Email	Asynchronous tool, Longer more detailed messages, Ease of access, Frequency of communications, On cell phone, Ability to archive messages	Outdated contact information, Equity, Access Misinterpretation
Phone Messages	Asynchronous tool, Longer more detailed messages, On cell phone	Equity, Outdated contact information
School App	Asynchronous tool, Notification alerts on cell phone, On cell phone	Equity, Access
School Website	Asynchronous tool, Longer more detailed messages, On cell phone	Equity, Access, No alerts for updates
Parent Vue	Asynchronous tool, On cell phone, Ability to sign up for scheduled alerts	Equity, Access, Only available in English

The communication tools that were available on cell phones seemed to be the most accessed and favored for the parents at Blythe. Since cell phones are such an integral part of a person's daily life, communication components on the cell phone were the most successful. Another feature that the parents at Blythe preferred was the ability to connect with the school asynchronously. That attribute of the technology tool helped to aid in prevailing over two of the barriers to family engagement. As previously noted

within the literature review and the findings from the focus groups, parents found it difficult to be involved due to work/home commitments, and language barriers impeded non-English speaking parents' involvement. Through the use of asynchronous communication tools that were accessible on smart phones, parents were able to receive information from the school, communicate with administration as needed, and use consistent reminders to plan better, based on their individual schedule. Being mindful of the constraints and affordances of each tool along with knowledge about Roger's diffusion of innovation theory will help any administrator implement these emerging technologies successfully.

**Which characteristic of the technology tool(s) used by administrators allow parents to feel the most informed about school programs and student success?**

The significant findings from the Parent Communication Survey came from the pre and post results from question 8, "Do you believe that using the following communication tools (paper flyers) keeps you better informed about school programs and the success of your students?" The pre-survey results indicated that 80% of the respondents thought that paper flyers kept them better informed, but the post-survey results revealed that only 75% still felt that way, as seen in Table 23. The null hypothesis of no difference between these two proportions was rejected ( $p = 0.03$ ), indicating a decrease in the perception that paper flyers kept the participant better informed between pre and post implementation.

These quantitative results indicate that there was a diminished feeling about the effectiveness of communication regarding school programs and the success of students through the use of paper flyers. Those results could be due to the fact that parents were

able to see the decreased value of paper communications with the heavy focus of technological communications during the intervention cycle. This data has the potential to impact future communication modes at Blythe Elementary School. Additional research should be conducted by obtaining an adequate sample size in order to achieve a true representative of the population. In particular, administration should determine what types of information, if any, is warranted by paper communications.

Additional qualitative data was collected to determine how parents ranked the tools based on the tools ability to inform parents about school programs and student success. Question 13 asked parents to rank tools from most informing (1) to least informing (6). Of the 24 respondents who accurately completed the question, 9 parents selected email as the most informing, 7 parents elected text, 3 chose phone, 3 picked Parent Vue, 2 indicated the school website, and 0 designated the school app. Based on those quantitative results, parents felt the most informed with email. In order fully answer this question both the qualitative and quantitative data was reviewed analyzed. When considering both the qualitative and quantitative data, the characteristics of tools that were the most informing about school programs and student success included the asynchronous properties, the ability to access email from cell phones, and the ability to archive messages.

**What impact does the use of emerging technologies to promote family engagement have on family members' attendance at school events?**

When comparing the number of parents in attendance at scheduled events held during the intervention cycle, there were minimal differences in comparison to the same events held the year prior. For all three events the attendance was 6%-9% higher during



the intervention cycle. While there is no way to directly correlate the increased attendance to the enhanced scheduled communications, there was some data to predict that the boosted communication resulted in improved attendance at night events. The numbers included in Table 33 are only based on the number of parents who signed in at the event; therefore, it is not a completely accurate account of attendees because some parents did not sign in.

Table 33

*Comparison of Attendance at Night Events*

	Valentine's Dance	International Night	STEM Night
2013-2014	267	86	57
2014-2015	289	95	61
% increase from previous year	7%	9%	6%

At each of these evening events, the parents who signed in were asked to indicate which tools notified them of the event. There was a consistency in the data collected that indicated parents were made aware of the events by multiple tools. It was interesting to note the percentages listed for each tool (see Table 34). As stated earlier, during the focus group sessions parents acknowledged that the constant reminders on various platforms led to increased attendance at night events. The research literature aligned with these findings by identifying lack of information as a reason parents may not participate in school events (Fogle & Jones, 2006). The systematic scheduling of constant reminders that were implemented at Blythe provided parents with plenty of opportunities to adjust schedules as needed to attend events or become more involved.

Table 34

*Results from Parent Participation Log*

	Website	Dial Out	Text	Email	Flyer	App
Valentine's Dance	7%	18%	29%	22%	20%	3%
International Night	8%	15%	32%	23%	28%	2%
STEM Night	7%	20%	36%	30%	20%	5%

**What are parents' perceptions of invitations to involvement when administration uses technology tools for communication?**

Parents' positive perceptions of invitations to involvement cultivate actual parent participation in schools, as shown by the Hoover-Dempsey and Sandler Model (Hoover-Dempsey & Sandler, 1995). Increasing parents' positive perceptions is crucial in cultivating family engagement. Based on the qualitative and quantitative data gathered, the technology tools used in this study seemed to make parents feel more welcome. The finding revealed that communications were an extension from the school to let parents know what was happening at the school and ways to be involved. A broader audience was reached by allowing the communication tools to convey the message.

Due to the short intervention cycle, qualitative data obtained was not strong, but provided some insight into how parents' perceptions were influenced due to on the systematic communications through technology. Based on the Parent Communication post-survey results, parents evaluated Blythe very positively in several areas. Each of the following statements were ranked on a 4 point Likert scale meaning; 1= strongly agree, 2=agree, 3= disagree, and 4= strongly disagree. 96% of the parents agreed that Blythe is a very good school ( $M= 1.60$ ). When parents were asked if they felt welcome at Blythe, 94% of the parents agreed. Although there was no difference in the pre ( $M= 1.47$ ) and post ( $M=1.47$ ) mean results, 94% of the parents are confirming that Blythe has a welcoming environment. Parents were also asked to rate Blythe on how well the school encouraged parents to play a role in helping the school to be a better place. 96% of the parents agreed that the school was encouraging them to play a role in making the school a better place ( $M= 1.53$ ).

### **Implications for Practice**

The ultimate goal of increasing communication in a school setting is to have fluid two-way communication. For this study there was a focus on systematic school-home communications with the realization that this was the first step in increasing family engagement. Throughout the intervention cycle, school-home communications were tracked on the administration communication log. Parents were encouraged to make contact with the school through those tools regarding any questions, concerns or comments. In order to make that process easier for parents the assistant principal's number was included at the end of every text message that was sent out. Seven parents used this feature. Likewise, at the conclusion of every email, the assistant principal's

email address was included so that parents could reply at their convenience as needed. 14 parents used this facet of home-school communication. Lastly, home-school communication was tracked by the comments posted on the school website. Nine parents used this element to communicate with the school. The numbers noted on those logs were far from where they should be in terms of an active partnership. Nonetheless, it is a starting point. There will be a continued focus on increasing home-school communications and full partnerships at Blythe.

This study found that there has to be a systematic approach to increasing family engagement which includes redefining expectations and allowing for a comprehensive approach. Each school must evaluate their parents' needs to determine which emerging technologies facilitate better school-home communication and family engagement. Information gathered from the needs assessment must be analyzed and continually evaluated. A consistent plan for increasing communications between school and home must be in place. Once a school has mastered improved school to home communication, the focus should then shift to increasing home to school communication. A discussion of the implications of this study will begin with parents and then move to school level administration and then to district level administration.

### **Parents**

In order for parents to become active members in a partnership, their needs must be met. The Hoover-Dempsey and Sandler model revealed personal motivation, invitations, and life context as precise predictors of parental involvement (1997). In order for schools to begin to build different parental involvement forms (home involvement, communication, school involvement, goals) those level 1 needs must be met. Parents and

schools should work together to be mindful of these needs while having open communications to overpass those role constructs that limit engagement.

### **Local School Administrators**

The sense of welcome that families feel has a direct effect on their involvement (Auerbach, 2007; Robinson & Fenwick, 2007; Stewart, 2008). Schools must intentionally aim at creating a welcoming environment by training staff members on cultural differences, misconceptions (Auerbach, 2007; Davis, 2006; McGrath, 2007), and creating an atmosphere of trust (Quiocho & Daoud, 2006).

For school based administrators this study can provide guidance to facilitate action plans to increase school-home communications in the infancy stage and then home-school communications for a full partnership approach. If other administrators feel like this study provides a comprehensive approach to using technology tools they can mimic the components to meet their school's needs. Table 35 shows an example of planned topics to discuss with parents.

Table 35

*Planned Topics Disseminated via Emerging Technology Tools*

<b>Parental Invitations/ Engagement Requested</b>	<b>Black-board Connect Email</b>	<b>Black-board Connect Phone Calls</b>	<b>Black-board Connect Text</b>	<b>School App</b>	<b>Website</b>
Ways Parents can Communicate with the School	Included the AP's email address for questions or concerns	Included the school's phone number for questions or concerns (not easy to track this information)	Included the AP's text now number for questions or concerns	Direct link for *school's phone number *staff member's blogs & email addresses	*parents can leave comments or questions and they were sent to the AP for a quick response *include polls, surveys, forms, RSVP requests, forums, and comments
Attendance at PTA Meetings	Invited parents to attend via email one week prior	Invited parents to attend via call the day before the event	Invited parents to attend via text the day of the event	Invited parents to attend via notifications the day of the event	Invited parents to attend (include RSVP)
Volunteers at Events	Invited parents to volunteer, sent out a link with signnupgenius information	Reminded parents about the event, invite them to volunteer, asked them to sign up with the link on the school website	Invited parents to volunteer, sent out a link with signnupgenius information	Invited parents to volunteer, sent out a notification that includes signnupgenius information	Invited parents to volunteer, included a link with signnupgenius information
Information about Benchmarks (where students should be performing) in Reading or Math	Sent a chart and/or information on where students should be performing, asked parents to inquire about their child's level, and/or asked parents to contact teacher for more information Example: At this point in the school year, your child should be reading at the level designated on the chart. K- level C 1 <sup>st</sup> - level F 2 <sup>nd</sup> - level K Talk with your child about his/her reading level. Your child should know his/her current level. If your child does not know his/her reading level please contact the classroom teacher.				
Attend Quarterly Math Mania Meetings	Invited parents to attend	Invited parents to attend	Invited parents to attend	Invited parents to attend	Posted videos of the academic coach's session on new math standards for parents to review

The modified Parent Communication Survey instrument collected constructive information which informed decisions for the local school. The parent focus groups allowed for parents to provide input about their perspective on communication. The administration communication log was a great tool for ensuring a systematic approach to frequent exchange; it served its purpose of holding the administrators accountable for organized communications. These components of the study can be beneficial for each school that implements them. The lengthy projects of this study include the creation of the survey and focus group questions. Administrators at other schools could benefit from using the created instruments for this study so that more time could be spent analyzing data and implementing an action plan.

School level administrators should work in a collaborative manner with other school administrators and district level employees at the Title I office to learn from one another regarding family engagement. It would be very valuable for school administrators to be able to have a dedicated time to analyze local needs assessment data with colleagues and to collaborate with other administrators on an action plan.

### **District Level Central Office Administration**

This study has the potential to have a much larger effect, when scaled for an entire school district rather than a single school. Currently Blythe's school district directs local schools to develop their own individualized Title I action plan. In creating that plan local schools focus on a projected budget and a professional development plan based on local data from the previous school year. The amount of planning geared towards a systematic approach to communicating with parents is generally lacking within the Title 1 plan. Unfortunately, without the detailed requirement to plan out communications with parents,

it is often put on the backburner and is allotted attention as time allows.

There is a current need across the entire district to dedicate the time and money to existing communication methods and identify new, more effective methods. The Title I district office should create a new position to lead the district in advances with engaging families. Currently, local school administrators can't spend the time required to focus on developing a systematic approach to communicating with families; therefore, there is an ever present need for a district level employee to oversee that development and to provide support as needed. District level employees should develop trainings and provide support on aspects discovered in this study, including ways to make parents feel welcomed, ways to work around language barriers, ways to use technology tools to communicate with families, and ways to increase the effectiveness of some technology tools.

Based on the researcher's experience, the school district has a need for more technological support of online capabilities for parents to electronically "attend" meetings. Since parents have limited time to be physically present at the school, the potential of an online meeting may save parents time. The district level Title I office should reallocate staff members so that there is one person who leads the charge of increasing family engagement by providing support to schools as needed.

### **Recommendations for Future Research**

If this study were to be replicated, there are a few modifications that should be made. First, this study would be funded by a grant so that the researcher would not have to serve dual roles. The researcher could focus on unbiased data collection, while the administrator could concentrate on the planning phase and intervention cycle with more fidelity. In addition, the grant could provide stipends for parents to participate in this



study so that an adequate amount of data could be collected.

The next adjustment would be made concerning the intervention cycle. As noted in the *School, Family, and Community Partnerships* handbook, the whole plan should last three to five years. It would be ideal for parents to receive the pre-survey before beginning year one. Then the administrators would be able to implement the intervention cycle during years one through five and the parents would be given the post-survey at the end of year five to evaluate the effectiveness of the plan.

This study should be also be replicated at numerous other schools, with the intention of selecting different types of schools. This study evaluated 51 parents for the qualitative Parent Communication Survey and nine parents for the quantitative focus groups. Data collection with a larger number of parents would provide more statistical power to identify themes outlined in this study and would identify additional themes not noted in this study.

### **Concluding Remarks**

The lack of data collected in this study symbolizes the challenge of increasing the parental participation at Blythe. The return rate and limited participation of parents in the focus group sessions poignantly point to the difficulty of having parents involved even with many requests and increased communications.

The use of technology is an important tools for school administrators to use when building partnerships. School administrators need to become active participants in encouraging the use of technology for communication between parents and schools. Communication between schools and families is essential for building relationships that foster family engagement. With the shift of terminology and practices relating to family

engagement, there must also be a shift in administrative approaches to achieve full partnerships. As the relationship between parents and schools becomes more connected, student achievement increases. For school leaders, the ability to create and implement an effective family engagement model is an essential component of increasing student achievement in the school. School leaders must use research, such as the Hoover-Dempsey and Sandler (1995) model, which suggests that positive parent perceptions of invitations to involvement cultivate actual parent participation in schools.

Technology may play an important role in influencing parents' decisions regarding their engagement. Technology provides promising avenues for disseminating information to parents (Constantino, 2003; Decker & Decker, 2003) and creating effectual family engagement. The benefits of engaging families are abundant. The findings in this study should be used as a guide during the planning phase of future studies relating to this topic.

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## Appendix A

### Parent Communication Pre Survey

The following survey regarding communication between schools and parents/guardians is an important part of a research study conducted by Mrs. Beasley. Every parent will only complete one survey, even if you have more than one child at this school please only complete one survey. **Think back to the beginning of this school year, August 2014, and respond to the items based on your personal experience with the school.** All answers will be kept confidential and will be used to guide home to school communication improvement.

#### Part I. Demographic Information

Check the box next to your response to the following items.

##### Relationship to child:

Mother \_\_\_  
 Father \_\_\_  
 Stepmother \_\_\_  
 Stepfather \_\_\_  
 Grandmother \_\_\_  
 Grandfather \_\_\_  
 Other (please describe)  
 \_\_\_\_\_

##### Age:

Under 30 \_\_\_  
 30-39 \_\_\_  
 40-49 \_\_\_  
 50-59 \_\_\_  
 60 or above \_\_\_

##### Family's Income per Year:

Under \$20,000 \_\_\_  
 \$20,000-30,000 \_\_\_  
 \$31,000-40,000 \_\_\_  
 \$41,000-50,000 \_\_\_  
 \$51,000-60,000 \_\_\_  
 \$61,000-70,000 \_\_\_  
 above \$71,000 \_\_\_

##### Marital status:

Single \_\_\_  
 Married \_\_\_  
 Divorce \_\_\_  
 Widowed \_\_\_

##### Language Spoken at Home

English \_\_\_  
 Spanish \_\_\_  
 Portuguese \_\_\_  
 Other \_\_\_

##### Ethnicity:

African American \_\_\_  
 Asian \_\_\_  
 Caucasian \_\_\_  
 Hispanic \_\_\_  
 Multiracial (please indicate which ethnicities  
 \_\_\_\_\_ & \_\_\_\_\_)

##### Highest Level of Education

###### Completed:

Some High School \_\_\_  
 High School Diploma \_\_\_  
 College (Undergrad) \_\_\_  
 College (Graduate) \_\_\_

##### Work Status

Employed Full Time \_\_\_  
 Employed Part Time \_\_\_  
 Manage Home \_\_\_  
 Retired \_\_\_  
 Unemployed \_\_\_

##### Spouse's Work Status

Employed Full Time \_\_\_  
 Employed Part Time \_\_\_  
 Manage Home \_\_\_  
 Retired \_\_\_  
 Unemployed \_\_\_  
 Not Applicable \_\_\_

**Part II. Internet Availability Information**

Check the box next to your response to the following items.

	Yes	No
1) Does your family have an Internet connected computer or tablet?		
2) Do you have a computer at work that allows access to the Internet?		
3) Does your family own a cell phone?		
4) Does your cell phone have the ability to connect to the Internet?		
5) Do you own a Smartphone? (iPhone, Android, can download apps)		

**Part III. Communication and Perceptions**

**6. How well has your child's school communicated the following through the use of technology tools during THE FIRST SEMESTER OF THE SCHOOL YEAR (August to December)?** Circle ONE answer on each line to tell if the school does this: Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).

**My child's school uses technology to ....**

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Ask me to volunteer at the school.	1	2	3	4
b. Send home news about things happening at school.	1	2	3	4
c. Tell me what skills my child needs to learn in Math.	1	2	3	4
d. Tell me what skills my child needs to learn in Reading/Language Arts.	1	2	3	4
e. Invite me to PTA meetings.	1	2	3	4
f. Invite me to a program at the school.	1	2	3	4
g. Ask me to help with fundraising.	1	2	3	4
h. Include opportunities for parents to be included in committees, such as Title I, or Student Council.	1	2	3	4

**7. How much do you agree or disagree with the following statements about your child's school and administrators?** Circle ONE answer on each line to tell if you: Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. This is a very good school.	1	2	3	4
b. I feel welcomed at the school.	1	2	3	4
c. I get along well with my child's administrators.	1	2	3	4
d. The administrators at this school care about my child.	1	2	3	4
e. My child's school uses web pages to tell me about school events.	1	2	3	4
f. Parents are encouraged to play a role in helping this school to be a better place.	1	2	3	4
g. The principal and other school administrators keep the school focused on student learning and promote sustained and continuous improvement. Q1	1	2	3	4
h. The principal and other school administrators are accessible to parents when needed.	1	2	3	4



8. **Do you believe that using the following communication tools keeps you better informed about school programs and the success of your student(s)?** Choose ONE answer on each line to tell if: yes, that type of communication keeps me informed or no, that type of communication does not keep me informed.

	Yes	No
BB Connect (email)		
BB Connect (phone messaging)		
BB Connect (texts)		
Paper		
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here _____</b>		
School App		
Website		

9. **How many times per month do you use each tool?** Choose ONE answer on each line to tell how often you use each tool.

	Never	1-2 times	3-4 times	5 or more times
BB Connect (email)				
BB Connect (phone messaging)				
BB Connect (texts)				
Paper				
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here _____</b>				
School App				
Website				

10. **Which tools do you use to initiate communication or to respond to communications sent from the school (not sent from your child’s teacher)?** Choose ONE answer on each line to tell how often you use each tool per month.

	Never	1-2 times	3-4 times	5 or more times
BB Connect (email)				
BB Connect (phone messaging)				
BB Connect (texts)				
Paper				
School App				
Website				

**11. Please list what makes using these technologies tools easy to use.**

BB Connect (email)	
BB Connect (phone messaging)	
BB Connect (texts)	
Paper	
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here</b>	
School App	

**12. Please list what makes using these technologies tools difficult to use.**

BB Connect (email)	
BB Connect (phone messaging)	
BB Connect (texts)	
Paper	
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here</b>	
School App	

13. Please rank from 1-6 the technology tools that allow the parents to feel informed about school programs and student success, in order, from most informing (1) to least informing (6).

	Write the number below
BB Connect (email)	___
BB Connect (phone call)	___
BB Connect (text)	___
Parent Vue	___
School App	___
Website	___

14. The following statements often are used to describe barriers to why parents are not able to get involved in their child's education. For each statement check how much you agree or disagree that this is a barrier for you. Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I don't speak or understand English.	1	2	3	4
b. I don't have time due to work conflicts.	1	2	3	4
c. I don't have time due to family needs.	1	2	3	4
d. I don't have access to the technologies used.	1	2	3	4
e. I don't know how to use the technologies used.	1	2	3	4
f. I am not comfortable talking to administrators at my child's school.	1	2	3	4
g. I do not feel welcome at the school.	1	2	3	4
h. I do not know how to get involved.	1	2	3	4

Family Identification Code \_\_\_\_\_

**Appendix B**  
**Parent Communication Post Survey**

The following survey regarding communication between schools and parents/guardians is an important part of a research study conducted by Mrs. Beasley. Every parent will only complete one survey, even if you have more than one child at this school please only complete one survey. **Think back to the experience this school year and respond to the items based on your personal experience with the school.** All answers will be kept confidential and will be used to guide home to school communication improvement.

**Part I. Demographic Information**

Check the box next to your response to the following items.

<b><u>Relationship to child:</u></b>	<b><u>Age:</u></b>	<b><u>Family's Income per Year:</u></b>
Mother ___	Under 30 ___	Under \$20,000 ___
Father ___	30-39 ___	\$20,000-30,000 ___
Stepmother ___	40-49 ___	\$31,000-40,000 ___
Stepfather ___	50-59 ___	\$41,000-50,000 ___
Grandmother ___	60 or above ___	\$51,000-60,000 ___
Grandfather ___		\$61,000-70,000 ___
Other (please describe) _____		above \$71,000 ___

**Highest Level of Education Completed:**

**Work Status**

**Spouse's Work Status**

Some High School ___	Employed Full Time ___	Employed Full Time ___
High School Diploma ___	Employed Part Time ___	Employed Part Time ___
College (Undergrad) ___	Manage Home ___	Manage Home ___
College (Graduate) ___	Retired ___	Retired ___
	Unemployed ___	Unemployed ___
		Not Applicable ___

**Marital status:**

**Language Spoken at Home**

**Ethnicity:**

Single ___	English ___	African American ___
Married ___	Spanish ___	Asian ___
Divorce ___	Portuguese ___	Caucasian ___
Widowed ___	Other ___	Hispanic ___
		Multiracial (please indicate which ethnicities _____ & _____)

**Part II. Internet Availability Information**

Check the box next to your response to the following items.

	Yes	No
1) Does your family have an Internet connected computer or tablet?		
2) Do you have a computer at work that allows access to the Internet?		
3) Does your family own a cell phone?		
4) Does your cell phone have the ability to connect to the Internet?		
5) Do you own a Smartphone? (iPhone, Android, can download apps)		

**Part III. Communication and Perceptions**

**6. How well has your child's school communicated the following through the use of technology tools during THE ENTIRE SCHOOL YEAR? Circle ONE answer on each line to tell if the school does this: Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).**

**My child's school uses technology to ....**

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Ask me to volunteer at the school.	1	2	3	4
b. Send home news about things happening at school.	1	2	3	4
c. Tell me what skills my child needs to learn in Math.	1	2	3	4
d. Tell me what skills my child needs to learn in Reading/Language Arts.	1	2	3	4
e. Invite me to PTA meetings.	1	2	3	4
f. Invite me to a program at the school.	1	2	3	4
g. Ask me to help with fundraising.	1	2	3	4
h. Include opportunities for parents to be included in committees, such as Title I, or Student Council.	1	2	3	4

**7. How much do you agree or disagree with the following statements about your child's school and administrators? Circle ONE answer on each line to tell if you: Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).**

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. This is a very good school.	1	2	3	4
b. I feel welcomed at the school.	1	2	3	4
c. I get along well with my child's administrators.	1	2	3	4
d. The administrators at this school care about my child.	1	2	3	4
e. My child's school uses web pages to tell me about school events.	1	2	3	4
f. Parents are encouraged to play a role in helping this school to be a better place.	1	2	3	4
g. The principal and other school administrators keep the school focused on student learning and promote sustained and continuous improvement.	1	2	3	4
h. The principal and other school administrators are accessible to parents when needed.	1	2	3	4

8. Do you believe that using the following communication tools keeps you better informed about school programs and the success of your student(s)? Choose ONE answer on each line to tell if: yes, that type of communication keeps me informed or no, that type of communication does not keep me informed.

	Yes	No
BlackBoard Connect (email)		
BlackBoard Connect (phone messaging)		
BlackBoard Connect (texts)		
Paper		
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here _____</b>		
School App		
Website		

9. How many times per month do you use each tool? Choose ONE answer on each line to tell how often you use each tool.

	Never	1-2 times	3-4 times	5 or more times
BlackBoard Connect (email)				
BlackBoard Connect (phone messaging)				
BlackBoard Connect (texts)				
Paper				
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here _____</b>				
School App				
Website				

10. Which tools do you use to initiate communication or to respond to communications sent from the school (not sent from your child's teacher)? Choose ONE answer on each line to tell how often you use each tool per month.

	Never	1-2 times	3-4 times	5 or more times
BlackBoard Connect (email)				
BlackBoard Connect (phone messaging)				
BlackBoard Connect (texts)				
Paper				
School App				
Website				

**11. Please list what makes using these technologies tools easy to use.**

BlackBoard Connect (email)	
BlackBoard Connect (phone messaging)	
BlackBoard Connect (texts)	
Paper	
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here</b>	
School App	

**12. Please list what makes using these technologies tools difficult to use.**

BlackBoard Connect (email)	
BlackBoard Connect (phone messaging)	
BlackBoard Connect (texts)	
Paper	
Parent Vue (grades and attendance only for 4 <sup>th</sup> and 5 <sup>th</sup> grade students) <b>If you do not have a 4<sup>th</sup> or 5<sup>th</sup> grader please check here</b>	
School App	

13. Please rank from 1-6 the technology tools that allow the parents to feel informed about school programs and student success, in order, from most informing (1) to least informing (6).

	Write the number below
BlackBoard Connect (email)	_____
BlackBoard Connect (phone call)	_____
BlackBoard Connect (text)	_____
Parent Vue	_____
School App	_____
Website	_____

14. The following statements often are used to describe barriers to why parents are not able to get involved in their child’s education. For each statement check how much you agree or disagree that this is a barrier for you. Strongly Agree, (1), Agree (2), Disagree, (3), Strongly Disagree (4).

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I don’t speak or understand English.	1	2	3	4
b. I don’t have time due to work conflicts.	1	2	3	4
c. I don’t have time due to family needs.	1	2	3	4
d. I don’t have access to the technologies used.	1	2	3	4
e. I don’t know how to use the technologies used.	1	2	3	4
f. I am not comfortable talking to administrators at my child’s school.	1	2	3	4
g. I do not feel welcome at the school.	1	2	3	4
h. I do not know how to get involved.	1	2	3	4

Family Identification Code \_\_\_\_\_



**Appendix C**

**Flyer for Focus Group Sessions**

Dear \_\_\_\_\_,

I would love for you to be a part of our parent focus group regarding using technology to increase parental involvement. On \_\_\_\_\_ we will have a short, one hour meeting from \_\_\_\_\_. Please let me know if you would be able to attend this session.

If you attend this session you will be entered into a drawing for a gift card.

I will attend the:

\_\_\_\_\_ scheduled session

\_\_\_\_\_ I cannot attend the session. But, I am available in the morning/evening

on \_\_\_\_\_.

day of the week

Thanks,

Ashley Beasley

Assistant Principal

## Appendix D

### Focus Group Questions for Parents

During this focus group I will ask questions and facilitate a conversation about how administrators can use technology tools to increase family engagement. Please keep in mind that there are no “right” or “wrong” answers to any of the questions I will ask. The purpose is to stimulate conversation and hear the opinions of everyone in the room. I hope you will be comfortable speaking honestly and sharing your ideas with us. Please note that this session will be recorded and Ms. Phillips will be taking notes during the focus group to ensure we adequately capture your ideas during the conversation. However, the comments from the focus group will remain confidential and your name will not be attached to any comments you make. Do you have any questions before we begin?

1. What grade is/are your student(s) in?
2. What experiences have you had that make you feel welcome /unwelcome at this school? Probe: Provide specifics of when you felt welcome or unwelcome.
3. Do you think communication from the school administrators encourages parental involvement? (How? or Why not?)
4. How have we used technology to make you feel welcomed at this school?
5. Tell the great things about technology that helps you to understand what’s going on?
6. Do other parents feel welcome at this school? What do other parents say?
7. What are reasons parents would not be involved at this school?
8. How are you involved? Discuss the ways that you are currently involved. What are the biggest problems in terms of getting more involved with your child’s education at school?
9. What could the school do to get more parents involved? Probe: What technology tools could the school use to get more parents involved?
10. How would you describe communication between the school and the parents? Probe: Administrators and parents?
11. Think back to the last time you had contact with the school either about school activities or your child’s performance:
  - a. What was the nature of that contact and how did it occur?
  - b. How else does your school communicate with you?
  - c. How do these ways work for you?
  - d. How do you communicate with the school?
  - e. To what extent is your child your source of information?
12. What is your preferred method of communicating between home and school? Why? Probe: preferred method of communicating with technology? Why?
13. Which technology tools allow you to feel the most informed and why?
14. How does the school usually keep you informed about what’s going on with your child and how to get involved with your child’s education? Is most of the communication done by phone, in person, email, regular mail, website, Blackboard Connect, School App, etc.?
15. What has the school done that is most helpful in terms of making it easier for you to understand how your child is doing in school? Probe: Using technology?
16. What would you like to see your child’s school do in order to make it easier for you to understand how your child is doing and to get more involved in your child’s education? Probe: Any technology tools/components that would accomplish that?

17. Please discuss your use of the following technology tools. Describe how these tools allow you to feel informed about school programs and student success.
  - a. Blackboard Connect email
  - b. Blackboard Connect phone call
  - c. Blackboard Connect text
  - d. Parent Vue
  - e. school App
  - f. website
18. Which components make the following technology tools convenient or easy to use?  
When you use \_\_\_ what makes it easy to use? Why?
  - a. Blackboard Connect email
  - b. Blackboard Connect phone call
  - c. Blackboard Connect text
  - d. Parent Vue
  - e. school App
  - f. website
19. What are the biggest barriers that prevent or hinder you from using technology to communicate with the school?
20. Which components limit your use of the following technology tools? What are the biggest barriers that prevent or hinder you from using technology to communicate with teachers?  
When you use \_\_\_ what makes it difficult or inconvenient to use? Why didn't you use this tool?
  - a. Blackboard Connect email
  - b. Blackboard Connect phone call
  - c. Blackboard Connect text
  - d. Parent Vue
  - e. school App
  - f. website
21. Which communication tool provides the best access to both school-to-home and home-to- school communications?
22. Which communication tool provides little or no access to both school-to-home and home- to- school communications?
23. Please take a moment and elaborate on how these technology tools used by your school administrators has changed communication between home and school.
24. What can the school do to encourage you to use technology to communicate? How can the school overcome parent barriers to using technology to communicate? Q4
25. Discuss the administrators' use of emerging technology tools to facilitate better home- school communications.

Note: If participants aren't discussing components that help or hinder their use, I will provide specific follow up questions that will address the constraints and affordances of each tool. (May prompt with prepared sheet of constraints and affordances of each technology tool.)

**Appendix E****Consent for Focus Group Sessions****Title of Research Study: Administrators using Technology to Increase Family Engagement****Researcher's Contact Information:**

<b>Researcher's Contact Information:</b>	
Primary Investigator:	Faculty Advisor:
Ashley Beasley	Dr. Laurie Brantley-Dias, Ph. D.
770-578-7936	470-578-2747
Ashley.Beasley@cobbk12.org	ldias@kennesaw.edu

**Introduction**

You are being invited to take part in a research study conducted by Ashley Beasley of Kennesaw State University. Before you decide to participate in this study, you should read this form and ask questions about anything that you do not understand.

**Description of Project**

The purpose of the study is to utilize new technology approaches to increase school to home communication and to determine what emerging technologies facilitate better home-school and school-home communication and family engagement. For school leaders, the ability to create and implement an effective family engagement model is an essential component of increasing student achievement in the school.

**Explanation of Procedures**

If you decide to participate in this research study, you will be asked to complete a 90 question multiple choice survey in January and again in May. In addition, you may be asked to join a parent focus group where we will meet at Powers Ferry Elementary School for one hour to discuss family engagement. You may also complete an anonymous 29 short-answer or multiple-choice questionnaire when you attend a PTA event. You may decide to take part in all of these activities if selected for all, or you may choose to participate in only one or two.

**Time Required**

The short parent communication survey will take less than twenty minutes to complete. The focus group will last one hour. The questionnaires will take less than five minutes to complete.

**Risks or Discomforts**

You will not experience risk or discomforts beyond what is experienced in a normal day of life.

Your research is voluntary. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may elect or decline to answer questions or stop participating at any time without penalty.

**Benefits**

The benefits for participants will include satisfaction of knowing that you helping improve two-way communication from home to school. Participants will also help administrators learn more about using technology to increase two-way home to school communication.

**Compensation**

All participants who complete the surveys or attend the focus group will be entered into a drawing for a gift card.

**Confidentiality**

The researcher will assign a family identification number to eliminate including participant names on study records. Participant names and other facts that might point to individual participants will not appear when the study is presented or published. The findings will be summarized and reported in group form, not based on individual responses. Participants will not be identified personally. Focus group participants will be asked not to reveal what was discussed in the focus groups. However, the researcher does not have complete control of the confidentiality of the data.

The researcher will keep records private to the extent allowed by law. Information may also be shared with those who ensure the study is performed correctly and ethically (KSU Institutional Review Board). Digital data will be stored in a cloud (Dropbox) and on the researcher's personal hard drive, both requiring a secure login or access to a password and firewall protected computer. Analysis of survey data through Atlas Ti and SPSS will be stored on the researcher's computer and on KSU's password and firewall protected computers. All data will be destroyed 5 years after the study's completion in July of 2020. Any paper files of raw data will be shredded at that time, and digital and audio files will be deleted or erased to ensure confidentiality.

**Inclusion Criteria for Participation**

Only participants 18 or older may partake in this study.

**Statement of Understanding**

The purpose of this research has been explained and my participation is voluntary. I have the right to stop participation at any time without penalty. I understand that the research has no known risks, and I will not be identified. By completing this survey, I am agreeing to participate in this research project.

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THIS PAGE MAY BE REMOVED AND KEPT BY EACH PARTICIPANT

Research at Kennesaw State University that involves human participants is carried out under the oversight of an Institutional Review Board. Questions or problems regarding these activities should be addressed to the Institutional Review Board, Kennesaw State University, 585 Cobb Avenue, KH3403, Kennesaw, GA 30144-5591, (470) 578-2268.

**Appendix F**

**Demographics Questionnaire for Focus Groups**

Name \_\_\_\_\_ Male/Female

Race \_\_\_\_\_ Language Spoken at Home \_\_\_\_\_

Child's Name \_\_\_\_\_ Child's Grade Level \_\_\_\_\_

Child's Name \_\_\_\_\_ Child's Grade Level \_\_\_\_\_

Focus Group Session Attended: Date \_\_\_\_\_ Time \_\_\_\_\_

Parent # \_\_\_\_\_

**Appendix G**

**PTA Questionnaire**

**School App**- Apple or Android (Circle One)

1. Have you downloaded the school app?  Yes  No

2. If yes, how often do you access it? Place a check in the column next to your response.

Daily	
Weekly	
Every Other Week	
Never	
Only When Updates are Sent	

3. If you are not using the school app, what impedes your use?

\_\_\_\_\_

4. If you are using the school app, why do you choose to use this tool? \_\_\_\_\_ -

\_\_\_\_\_

5. Which elements of the school app allow you to feel most informed about school programs and/or student success? \_\_\_\_\_

\_\_\_\_\_

**School Website**- accessed mostly from desktop or mobile device (Circle One)

6. How many times have you visited the school website this school year? Place a check in the column next to your response.

1-3 times	
4-6 times	
7-9 times	
10-12 times	
13-15 times	
16-18 times	
19-21 times	
22-24 times	
Over 24 times	

7. If you are not using the school website weekly, what impedes your use?

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8. If you are using the school website, why do you choose to use this tool?

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9. Which elements of the school website allow you to feel most informed about school programs or student success?

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**Parent Vue (Grades and Attendance for 4<sup>th</sup> and 5<sup>th</sup> Grade Students)**

10. Only answer this question if you have a 4<sup>th</sup> or 5<sup>th</sup> grade student. How many times have you visited ParentVue (for grades and attendance) this school year?

Place a check in the column next to your response

I don't have a 4 <sup>th</sup> or 5 <sup>th</sup> Grade student	
1-3 times	
4-6 times	
7-9 times	
10-12 times	
13-15 times	
16-18 times	
19-21 times	
22-24 times	
Over 24 times	

11. If you are not using Parent Vue weekly, what impedes your use?

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12. If you are using Parent Vue website, why do you choose to use this tool?

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13. Which elements of the Parent Vue allow you to feel most informed about school programs or student success? \_\_\_\_\_

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**Blackboard Connect Phone Calls**

14. When you receive a call from the school with an automated message from blackboard connect, do you:

Place a check in the column next to your response.

Listen to the entire message	
Listen to the beginning of the message	
Delete the message	
I never receive a message	

15. What do you think about the frequency of phone calls from the school?

Place a check in the column next to your response.

Too many phone calls	
Just the right number of phone calls	
Not enough phone calls	
I never receive any phone calls	

16. If you are not using the phone portion of Blackboard Connect, what impedes your use?
- 

17. If you are using the phone portion of Blackboard Connect, why do you choose to use this tool? \_\_\_\_\_

18. Which elements of the phone portion of Blackboard Connect allow you to feel most informed about school programs or student success? \_\_\_\_\_
- 

**Blackboard Connect Texts**

19. When you receive an automated text message from blackboard connect, do you:

Place a check in the column next to your response.

Listen to the entire text	
Listen to the beginning of the text	
Delete the text	
I never receive a text	

20. What do you think about the frequency of text messages from the school?

Place a check in the column next to your response.

Too many texts	
Just the right number of texts	
Not enough texts	
I never receive any texts	

21. If you are not using the texting portion of Blackboard Connect, what impedes your use?

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22. If you are using texting portion of Blackboard Connect, why do you choose to use this tool?

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23. Which elements of the texting portion of Blackboard Connect allow you to feel most informed about school programs or student success? \_\_\_\_\_

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### **Blackboard Connect Emails**

24. When you receive an email from the school with an automated message from blackboard connect, do you:

Place a check in the column next to your response.

Listen to the entire message	
Listen to the beginning of the message	
Delete the message	
I never receive a text	

25. What do you think about the frequency of emails from the school?

Place a check in the column next to your response.

Too many emails	
Just the right number or emails	
Not enough emails	
I never receive any emails	

26. If you are not using the email portion of Blackboard Connect, what impedes your use?

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27. If you are using email portion of Blackboard Connect, why do you choose to use this tool?

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28. Which elements of the email portion of Blackboard Connect allow you to feel most informed about school programs or student success? \_\_\_\_\_

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### **General Questions**

29. How do the administrators make you feel, through technology based communications, about being welcomed at Blythe?

Place a check in the column next to your response.

I feel welcome at any time	
I sometimes feel welcome	
I feel welcome when invited for a specific occasion	
I never feel welcome	

**Appendix H**  
**Changes Made to the Parent Survey of Family and Community Involvement in the Elementary and Middle Grades**

Category	Questions Omitted	Questions Added
Demographics	When was your child born? Month/Year Is your child at this school a girl or boy?	Family's income per year
Internet Availability Information	None	Does your family have an Internet connected computer or tablet? Do you have access to a computer at work that allows Internet access? Does your family own a cell phone? Does your family's cell phone have the ability to connect to the Internet? Do you own a Smartphone?
Communications and Perceptions	Helps me understand my child's stage of development? Tells me how my child is doing in school? Explains how to check my child's homework. Tells me what skills my child needs to learn in science. Assigns homework that requires my child to talk with me about things learned in class. Has a parent-teacher conference with me.	None
Communications and Perceptions- Question 2	Explains how to check my child's homework. Tells me what skills my child needs to learn in Science. Assigns homework that requires my child to talk with me about things learned in class. Your Involvement How often do you? Your Ideas It is a parent's responsibility to....	My child's school uses web pages to tell me about school events. *Parents are encouraged to play a role in helping this school to be a better place. *The principal and other school administrators keep the school focused on student learning and promote sustained and continuous improvement. *The principal and other school administrators are accessible to parents when needed. *School leadership has created an environment in which staff, parents, and community are in partnership to promote student achievement.

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	Connections with Other Parents Think of 5 parents who have children in your child's school. Describe how often you.....	*The overall school culture provides support and practices that provide for the academic achievement of all learners. Explains how to check my child's homework.
Communications	None	Questions about the communication tools (question 8, 9, 10, 11, 12, 13)
Communications and Perceptions- Question 6	None	Asks about barriers to family engagement I don't have time due to work conflicts. I don't have time due to family needs. I don't know how to help my child. I think that it is the school's job to educate my child. I am not comfortable talking to teachers or staff members at my child's school. I do not feel welcome at the school. I do not know how to get involved.
Communications and Perceptions- Question 2	Explains how to check my child's homework. Tells me what skills my child needs to learn in Science. Assigns homework that requires my child to talk with me about things learned in class. Your Involvement How often do you? Your Ideas It is a parent's responsibility to.... Connections with Other Parents Think of 5 parents who have children in your child's school. Describe how often you.....	My child's school uses web pages to tell me about school events. *Parents are encouraged to play a role in helping this school to be a better place. *The principal and other school administrators keep the school focused on student learning and promote sustained and continuous improvement. *The principal and other school administrators are accessible to parents when needed. *School leadership has created an environment in which staff, parents, and community are in partnership to promote student achievement. *The overall school culture provides support and practices that provide for the academic achievement of all learners. Explains how to check my child's homework.
Communications	None	Questions about the communication tools (question 8, 9, 10, 11, 12, 13)
Communications and Perceptions- Question 6	None	Asks about barriers to family engagement I don't have time due to work conflicts. I don't have time due to family needs. I don't know how to help my child. I think that it is the school's job to educate my child. I am not comfortable talking to teachers or staff members at my child's school. I do not feel welcome at the school. I do not know how to get involved.

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