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Using Email to Improve Parental Involvement in Middle School

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Abstract

The purpose of this study was to test the relationship between the type of school-to-home communication (regularly sent, structured emails versus ad hoc emails), the originator of these emails (teacher or student), and Parental Involvement (PI) as measured according to the frequency of email contact and distribution of student and parent emails among the tested population, as well as pretest and posttest survey data of PI. As technology advances, schools have the opportunity to communicate more often with parents through school websites, classroom web pages, and teacher email rather than face-to-face meetings and letters. Schools can take advantage of technology to improve school-to-home communications and positively affect PI. The literature review found that ad hoc emails between teachers and parents positively affected PI; parents communicated more often with teachers (Bouffard, 2006; Reed, 2008). However, the research only looked at parents' behavioral involvement in communicating about their child's academic development and did not consider a broader definition of PI to include their child's cognitive and personal development. Previous research has not studied email communication to include the regularity or structure of school-to-home emails. In addition, the research did not consider whether the child in the communication exchange added an affective element to the communication beyond that of the teacher. The current study used Grolnick, Benjet, Kurowski, and Apostoleris's (1997) theory of PI that consists of Behavioral, Cognitive-intellectual, and Personal variables to identify type and degree of PI. The study randomly assigned three eighth-grade classrooms to one of three conditions: a) structured, bi-weekly emails from the teacher that included messages about the behavioral, cognitive-intellectual, and personal development of children in the eighth grade; b) the same bi-weekly emails as in (a) but sent by students in the second class; and c) no regular emails from the teacher or students of the

third class. A pretest and posttest survey, the Modified Parental Involvement Scales (MPIS), based on Grolnick, Kurowski, Dunlap, and Hevey (2000) identified type and degree of PI as perceived by parents and students. Students rated PI significantly lower than their parents in the three dependent measures. Posttest scores were little changed from the pretest with the exception of the No Email group having significantly lower Behavioral posttest scores than the pretest results. Analysis of individual survey variables found 25 of 39 questions significantly different between parents and students. Core classroom teachers and the middle school principal recorded the total number of emails by class that they received from parents during the semester of the study. The number of emails received from parents during the study was very low, which is consistent with other literature (Bouffard, 2006; Thompson, 2008). Additionally, PI ratings were low on the Behavioral (School involvement) measure. Qualitative data found that parents were favorable to their children being involved in the communication process, and they preferred regular, consistent, and thorough communication from their child's teachers. More research is needed to test if an email treatment can have favorable effects on PI. Educators and researchers need to continue to investigate treatments in communications to encourage and support PI.

Chapter 1

Introduction and Literature Review

How can schools encourage parental support of middle school students during their transition years of adolescence? Middle school is an important time in the education of a child because students are going through physical, emotional, and intellectual changes while seeking greater autonomy and self-sufficiency (Ouimette, Feldman, & Tung, 2004). Although parental support for a child's academic success is important, middle school students need support in all areas of their lives (Grolnick et al., 1997). As such, parental support and involvement during adolescence can have life-changing outcomes. Research, however, has shown that parental support tends to drop off as students move into middle school and high school (Epstein, 1995). Studies have shown that improving school-to-home communication is an effective means of increasing PI with their adolescent children (Bouffard, 2006; Bridgemohan, van Wyk, & van Staden, 2005; Epstein & Dauber, 1991; Miretzky, 2004; Rutherford & Billig, 1995).

Schools should consider how to maximize modern technology of email to improve school-to-home communications and thereby encourage PI. Improved communications between schools and parents can positively affect PI in both academic and non-academic areas (Bouffard, 2006). Communications can be improved by addressing the content, consistency, and communication flow pattern (Reed, 2008; Walther, 1995). Email provides educators with the opportunity to address all of these areas (Adams & Christenson, 2000). Email offers educators the opportunity to design communications formats to include a broad range of issues that address intellectual and personal growth of the student. Teachers can deliver information to parents on how to encourage students with further study of particular fields, as well as provide parents with

resource information on developmental issues of adolescent growth. Email also provides schools the opportunity to provide regular communiqués with a consistent structure, giving parents a steady flow of recognizable school-to-home communications.

Communicating via email with parents also presents additional advantages for educators. Given its asynchronous nature, email allows for communication to transcend time and individual schedules (Thompson, 2009). Email allows parents to read communications when they have time to do so, either on the way to work via PDA or while on a break at work. Although parents may not be able to meet teachers face-to-face, many would still be able to communicate regularly with teachers through an email exchange. Additionally, the nature of email decreases social presence (Madrid, 1999). Thus, parents who may be hesitant to communicate in person with teachers may find it easier to do so by email. For those parents and others who are unable to meet with teachers due to scheduling conflicts or distance limitations, communicating by email may increase parent-teacher interaction and rapport and aid in the development of trust between parents and teachers (Blanchard, 1997, November; Cross, Borgatti, & Parker, 2002).

This study was the first research study that tested an email treatment with parents and students of an international school as the population. The results may serve as a prototype for other international and U.S. schools because this study used a population that is on the leading edge in computer-mediated communications (CMC) in two areas. First, all parents of students at International Community School (ICS) were connected by email; ICS parents must submit an email address as a part of the registration process and must use the internet to access report cards through the online grading system, Renweb. All ICS parents and secondary students had personal email accounts and many had mobile phones with Internet capability. Second, parents

and students of ICS were knowledgeable in tools of technology; parents and students understood how to use various information sources that the school provides online, such as grade reporting and posting of homework. Thus, this population met the basic requirement of email connectivity and sufficient technological awareness to use the Internet and email communications capably. In time, as connectivity and access to the Internet improve worldwide and parents' technological awareness grows, the results of this study may be significant to systems that desire to improve communications through email.

Literature Review

Defining Parental Involvement

Research on PI has often focused on what parents do when their children are struggling in school, or how parents help children with homework (Bailey, Silvern, Brabham, & Ross, 2004; Hoover Dempsey et al., 2005; Kirkbride, 2002; Lewis, 2003; Shayne, 2008; Van Voorhis, 2003). Other research has focused on parents being involved in students' education when the students were having trouble with behavioral issues in schools (Hill et al., 2004; Hoover-Dempsey & Sandler, 1997; McNeal, 1999). These studies have identified an approach to PI that is essentially a response to "negative communication" from either the school or the student. Miretzky (2004) noted that negative communication puts parents on the defensive when they speak to teachers. Parents often have little time to formulate constructive responses when confronted in a face-to-face conference or when talking with a teacher on the phone about a problem with their child. Conversely, research has shown when parents received school-to-home communications of a positive nature, parents tended to be more involved in their children's education (Hoover-Dempsey & Sandler, 1997).

Eccles and Harold's (1993) research supported the need for the development of parent-teacher relationships in order to increase PI in all areas of adolescent students' development. Eccles' et al. (1996) longitudinal research of 1,500 middle school students indicated that although students desired more freedom from adults, they did not want to be emotionally detached from them. The study also found that children developed best when increasing opportunities for autonomy and decision-making occurred in emotionally supportive environments. Educators need to focus on how parents and schools can be proactive in identifying and building the proper environments that meet their children's needs (Hoover-Dempsey & Sandler, 1997).

Parental involvement that is proactive means that parents and schools are equally concerned about the student's overall academic, cognitive, and personal development (Grolnick et al., 1997) rather than performing particular discrete tasks such as supervising their children's homework and the time that they study for tests. Proactive schools involve parents by focusing on the development of the "whole person," and use a more positive and broader base of content in communications in order to include all areas of child development. Grolnick et al. defines PI to include involvement not only in academic areas, but also in cognitive-intellectual stimulation as well as issues of a child's personal growth. Grolnick and Slowiaczek's (1994) work on PI in children's schooling focused on areas of behavioral, cognitive-intellectual, and personal involvement.

Grolnick's et al. (1997) conception of parental involvement. According to Grolnick et al. (1997), the first category of PI is that of parent behavioral involvement in relation to the child's educational experiences. While this term may appear to refer to the child's behavior,

"behavioral involvement" is not primarily concerned with the child's discipline issues, but rather how the parent behaves in a proactive, participatory way in educational activities at school and at home. For example, behavioral involvement concerns frequency of attending parent-teacher conferences and school activities, helping children with homework, asking students and teachers about completion of schoolwork, and frequency of checking grades on-line. Grolnick et al. (2000) divided the behavioral category into two distinct areas, school involvement and home involvement. School involvement included parental behavior of involvement in the child's academic experiences at school with school activities and school personnel. Home involvement included parental behavior of involvement at home concerning the child's academic experiences. Parental involvement at home is considered to be a necessary ingredient for building dependable relationships between parents, students and their educational experiences (Becker & Epstein, 1982). Ho-Sui Chu & Willms' (1996) study of survey responses from 24,599 parents, teachers, and students from 1,052 nationally represented schools in the National Education Longitudinal Study (NELS) found that discussion at home of school-related activities had the strongest relationship with academic achievement than other types of PI.

The second area of Grolnick's et al. (1997) PI is cognitive-intellectual involvement. Cognitive-intellectual involvement means parents engage in the child's intellectual development through talking about current events, going to the library with the student, buying books/magazines as resources for cognitive development, and discussing issues the student is learning in class. Another way to think of cognitive-intellectual involvement is to think of "content;" to what degree do parents engage and develop their children in response to the content they are learning in school? This area of PI focuses on how parents support their children's development at home and away or apart from school using the content area of particular subjects

that students are learning and discussing in the classroom. Parents' cognitive-intellectual involvement may challenge students to attain higher levels of understanding and broader ranges of knowledge. The remainder of this paper will refer to this category as "Cognitive."

The third area of Grolnick's et al. (1997) PI is personal involvement. Personal involvement includes parental awareness of what is going on in their child's life. Parents become aware of these events and issues as they talk with their children regarding issues of adolescent personal development. Although personal involvement could also seem to be "behavioral," Grolnick delineates this area to items of a more intimate, individual nature. For example, personal issues may include peer-pressure, bullying, sexual development, self-esteem, family relationships, friendships, dating, and student-teacher relationships. Additionally, personal involvement may include aiding in student decision-making about current educational activities, such as extra-curricular activities or course electives, Advanced Placement (AP) and Honors courses, and future decisions such as college and scholarship opportunities.

Schools should not underestimate the area of personal involvement. Cohen, Richardson, and LaBree (1994) suggested that parents who spent time and communicated with their children when they were young built and maintained more positive personal relationships with their children than those who did not. These positive personal relationships were found to be protective factors in the case of substance abuse. Children whose parents established higher levels of trust with them were less likely to engage in smoking and substance abuse (Cohen et al., 1994). In the educational setting, Bouffard (2006) found that parents who were more involved with their children's educational experiences and who communicated more with teachers had better relationships with their children.

The remainder of this paper will refer to Grolnick's et al. (1997) definition of PI due to Grolnick's focus on positive aspects of student development and the link between positive communications and PI. The subsets will be referred to as Behavioral, Cognitive, and Personal. The researcher hypothesizes that regular, structured communication may have a positive effect on all three of Grolnick's areas of PI, resulting in positive support for student development during adolescence.

Parental Involvement in Middle School

Adolescents experience changes across a wide spectrum from physique to family relationships, peer dynamics, and academic expectations (Ouimette et al., 2004). Students need support in building confidence and resilience, self-efficacy, and a sense of the value and importance of their contributions to society. As adolescents mature and grow more independent, their ability to make wise choices has greater consequences. A sense of parental support and involvement in an adolescent's life aids in the development of a more open relationship in which parents can positively model and guide students in making choices (Burgis, 2000; Epstein, 1995). Coleman (1961) discussed the need for closure among students and their parents to develop a higher level of trust, and thus create a more significant relationship and ability influence their children. This closure happens as individuals spend time together regularly discussing topics and sharing concerns (Falk & Harrison, 1998) and are able to have a sense of security with others (Bandura, 2006).

Even though students need the support of parents and other adults during their transition through adolescence, research has shown that as students move from elementary into middle school, parent involvement in their children's education tends to diminish in various academic

areas (Becker & Epstein, 1982; Roeser, 1994). Becker and Epstein (1982) found that PI in reading at home dropped significantly from first to fifth grades. Parents were also less involved in discussing school-related events at home after children graduated from elementary school. Research has shown many reasons for this drop in PI during middle schools years. Some parents felt their adolescent children played a more active role in their own education and had more autonomy (Hill & Tyson, 2009; Stevenson & Baker, 1987). Parents said they did not have time to be more involved (Drummond & Stipek, 2004). Parents also reported a lack of trust in teachers and schools, and questioned whether they held their children's best interests at heart. As a result, parents indicated losing their interest in being involved with the school (Eccles & Harold, 1993; Lareau, 2004). Other parents reported they did not know how to help their children (Hoover-Dempsey & Sandler, 1997) and did not know how to obtain resources when homework or projects required an education beyond the parents' experiences (Dauber & Epstein, 1993). However, research on PI (Drummond & Stipek, 2004; Eccles & Harold, 1993; Epstein, 1986) indicated that parents of all social-economic levels desired to be involved in their children's lives, and believed it was their responsibility to do so (Hoover-Dempsey & Sandler, 1997).

Parental support and involvement during adolescence can have life-changing outcomes. Research has shown that students had higher levels of academic achievement when parents were involved in their education (Comer & Haynes, 1991; Epstein & Dauber, 1991). Bouffard (2006) conducted a two-year longitudinal study on PI in school communications based on surveys from 1,221 nationally represented schools. Bouffard found a positive relationship between PI and academic achievement, as well as positive parent-child relationships. A student's relationship with his or her parents can influence the student's choices and encourage positive outcomes (Bouffard, 2006).

In addition to parent-student relationships, the quality of relationships as measured by "personal connectedness" between home and schools, may affect the degree of openness or trust that families feel as well as parents' willingness to participate on and off campus in their children's education (Eccles & Harold, 1993; Hoover-Dempsey & Sandler, 1997). Miretzky (2004) found that parents often felt a "disconnect" between homes and schools in that most school-to-home communication was one-way informative communication and did not include parents in the communication exchange nor encourage parents to engage in dialogue. Improving communications in order to affect PI, therefore, means communications must present opportunities for parents to overcome limitations to involvement and to "connect" with schools.

Limitations to Parental Involvement

Drummond and Stipek (2004) found that parents reported a leading reason for their lack of involvement in their children's education was a "disconnect" between homes and schools, resulting from poor communication. However, PI does not occur on its own and several significant limitations separate the degree of involvement desired by schools and parents alike.

Hoover Dempsey et al. (2005) found that parents who felt a lack of trust in schools and in their children's teachers reported a loss of interest in being involved in their children's education. Schools do not wish to discourage parents from being involved in children's education. However, schools inadvertently send out discouraging messages because of poor communications. Random communication patterns and ad hoc communication formats may result in barriers of mistrust and "disconnect" between homes and schools. These barriers of mistrust and disconnect may dictate how parents are involved in their children's education (Hoover-Dempsey & Sandler, 1997). School-to-home communications may limit PI due to the

following: first, an imbalance of content in communications which results in communications that are more negative in nature and less supportive of the student; second, a mismatch in communications expectations; third, a lack of interactive communication exchange; and fourth, a lack of time.

Imbalance of content. First, an imbalance of content in communications may limit PI in that school-to-home communications may be narrow in scope leading teachers and parents to focus only on academic problems or discipline issues. Eccles and Harold (1993) reported that a lack of PI may result from past experiences of receiving only negative communications from the school regarding a child's poor academic performance or misbehavior in school (Bouffard, 2006; Thompson, 2009). Additionally, if communication has a limited scope, the actual communication itself may receive the focus of attention, rather than on how best to help or support the student. A limited scope may cause parents to worry about cultural and language differences between parents and school personnel or the school population (Bridgemohan et al., 2005), or may result in creating social distance, a feeling of an inability of parents to connect with school personnel due to economic or personality differences (Comer & Haynes, 1991). Broadening the content of communications to include Grolnick's areas of cognitive and personal involvement may allow communications to yield a more positive reception from parents in that communication will focus on a proactive support of student needs.

Mismatch in communications expectations. Second, mismatches in expectations of communications between parents and schools may occur concerning the frequency, regularity, and consistency of those communications that may lead to confusion and distrust. A year-long case study of the use of technology in communications by a private school in the mid-western United States showed that parents were frustrated with the inconsistencies of the school's

communications (Shayne, 2008). At times, communications arrived by letter, other times via the school website, and yet other times by Short Message Service (SMS) on the mobile phone. Inconsistency and randomness aided in a drop in the efficacy and efficiency of the school's communications. Rogers (2007) highlighted the gap in communications expectations between information sent and information received by parents. This gap in communications creates a mismatch between how schools believe they are communicating with parents and how parents perceive schools are communicating. Other research has noted a similar mismatch between school and home perceptions of communication (Blackerby, 2004; Bouffard, 2006; Drummond & Stipek, 2004; Halsey, 2005).

Lack of interactive communication exchange. Third, a lack of interactive communication exchange may limit PI due to the nature of the communications. When the nature of school-to-home communications is one-way, PI is, in essence, discouraged. Petroczi, Nepusz, and Bazso (2006) distinguished between receiving virtual help in the form of one-way electronic communication, such as a school website, and that of receiving personal support through a friendship tie and dialogue exchange. In his study on tie-strength of virtual communities, Petroczi et al. noted that support offered to "virtual strangers" could not be compared to support between two friends. For communications to affect PI, help asked for and received must go beyond what is normally expected and invite communication exchange. Without such exchange, individual needs are not met and the expectation to be involved will decrease (Riel & Levin, 1990). Communication exchanges are necessary to understand the differences between parent and school communication expectations in order to allow trust to develop and greater PI to occur.

Lack of time. In addition to the nature of communications, perhaps a more obvious limitation to PI is lack of time. Lack of time to meet with teachers and scheduling conflicts are two of the most identified barriers to PI (Bridgemohan et al., 2005; Lareau, 1987). In the current age, with the prevalence of email and mobile phones, it is highly unlikely that parents and teachers will devote more time toward developing PI through written messages or face-to-face meetings. Schools should look at improving communications through using existing tools of electronic communications and taking advantage of asynchronous communication, which surpasses time and scheduling conflicts.

Development of School-to-home Communications

Epstein & Dauber's research (1991) showed that improved communications are pivotal to improving PI in students' education. School leaders generally agree that improving school communications will build school and parent relationships, and thereby will help to increase PI (Epstein, 1996; Ramirez, 2001). Given the findings from the PI and communication studies, schools should consider building communication programs that promote quality of relationships and lead to trust, openness, and interactions that support shared values and goals (Israel, Beaulieu, & Hartless, 2001; Leithwood & Jantzi, 2000; Osterman, 2000; Sanders & Epstein, 2005). Because PI tends to diminish as children move into adolescence, middle school years are important periods in which schools would be wise to target communications to build parent support for their children's education (Eccles & Harold, 1993; Hoover-Dempsey & Sandler, 1997; Hoy & Sabo, 1998).

As schools gain more understanding of partnership roles among schools and families, schools must work with parents to improve supportive roles of families and communities for

students (Epstein, 1995). Designing effective school-to-home and home-to-school communications is one of Epstein's six types of PI (Epstein, 2001; Sanders & Epstein, 2005); other categories include parenting, volunteering, decision-making, collaborating with community, and learning at home. Effective communications is a key factor because it can influence the other five categories of Epstein's PI paradigm. However, for school-to-home communications to be effective, schools must develop a clear communications plan and implement an effective method of delivering those communications (Ouimette et al., 2004).

Such a communications plan should address the limitations to PI detailed previously: first, an imbalance of content in communications; second, a mismatch in communications expectations; third, a lack of interactive communication exchange; and fourth, a lack of time. An effective communications plan will address the 1) content, 2) consistency, and 3) flow of interactive exchanges through the avenue of regular, structured communications (Freytag, 2001, November). Additionally, efficacy of school-to-home communications delivery may be improved by 4) the asynchronous nature which communications via email presents.

Improving Communications Using a Communications Plan

Content of communications: Email format. Given the breadth and depth of adolescent development (Ouimette et al., 2004), school-to-home communications may build trust with families as communications take on broader content, widening from academic to non-academic, to include areas of cognitive and personal development of students. Increased understanding of how to help students with their studies, added knowledge of what students are learning at school, recommendations for learning activities at home, and suggestions for supporting students in

personal life decisions may positively affect parents' attitudes and degree of involvement (Epstein, 1986).

Research by Epstein (1986) found that parents felt positively toward public elementary schools and were pleased with the work teachers were doing. However, a large majority of parents felt teachers could do more to involve parents at home. Eighty percent of parents said they could spend more time helping their children at home, if educators would show them how to do specific activities. Epstein found that most school-to-home communication was in the form of one-way information about schedules, events, report cards, and emergencies. Grolnick et al. (1997) proposed that teacher intervention move beyond traditional classroom activities, such as homework assignments and working on projects, to broader contexts in attempts to support families in all areas of PI.

Using Grolnick's et al. (1997) theory of PI, the current research structured emails to include a variety of content to include school activities and events, intellectual development issues and resources for parents to encourage cognitive growth, as well as issues of personal development. The researcher hypothesized that a focus on positive and supportive school-to-home communications to include Grolnick's three areas of development would have a positive effect on PI. The design of the structured emails is detailed in the Methods section of this dissertation.

Consistency of communications. Reed (2008) found that weekly email communications to parents improved PI in frequency of communication with teachers, as well as improved positive attitudes toward regular communications from schools. Haythornwaite and Wellman (1998) found in a study of a university computer-science study group that students more

frequently in contact with each other exchanged a greater variety of information and communicated more frequently about their relationships. In a time and space where face-to-face communication is becoming less frequent, email communication can allow individuals to interact regularly and frequently. Riel and Levin (1990) described the presence of response opportunities, in addition to the presence of response obligations, as vital aspects in the success of electronic communities. In other words, the greater the expectation of messages arriving, and the greater the expectation to respond to the message, the more probable the exchanges will be successful. Designing regular school-to-home communications may improve the expectancy of those communications.

Feuerstein (2000) noted that as schools increase contact with parents, often a reciprocal contact from parents would follow. This observation agrees with other research on communication mismatches in which parents feel schools should contact them more often and in schools that believe they are contacting parents often enough. How often is "enough?" Electronic communication does not have to be excessive; Riel and Levin (1990) reported a successful email program with an average of only 1.5 emails per week exchanged between members. However, emails should meet a need of the recipient, have an established goal or purpose, and have an established response opportunity and obligation. Riel and Levin found that these key elements coupled with an organized structure and evaluation opportunity led to successful electronic communication cycles.

Consistency of communications goes beyond regularity and expectancy of message exchanges to that of the look and format of the message itself. In addition to consistent exchanges of communications, school-to-home messages should come in a format that is

likewise consistent in mode and form. As previously noted, parents often feel disconnected when communications are ad hoc, perhaps resulting in dropped messages. Perhaps teachers send home notes when parents are looking for an email message and vice versa. Additionally, parents may be confused when messages come from a wide variety of senders. For example, in a week, the parents may get an email from the director of the school, the guidance counselor, the nurse, the principal, the athletic director, and the teacher. In order to limit confusion and develop school-home partnerships, a consistent messaging exchange from one source may be advantageous for schools.

Communications flow: Interactive and ongoing. Creating a communication exchange environment is possible (Pinkett & O'Bryant, 2003) when the participants "are provided with clearly stated performance goals that indicate what the team is to produce or accomplish" (DuFour & Eaker, 1998, p. 123). Teachers can foster growth of interactive environments by addressing communication tasks between school and home (Picciano, 2002; Pierce, 2004). The resulting communication feedback, whether positive or negative (Webb, Troper, & Fall, 1995), supports decision-making opportunities, thus involving parents in their children's education (Caspe & Lopez, 2006).

Opportunity for communication exchange with parents builds relationships and can be more effective than one-way informational communication because communication exchanges allow greater opportunity for educators to listen to parents' views (Bridgemohan et al., 2005). A teacher email and a resulting response from a student or parent might provide a window for teachers, parents, and students to discuss how the school is educating the "whole person" and allow for dialogue of how to improve classroom performance and student participation in school

activities (Holland & Andre, 1987). Riel and Levin (1990) noted that successful communication cycles contained an element of feedback for evaluation and reflection of the communication exchange. This feedback cycle is often missing when communications take a one-way informational format, such as web page or newsletter.

Improving Communications Using Email

Hawthorne (1998) noted that while face-to-face communications were the desired medium for parent contact, email could aid in scheduling such meetings, provide a written record of communications exchanges, and serve as an alternate way to communicate when personal meetings were not possible (Bouffard, 2006; Hoover-Dempsey & Sandler, 1997). Email provides a means for teachers to communicate with parents that may help overcome barriers such as distance, social anxiety (Comer & Haynes, 1991; Tozer, Violas, & Senese, 2002), language differences (Bridgemohan et al., 2005), and scheduling conflicts (Butler, Uline, & Notar, 2009; Drummond & Stipek, 2004; Miretzky, 2004). Most importantly, email provides an avenue for ongoing communications between home and school (Blanchard, 1997, November; Bouffard, 2006; Follansbee et al., 1997; Grotevant & Cooper, 1985; Haythornthwaite & Wellman, 1998; Kirkbride, 2002; Shayne, 2008).

Ease of access to communications. Use of electronic communications allows relatively easy access to 24-hour, nearly unlimited exchanges of information that do not take place in real time, and are, in other words, asynchronous. Parents, teachers, and students can transmit and access information instantly, repeatedly, whenever and wherever they are, with the appropriate hardware, software, and Internet connection. Accessibility and convenience are two advantages that email has over face-to-face and written communications (Riel & Levin, 1990).

Having only a few available hours in a day as a result of busy schedules significantly limits communication between parents and teachers (Bauch, 2001) . Walther (1995) noted that use of electronic communications enabled participants to have control of the time and the content of their communications. Conversations beginning in one medium can continue over an extended period. Email exchanges intersect with personal meetings, "filling in gaps and making arrangements for future get-togethers," (Wellman et al., 1996, p. 14). Electronic communication technology can support development of communications that transcend time, schedules, presence, and availability.

Frequency of communications. Use of email creates frequent opportunities for positive communication with parents and allows for communication in asynchronous time providing flexibility for working parents (Butler et al., 2009). Reed (2008) found that "technology can be beneficial in increasing communications between school and home," (p. 2) and that email specifically could be beneficial to aid in parent-school communications. According to Wellman (1999), frequency of electronic contact and use of several types of electronic media results in stronger partnerships.

Reed (2008) found that increased email usage initiated by teachers resulted in a significant increase in communication exchanges over a six-week period. This research showed a trend toward more positive attitudes regarding electronic messaging and email use, as well as an increase in teacher and parent communication preferences for email use. Reed found that email increased the number of contacts made between home and school. However, a better question to ask would be the purpose for those contacts and their relationship with PI. A greater number of

contacts may be arbitrary. As Reed stated, one teacher could use a distribution list and count 25 contacts made by distributing the same email to every parent.

Decreased social presence. Wellman's et al. (1996) research with online social groups found that the lack of "social presence," allowing one to distance himself from the individual in a conversation, allowed for more diversity in relationships among members. Use of email lowers social presence and masks social status, thereby enabling parents and students to approach and engage teachers when under normal face-to-face conversations they might feel nervous or intimidated to engage in a meeting. Certain cultures, particularly, prefer to avoid face-to-face meetings when a question may test the teacher's judgment (Tozer et al., 2002). Use of regular email communication may offer parents a more comfortable means to communicate with teachers other than meeting face-to-face.

Increased visibility. Another advantage to email as a means of school-home communications is increased visibility. Hassini (2006) found that email is a way for shy individuals, who would otherwise be afraid to approach the other party, to be involved in discussions. Email can identify peripheral individuals (Cross et al., 2002) by inviting their questions and discussions through the keyboard as opposed to face-to-face and one-to-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.

Level of commitment. Sending regular email communication to parents requires a commitment on the part of the teacher to build school-to-home relationships. Research on email and PI showed that communication exchange is a characteristic valued by parents and teachers and encourages trust as individuals give input and receive feedback (Barlow, 2008; Bouffard, 2006; Clemente, 2002; Haythornthwaite & Wellman, 1998; Lunts, 2003; Madrid, 1999). Email exchanges may encourage development of school-home relationships through extended periods of communication (Butler et al., 2009), providing time for relationships to develop. Email exchanges also serve as a running record of the communication exchange, which teachers and parents may refer to at a later time for additional clarification and continued building of trust (Stacey, 2002; Walther, 1996).

Why is research on email necessary? Web pages, school web sites, and posting homework assignments online are not sufficient to create school-family partnerships. Providing opportunities for parents and students to access web information and inviting them to access that information does not ensure participation. For participation to occur and a relationship to grow, there must be a purpose for the communication exchange (Gunawardena, 1995; Rogoff, Paradise, Arauz, Correa-Chavez, & Angelillo, 2003).

Twenty years ago, Riel and Levin (1990) commented on the readiness of organizations to communicate in new technology mediums. Today, we are experiencing diminishing technical barriers in communication mediums, but schools are still having difficulty utilizing technology, as educational researchers have done little in studying the design and activities of electronic messages.

The barriers to sending messages by email are becoming non-existent. New printer technology by Hewitt Packer allows customers to print emails directly to printers through a printer email (Britt & Stilwell, 2010, June). Personal printers could receive parent-designated emails automatically print them without parents having to check their email. Access to Internet is becoming the norm in some countries. In the summer of 2010, Finland mandated that Internet access be available to all its citizens in anticipation of 2015, when the country will have access to high speed Internet of 100 MBS (June, 2010). As other countries move toward similar mandates and 3G mobile phones become more available, allowing Internet access on mobile phones, communication from schools to parents by email will be more accepted and commonplace.

Prior Research on Email

Several email and technology studies on PI were investigative in nature and did not specifically study email relationships with PI beyond the effect of email on communications (Clemente, 2002; Madrid, 1999; Shayne, 2008; Thompson, 2008). In a more in-depth study on the effects of email, Hassini (2006) found that email exchanges between students and teachers led to greater discussion of a variety of topics and sustained dialogues, which resulted greater student access to resources and information. Three studies have specifically researched the effects of email on PI. Rogers (2007) examined the role of technology in general and its influence on PI in middle school. Reed (2008) studied the more specific area of teacher attitudes toward electronic communications and PI. Bouffard (2006) conducted a longitudinal study on email and student outcomes in relationship to PI.

In Rogers' (2007) study of a K-12 private school in the southeastern United States, data showed that 72% of families owned an Internet-connected computer and that 93% of families

had cell phones. Cell phone ownership may be helpful information to consider as 3G capabilities are becoming universal and a means for parents' accessing email. Communications patterns are changing due to new technology and behaviors of individuals. Trends show that percentages of families having Internet access at home and work have continually increased and the digital divide between computer access and non-access is closing (Kleiner & Farris, 2002; Koch, 2010; Shayne, 2008).

Reed (2008) studied a population of teachers in a New York high school specifically on their attitudes and usage of email and its effects on PI. Reed's study, though, did not look at aspects of PI other than the total amount of email communications between parents and teachers. Although Reed's study showed a significant increase in communication contacts after initiating an email treatment, the study did not differentiate between original email contacts and follow-up emails and did not define the structure, regularity, or content of school-to-home emails.

Reed's (2008) study was a good precursor to the current study in that both studies examined a specific email treatment and its relationship to PI. However, the current study included two experimental email treatments, one from the teacher and one from the student. In addition, the current study identified the frequency of email contacts among the two experimental groups and the control group. Another difference from Reed's study was the use in the current study of open-ended questions for qualitative research on school-to-home communications and the effects of the treatment on PI.

Bouffard's (2006) two-year study of 580 public schools and 172 private schools in United States, that were part of the Education Longitudinal Study of 2002, is the only large-scale study of email and PI that looked for outcomes among students, schools, and families. The study

identified that relationships existed between email usage and student and family outcomes. Bouffard noted higher math scores and more positive parent-student and parent-teacher relationships among those who reported greater email use to communicate with schools. Bouffard's study found that parents with more email communication had greater understanding of school policies and procedures, greater awareness of student progress, better relationships with teachers, and better engagement with their children in at-home parent-child discussions concerning academic progress and assignments, as well as discussions about future educational goals and decisions.

Bouffard (2006) found that only 10% of families surveyed in 2006 did not have Internet access and that a high percentage of parents used email to contact schools; however, the study showed the frequency of email contact between parents and schools was very low, only once or twice a year. Bouffard's study examined the relationship between casual email contact and PI. The current study tested Bouffard's findings in an experimental treatment using a structured email program and verified the findings through a qualitative aspect of the experiment. The current study took Bouffard's research a step further by addressing one of the two suggestions in her discussion, "Who is the initiator of the emails?" In the current study, the researcher tracked and recorded the sender of emails in relation to specific treatment groups.

Regular sending of email. No prior research on emails and PI used systematic emails as a variable. Key research on email and PI over extended periods analyzed email data that was impromptu by either the parent or the teacher (Bouffard, 2006; Clemente, 2002; Shayne, 2008). A few studies on email used systematic emails, but those studies did not look at the impact on PI but rather on quality and quantity of homework (Kirkbride, 2002) or were only three to six

weeks in duration and were investigative in nature as to the effects of email communication on parents (Blackerby, 2004; Reed, 2008).

Research by Thompson (2008) showed the majority of email messages were focused on student academic performance and were infrequent. Thompson's research showed teachers had a wide range of contact with parents by email, but that some parents contacted the teacher only a few times throughout the year and others not at all. The current research established regular bi-weekly communication delivered at a scheduled time in which parents and students would anticipate as a platform for communication exchange.

Duration of email studies. A significant number of studies on email were conducted in short periods, often ranging from four to nine weeks (Blackerby, 2004; Lewis, 2003; Nelms, 2002; Reed, 2008; Tobolka, 2006) which may not be enough time to establish successful communication cycles. The current research expanded the time to 16 weeks, increasing the opportunity for email exchange.

Research on email over extended periods of time yields more complete and detailed data on school-home communications, such as research by Clemente (2002), Hassini (2006), Bouffard (2006), Shayne (2008), and Blau and Hameiri (2012). Ongoing communications and extended dialogue provide for deeper insight into the quality and content of email messages as well as time for relational communication to develop (Blau & Hameiri, 2012; Walther & Burgoon, 1992).

Origin of email. Most email research concerns teacher-to-parent communications. Is there a relationship with the originator of the email? Will parents be more involved with their

children if the children themselves send school-to-home communications by email? Hoover-Dempsey & Sander's (1997) model of PI suggested that PI is dynamic, and that parents respond to their children's invitations to help with their educational needs. How will parents respond to their own children in regards to assignments, projects, and activities if they hear about them in regular bi-weekly emails? Will children experience less anxiety about what teachers are communicating to their parents if students know the content of the email messages that the school sends to their parents? How will the students' perceptions of PI change if they are aware of the information their parents receive?

Thompson's (2008) study on email communication examined who initiates email contact and the frequency of parent-teacher email exchange. Thompson found that students often had negative reactions to parent-teacher email communication. Students did not want their parents communicating with teachers by email because they did not know what the school was communicating to their parents. Students were especially wary that emails might contain information concerning poor academic performance or poor student behavior. However, Thompson found that emails containing information about assignments that allowed parents to help them with their work in turn motivated students. Students were further motivated when their parents' concern, which was generated by school emails, led to continued dialogue about their school assignments and activities.

Research by Edwards and Alldred (2000) has suggested that teens at times do not trust parent and teacher communications because teens are unaware of what is being said about them, or they sense the communication will bring unwelcomed or embarrassing scrutiny from either party. Bouffard (2006) referred to the concept of "negative dissonance," created by a lack of trust

due to problem based communications. On the other hand, if students are aware of the content of school-to-home communications and those communications are equally positive as those of "negative" communications, students may respond more favorably toward those communications. Additionally, if parents and teens have access to the same information regarding school activities and events, it may lead to increased face-to-face discussion at home (Hughes & Greenhough, 2006).

Conclusion

One of the major findings from the research on email communications is that the number of communication exchanges, both email and face-to-face, between parents and teachers increased for those parents using email (Reed, 2008; Thompson, 2008). Such increases may provide opportunities for parents and teachers alike to clarify information and provide feedback on the overall educational experience of students. Those communications may also result in greater positive PI that Grolnick et al. (1997) described. By structuring the content of school-to-home parent emails to include all areas of Grolnick's et al. PI, sending those emails on a consistent schedule, and by measuring the number of email communication threads received resulting from those emails, one could identify the relationship between school-to-home email and PI.

Additionally, regular email communication from students, as compared with emails from teachers, may result in more communication exchanges, both email and face-to-face, between parents and students resulting in improved PI. Perhaps the student will take more ownership of the communication exchange. Students may feel more at ease knowing that the information their parents receive is constructive and supportive of the student's educational development.

Thus, the purpose of this study was to test whether regular, structured, bi-weekly email communication from school-to-home, through either the teacher or the student to the parent, in addition to usual communications between teachers and parents and the school website, had any relationship to Behavioral, Cognitive, or Personal PI.

Research Questions

Quantitative Research Questions

1. Is there a relationship between type of communication (regularly structured school-to-home communication using bi-weekly emails -- school initiated or student initiated versus regular school communication), type of rater of PI (parent or student), time of administration (pretest and posttest), and responses to the items measuring their Behavioral, Cognitive, and Personal involvement based upon Grolnick et al. (1997)?
2. Is there a relationship between type of communication (regularly structured school-to-home communication using bi-weekly emails – school initiated or student initiated versus regular school communication), time period (bi-weekly periods after email sent home), and the number of emails received by teachers and the middle school principal?

Qualitative Research Questions

In order to probe more deeply into elements of school-to-home communication and its relationship with parent and student perceptions of PI, all parent participants were asked five open-ended questions on the posttest survey. The intent of these questions was to solicit qualitative data from each of the three groups: the Teacher-Sent Email group, the Student-Sent Email group and the No Email, control, group. The language of the qualitative questions was

simple in order that parents of various levels of education and nationalities could clearly understand the questions. The questions were phrased so that they addressed key findings of the literature. The first question addressed possible positive and negative effects of school-to-home communications treatment during the semester. The researcher looked for feedback concerning the four elements of the experimental communications plan: content, consistency, interactive nature, and asynchronous email. The second question was an opportunity for participants to comment on their personal communications expectations and if ICS was meeting those expectations. The third question elicited feedback on the benefits of the student as the originator of the school-to-home communications. The fourth question elicited suggestions on how ICS could improve school-to-home communications; the researcher looked for suggestions in the context of Grolnick's et al. (2000) theory of PI. The fifth question attempted to identify how and where parents received school-to-home communications. The research questions are the following:

1. Did the parents notice any differences in school-to-home communications this semester? What was good or not good about these differences?
2. Were the parents pleased with how ICS communicates what is going on at school and with their child? If not, what would they like to be changed?
3. Do/Did the parents like receiving messages from their child or would they prefer that messages come from the teacher or the administration without going through their child?
4. In the opinion of parents, how can ICS better use school-to-home communications to help parents become more involved with their child at school or at home?
5. Where do parents receive school-to-home communications? At work, at home, or on PDA.

Definition of Terms

Parental involvement – parental support for children in all areas of development; behavioral involvement includes the parents' activities in academics, including both school and home involvement; cognitive-intellectual involvement includes the parents' activities in supporting the child's interests and awareness intellectually and globally; personal involvement includes the parents' activities of more intimate concerns, such as bullying and career planning.

One-way communication – communication received by the parent in an informative fashion without an opportunity to respond, such as a newsletter, website, note, or email, structured to be the final communication exchange.

Two-way communication – communication received by the parent in a open, two-way fashion to include an opportunity and invitation to respond with questions, comments, or other feedback, designed to be the first of possibly two or more communication exchanges.

Asynchronous- without the barriers of time or space; in other words, an asynchronous email can be opened at any time or at any place as determined by the receiver.

Chapter 2

Methods

Research Design

Table 1 presents a non-randomized control-group pretest-posttest design (Isaac, 1997) in which classes as a whole were asked to participate and assigned to one of three conditions. The null hypothesis was there is no difference between the three conditions or type of rater over the period of the treatment as reported in a) the parent involvement surveys on the dependent measures of Behavioral, Cognitive, and Personal involvement, or in b) the emails received from parents recorded in the email logs.

Table 1.

Research Design Layout for Study

Group	Month 0	Intervention	Month 4
Experimental 1	Pretest	Teacher-Sent Email	Posttest
Experimental 2	Pretest	Student-Sent Email	Posttest
Control	Pretest	No Email	Posttest

Pre- and posttest questionnaires as well as teacher and principal email logs provided data for quantitative analysis. Posttest questionnaires included open-ended questions for parents to

provide qualitative data. The data collection was conducted from August 22, 2011 to December 31, 2011.

Participants

ICS of Bangkok, Thailand enrolled 870 students in grades kindergarten to 12th grade during 2011-2012. The participants were drawn from parents and students of the ICS middle school, eighth grade. The total number of middle school students was approximately 240 students, with 83 students in the eighth grade divided approximately equally into four classes. Only three of the four eighth-grade classes were used for the research, totaling 63 students. Student and parent dyads participating in each homeroom totaled 54 dyads as the following: 8J, control group, 16 of 21 (76%); 8Z, Teacher-Sent Email group, 17 of 21 (81%); and 8M, Student-Sent Email group, 21 of 21 (100%). The high percentage of participation was due to the encouragement of the homeroom teachers for students to participate, and the researcher's presentation to the students of the experimental research.

Two sets of parent/student dyads were dropped from the pretest and posttest survey results, and the reliability estimation adjusted, resulting in 52 usable parent/student dyads in both the pretest and posttest surveys. Two students reported very low PI scores in all three survey subsets, including more than two standard deviations in the Personal involvement subset of the posttest survey; the two student scores of the posttest Personal involvement subset were 1.33 and 1.00 compared to the student (n = 52) mean of 3.42 and standard deviation of .90.

The nationalities of the eighth-grade students were 50% Thai, 13% Korean, 13% American with the remaining students classified as Taiwanese, Chinese, Indian, and British.

Families were from middle to high-income sectors of expatriate and local communities, respectively. All families had access to computers and the Internet, as student grades at ICS are only accessible online. All eighth-grade students as well as their parents had personal email accounts. Many families and students also had mobile telephones with Internet capabilities allowing email access when away from a computer.

The homeroom teachers of the three participating eighth grade classes included one female and two male teachers between ages of 26 and 33. Two of the teachers had prior international teaching experience and were in their second year at ICS. One teacher was in his/her first year of teaching. The computer teacher was a 35-year-old teacher and a Thai national with six years' experience at ICS.

Independent Variables: Treatment and Control Groups

Two independent variables were tested. The first independent variable, type of communication, consisted of two conditions: (a) the use of structured, regularly scheduled bi-weekly emails to parents; and (b) a control group of no treatment by regular emails. Parents in condition (a) were sent one regular email message bi-weekly for a period of 16 weeks, resulting in eight emails from the school during the study. These email messages supplied parents with links to the week's homework assignments, upcoming projects and activities, upcoming opportunities for parent and student involvement at the school, available resources for academic and parental support, and contact information for the students' teachers. Parents in condition (b) received no bi-weekly structured emails, but they received normal mass and ad hoc email communications.

The second independent variable was the initiator of the email in condition (a). The source of the bi-weekly email was either the previously assigned teacher of the student (Teacher-Sent homeroom) or the student him/herself (Student-Sent homeroom). The email source was hypothesized to result in differing levels of PI among parent and student perceptions because of the affective elements that parent-teacher communications have on students (Bouffard, 2006; Thompson, 2008).

Email messages were an invitation for parents to query for clarification and additional information concerning their children's activities at school; parental responses to the teacher were encouraged. The researcher drafted bi-weekly emails based on school events such as tests, projects, sports activities, and concerts taking place at school and in the classroom. The emails purposefully included items of intellectual stimulation and personal development intended to elicit two-way communication and involvement by parents regarding behavior in other areas, such as co-curricular activities and adolescent development, in addition to academics (See pg. 36 and Appendix A for sample email). The bi-weekly email, modeled from Bauch (2001), was verified by each homeroom teacher and the middle school principal as an email they might send (See Researcher's role section, pg. 49) and included each of the following:

1) Behavioral involvement: School events such as homework, tests, projects, and activities on campus. The email included: a) reference to the school webpage for assignments and grades, and b) access links to school website for activity calendar.
2) Cognitive involvement: Descriptions of students' school experience such as what students were learning and advice to parents on how to support the school's program. The email also included access links to resources for continued learning.

3) Personal involvement: Descriptions of adolescent issues and advice to parents on how to handle them. The email also included: a) access links to topics such as how parents could help their children transition to ninth grade, and b) access links for parents on adolescent issues of personal development.

4) Links to PDF files of any e-letter or hard copy letters sent home to all students by the school during that bi-weekly period.

The parents in the first experimental group were sent a standardized email bi-weekly on Day 1 of the two-week block by the assigned teacher to the selected eighth-grade homeroom. The same standardized emails developed for experimental group 1 were sent to participants of another eighth grade class at the selected time but was sent by the student to the parent. The parents of the students in the third class, the control group, received no communications other than mass school emails, regular monthly e-newsletters, and casual email communications from teachers to parents, in addition to paper letters sent home.

Sample content of a bi-weekly email is presented in Figure 1 based upon events during the first school week in January. The contents of the bi-weekly emails were tailored to events that occurred during those periods.

Figure 1. Sample email for 8G and 8C.

Week One: January 7-11

School events

8 Jan Writing club – contact ben_r@icsbangkok.com

10 Jan Basketball tryouts for U-15 boys and girls

10 Jan Science project due for 8G

Links: (URL) weekly homework and grades

School experience

This week 8th grade is studying heredity in Science. We are looking at hair color, eye color, and difference between dominant and recessive traits. Students may look at the below links to find information on genes and heredity. Take a look at John's video log on heredity at the link below.

Links: (URL) resource for heredity

(URL) John's video

Student development

Middle school students need support in making decisions that will affect their future educational opportunities. In March, students will need to take an Algebra test to see if they are ready for Algebra I, Algebra II, or if they will need to take pre-Algebra again. Parents may contact their child's math teacher for more information on this test. A letter and email will be sent home in late February concerning the Algebra test.

Link: (URL) math letter copy

Teacher Contacts and Attachments of PDF files of any letters sent home that period

ben_r@icsbangkok.com

Instruments

Validity. The researcher used a survey called the Parental Involvement Scale (PIS) adapted from Grolnick et al. (2000) to measure type and degree of PI according to categories of Behavioral (school and home), Cognitive, and Personal involvement (See Appendix B). Grolnick's et al. measure was validated from previous research studies (Grolnick et al., 1997; Grolnick & Slowiaczek, 1994), in which Grolnick et al. formulated the three categories based on factor analysis.

The survey used many of the same questions as the Grolnick et al. (2000) study. However, Grolnick's et al. parent and student questions were not identical because the study did not make direct comparison between parent and student responses. The wording of survey items was adapted to match the parent and student questions in order to allow comparisons of PI as stated by the parent and as perceived by the student. The adaptation of the survey used the same categories as Grolnick et al. and descriptors assessed reliability among the parent, teacher, and student surveys. The teacher survey in Grolnick's et al. work included a section for homeroom teachers to answers questions concerning the PI of each student in his/her homeroom. In the research study, teachers only answered selected questions of the school involvement sub-category because they did not have knowledge of the other types of PI.

The adapted PIS survey contained 39 questions; 15 pertaining to school involvement, eight to home involvement, seven to cognitive involvement, and nine questions to personal involvement. All questions used in the Child, Parent, and Teacher Report surveys were the same; the wording only changed to reflect the participant taking the survey. The researcher omitted "Volunteered to go on a class trip," from the Grolnick et al. (2000) instrument as this item is not an activity that occurred during the course of the research. The researcher added several items to the Grolnick et al. survey to expand the modes of involvement. For example, for school involvement, "Talked on the phone with the teacher" was expanded to include "Talked with the teacher in a scheduled meeting," "Sent a note to the teacher," and "Sent an email to the teacher." "Checked grades on Renweb," was added to include the school's online grading and reporting system. Home involvement was expanded to include an additional question on helping with homework, "Worked with my child on a school project." Cognitive involvement was expanded to include, "Bought or played educational games with my child," and "Bought books or

magazines or took my child to a bookstore." In addition, the researcher incorporated and adapted a question from Grolnick's et al. Child Report for the Parent Report to include "Read books together at home." Personal involvement was expanded by splitting the question of "I know what my child likes and dislikes" into two separate questions of "I know what my child likes" and "I know what my child dislikes". The researcher added three questions to expand the question "I ask my child how things are going in school." The added questions are "I talk with my child about his/her struggles with growing up as a teenager," "I talk with my child about his/her interests," and "I talk with my child about the selection of school courses (e.g. band, choir, and Algebra track)."

Pilot test. The researcher conducted a pilot research project using the PIS survey and by sending two bi-weekly emails to two groups of seventh grade students and their parents in November of 2010 in order to test the experimental aspects of the project and the technological readiness for the research; the pilot study consent form is attached (See Appendix C). The pilot study of the instrument and open-ended questions in November 2010 served as a validity check that the survey items were appropriately categorized in areas of behavior, cognitive, and personal involvement. Students, parents, and teachers did not report any difficulty in understanding the questions and/or their placement in respective categories.

The researcher experienced two problems in the procedure of the pilot study. First, several parents agreed to participate in the research, yet their children were unwilling to participate. The reason for this difference was that the students did not want their parents knowing what was happening at school, whether it was positive or negative. The researcher addressed this concern for the final research by explaining the proposed treatment in detail and

allowing time for the students to understand the research in an effort to enroll a large percentage of the students in each group to participate. The researcher provided an example of the kinds of emails to be used in the research by giving a hard copy of the pilot email to students and parents. These methods were successful in the resulting high percentage of student participation for the final study.

Second, the researcher experienced difficulty in parents' willingness to complete the online survey. The researcher believed this outcome occurred because parents may have felt that the survey was judging their behavior, i.e., they are not as involved as they perhaps should be in their children's education. However, even after parents agreed to participate in the research and their children filled out the survey on the school's computers, several parents took many days to complete the survey. The delayed response time may be attributed to the infrequency with which parents checked their email, or the reluctance on the part of some parents to disclose their minimum level of involvement to others. The researcher revised his procedures in order to reassure parents that their responses would be confidential and would not affect their involvement with the school or their children's grades or evaluations. Additionally, the researcher sent hard copies of the parent survey home with participating students in order to facilitate quick response.

Revisions to PIS pilot-study survey. Feedback from parents and students showed that the survey was simple and clear, and the questions were relevant to their respective categories. Teachers participating in the survey asked for clarification as to whether the survey was asking about PI in all classes or how the parents were involved in their homeroom classes. The

researcher clarified the language in the teacher survey so the teacher was to answer questions from the "This happened to me" perspective.

The teacher survey provided data that resulted in revisions to the survey instrument. The teacher survey consists of ten questions taken from the school involvement sub-section of the PI survey. Averages from four of the ten items differed substantially from scores of the student and parent ratings of the same questions. On a Likert scale of 1 (never) to 5 (very often), the teacher composite of the school involvement category resulted in an average of 1.6 compared to 2.59 and 2.27 of the parent and student composite averages. However, two of the items, "Checked assignment folder," and "Checked grades on Renweb," could be answered by parents without the teacher's access to that information. Because the teacher may not have knowledge that the parent checked the assignment folder or checked the student's grades with the online grading program (Renweb), the teacher may have given low marks when indeed the parent had done those items.

Two other items in the teacher survey that showed a large discrepancy were the items, "Volunteered in the classroom," and "Sent an email to the teacher." Teachers reported that 0 out of 9 parents volunteered in the classroom over the semester; however, the parents reported an average of 2.14 for this category. The other noteworthy item is email exchange. Teachers reported the frequency of receiving emails from parents to be an average of 1.38 compared to the parents' reported average of 2.86.

Due to the multiple discrepancies in the teacher survey, the researcher modified the PIS to include only the parent and student responses and reserve the teacher survey for a later study. Thus, the finalized survey includes only the parent and student surveys adapted from Grolnick et al. (2000) and is called the Modified Parental Involvement Scales (MPIS) (See Appendix D).

Reliability. Cronbach alphas of the three categories from Grolnick's et al. (2000) study for years 2 and 3 of the sample were the following: .87/.88 (School), .67/.68 (Cognitive), .75/.66 (Personal). Cronbach alphas were estimated for each of the three subsets of Behavioral, Cognitive, and Personal involvement from the pretest and posttest surveys. Cronbach's alphas on the pretest survey resulted for parents and students respectively of .89/.88 (Behavioral), .74/.78 (Cognitive), and .90/.83 (Personal). The posttest survey subsets showed for parents and students, alphas of .88/.91 (Behavioral), .78/.87 (Cognitive), and .91/.89 (Personal). Table 2 reports the reliability coefficients for the two surveys. The reliability coefficients are comparable to or higher than that of Grolnick et al. in prior studies.

Table 2.

Cronbach Alpha Coefficients of the Parental Involvement Subsets for Pretest and Posttest Parent and Student Surveys

Subsets	Pretest		Posttest	
	Parent (n = 52)	Student (n = 52)	Parent (n = 52)	Student (n = 52)
Behavioral	.89	.88	.88	.91
Cognitive	.74	.78	.78	.87
Personal	.90	.83	.91	.89

Email logs. Teachers and the middle school principal kept a running log of the number of emails received from eighth-grade parents during the data collection period and recorded the sender of the email and the respective homeroom/treatment group. The researcher supplied homeroom teachers and the middle school principal with a spreadsheet that listed the email

addresses of each participating parent or parents along with the students' nicknames and the respective homeroom for each student in order to simplify the logging process.

Open-ended questions. Open-ended questions were included in the Parent Report of the posttest survey and provided the researcher with qualitative data as previously presented in the research questions (See Appendix E). The researcher reviewed the findings with the participants and with teachers as a source of verification by member check of the research. The researcher reported the findings to the headmaster, and with his approval, presented them at a meeting with participants and other interested individuals in the school and community during Open House of the 2012-2013 school year.

Procedure

The researcher asked the headmaster, middle school principal, computer teacher, and classroom teachers of the eighth grade to be involved in the project in December 2010. With permission from school administrators and teachers, the parents and students enrolled in the three participating eighth-grade classes were informed about the research in July 2011. The three participating homeroom teachers and the computer teacher each received a stipend of $200.

The researcher met with each participating homeroom to explain to students the purposes, benefits, and risks of the research prior to sending home any information to parents. A hard copy of a sample school-to-home email was distributed to students as well as sent home to parents via the students. The researcher gave students a chance to ask questions about the project. Teachers gave their opinions about the research project and assured students that their lack of participation would not adversely affect their grades or the evaluation of their performance.

Following the researcher's meeting with the students, students took letters home to parents containing a consent form that introduced the research and requested parental consent to participate and include their children in the project (See Appendix F). An email copy of the letter and invitation to participate was sent to parents the evening after the student meeting.

The school's headmaster wrote a permission letter, as well as enclosed an invitation letter with the consent form to parents encouraging their participation and ensuring confidentiality and administrative support for the research project (See Appendix G and H). A meeting was scheduled for parents on August 15, 2011, to discuss the rationale for the project and to respond to any questions or concerns. Parents were informed of this meeting in the consent letter and by email.

The parent consent letter and the meeting informed parents and students that ICS teachers and principal would keep parent-to-school emails confidential and only record the number of emails received and their distribution among the participant groups. All student activity, surveys and sending of emails, occurred during the students' computer class. The researcher chose to use the computer room for sending of emails by students in order to minimize student risk. In this classroom, the computer teacher assigned students to individual computers. As such, students were unaware of which of their peers were participating in the research unless participants told their classmates or allowed them to see their computer screen while they were taking the surveys or sending the standardized emails.

The research consisted of three phases:

Phase I: Pretest survey. In mid-August 2011, the pretest survey was administered to participating parents and students via email (See Appendix I).

Phase II: Bi-weekly emails. Bi-weekly emails were sent home on Day 1 of a two-week block beginning August 22, 2011. The designated teacher sent participating parents of experimental group 1 the standardized email with a read receipt to verify that the email was sent and read. Read receipts were only valid with parents using Microsoft Outlook. During the students' computer class, the teacher sent participating students of the experimental group two the same standardized email who read, copied, and pasted it in an email to their parents attached with a read receipt and carbon copy (cc) to the computer teacher for verification. In order to verify the email was received and read, the student printed out the returned read receipt, or an email from their parents confirming it was received, and submitted the receipt to the computer teacher to record along with group 1 read receipts (See Appendix J). The researcher oversaw the email distribution and verification of the reading process through recording on the email verification check sheet. Students not participating in the research began their scheduled computer assignment designed by the computer teacher according to the class curriculum. Participating teachers and the middle school principal recorded emails received from parents on the provided form (See Appendix K and L).

Phase III: Posttest survey. The researcher administered the same pretest survey, now called the posttest survey, at the end of the project in December 2011. The posttest survey also included open-ended questions for parents as previously described in the research questions. A follow-up email was sent a week following the distribution of the posttest survey to all parents and students reminding them to complete the survey and provide helpful information to improve

school-to-home communications through the open-ended questions (See Appendix M). Hard copies of the survey were also sent home for expedited parent response as some parents did not respond to the email survey in a timely fashion.

Data Collection

Emails. The researcher used email logs to collect quantitative data on numbers of emails and their distribution among the treatment groups. Teacher participants in each of the three treatment groups and the middle school principal tracked the number of emails received during the research study and identified the source of the email and homeroom of the respective student. The researcher followed up with teachers and the middle school principal each week to verify that the number and distribution of parent emails had been recorded.

Surveys. The researcher collected quantitative data through confidential surveys conducted via SurveyMonkey. The parent and student surveys obtained pre-treatment and post-treatment data. Students took the MPIS survey on individual computers during Computer class at school with a follow-up computer activity to engage students immediately upon finishing the survey. Students not participating in the research began the activity immediately. The computer teacher and researcher monitored students so they were not looking at their classmates' computers during the survey. Parents were sent the link to the MPIS survey through their given email addresses.

Open-ended questions. The researcher collected qualitative data from posttest surveys at the end of the treatment in December 2011. Open-ended questions with resulting answers were

printed out and coded by the researcher and his assistant. Coding is outlined in the Data Analysis section.

Data Analysis

Analysis of survey data. Two sets of analyses were conducted. A 3 (Treatment: Teacher-Sent emails, Student-Sent Emails, and No Emails) X 2 (Subjects: Parent and Student) X 2 (Time: Pretest and Posttest) repeated measures Analysis of Variance (ANOVA) was conducted for each of the three subset factor scores (Behavioral, Cognitive, and Personal). The Post Hoc Tukey, HSD pairwise comparison test, was used to determine the source of differences for Treatment and the Treatment X Subject interactions. A 3 X 2 X 2 Multivariate Analysis of Variance (MANOVA) was conducted for the 39 individual questions of the survey. The analyses used an alpha level of .05 for all tests of the hypothesis.

Analysis of email logs. The number of emails and the distribution of emails among treatment groups received by core teachers and the middle school principal were used to identify relationships among the treatment groups. Chi-square tests were run on receiver of emails, homeroom participants, and time period, to determine whether the number of emails received by the teachers and principal was significant by recipient, by homeroom, and by time.

Analysis of open-ended questions. Qualitative data from open-ended questions of the posttest survey were used to gather further information on school-to-home communication and specifically on the effects of the treatment. Chi-square tests were run among treatments to determine significance among homerooms. The researcher looked for themes running through the data that related to improving school-to-home communications, as well as feedback that identified positive and negative effects of school-to-home communications in relation to the

research study. The researcher looked for affective influences in experimental group 2 that used the student as the originator of school-to-home emails. Codes based on the open-ended questions are as the following:

PC: Positive content of communications

PR: Positive regularity/consistency/delivery of communications

PI: Positive interactive nature of communications

PE: Positive efficiency via email

NC: Negative content of communications

NR: Negative regularity/consistency of communications

NI: Negative interactive nature of communications

NE: Negative efficiency via email

IC: Improve content of communications

IR: Improve regularity/delivery of communications

II: Improve interactive nature of communications

IE: Improve efficiency via email

SPC: Student as originator of communications is positive due to content

SPI: Student as originator of communications is a positive influence on student development

SPO: Student as originator of communications is positive due to other

SPN: Student as originator of communications is negative or not a factor

NA: Not applicable

The researcher was assisted in coding of open-ended questions in order to increase the reliability of coding the data and to minimize researcher bias (Maxwell, 2005). The first assistant

researcher is in his 40's and has taught internationally for 14 years. He has a Master's degree in TESOL and had conducted qualitative analysis of writing samples of all ICS students grades 3-12 between 2000 and 2004. In order to establish intercoder reliability, the researcher and assistant separately evaluated ten sample responses from each open-ended question and then compared similarities and discrepancies of coding results. The first assistant was paid $200 for his services.

Codes that differed between the researcher and the assistant were analyzed by a second assistant for triangulation (Patton, 2002). The second assistant is in his 60's and has a doctoral degree in Education Administration. He currently works for a business developing software for school management. The second assistant reviewed the codes of ten sample responses and submitted the results to the researcher and assistant to aid in clarifying the discrepancies. The researcher and the assistant adjusted coding practices according to the findings of the second assistant. The inter-rater reliability agreement criterion was set at 80%. When half of all the open-ended responses were coded, the researcher and first assistant coded ten of the same randomly selected responses in order to determine whether the 80% inter-rater reliability agreement criterion was met. The criterion was met with agreement on eight of the ten selected responses, and the remaining responses were coded.

Verification of statistical data. The researcher obtained the services of a statistical expert to verify the survey data spreadsheets and tests run in the statistics package, SPSS. The expert is a lecturer and director of Business Management at Eastern Asia University in Thailand and holds a Ph.D. and a D.B.A. The expert verified the researcher's analysis of the data.

Researcher's role. The researcher acknowledges his role as a participant in the study. His presence may have influenced student/parent/teacher participation in the study (Patton,

2002). The researcher is a 48 year-old married American teacher and is currently teaching English as a Second Language (ESL) at ICS. Although teaching at the school for 15 years, the researcher was not a classroom teacher of the student participants and had no leadership role of the participant teachers. His leadership roles were at the high school level: homeroom teacher of the 11th grade, chair for the ESL department, chair for the high school teacher leadership team, and short-term supervisor on school grounds. The researcher also acknowledged his role in designing emails for the study might affect the response of students and parents. Therefore, the researcher designed a spreadsheet that the three participating homeroom teachers and the middle school principal signed to validate each bi-weekly email as an email that was accurate, timely, and one that the teacher would send to parents if they had designed it (See Appendix N).

Chapter 3

Research Results

Quantitative Questions

Quantitative Question 1: Is there a relationship between type of communication, type of rater of PI (parent and student), time of administration (pretest and posttest), and responses to the items measuring their Behavioral, Cognitive, and Personal involvement based upon Grolnick et al. (1997)?

Level of parental involvement according to parents and students. Table 3 (See pg. 52) presents the means and standard deviations of the three PI variables (Behavioral, Cognitive, and Personal) according to Factor A (Teacher-Sent Emails, Student-Sent Emails, and No Emails), Factor B (Parent and Student ratings), and the A X B interaction for pretest and posttest survey administration. Table 4 presents the results of the 3 X 2 X 2 repeated measures ANOVA with Factor C (time of survey administration) as the repeated measures.

Table 4 (See pg. 53) shows that Factor B, type of rater, was significant for each of the three dependent measures: Behavior ($F(1, 208) = 10.29$, $p < .01$), Cognitive ($F(1, 208) = 12.95$, $p < .01$), and Personal ($F(1, 208) = 14.94$, $p < .001$). The main effect of within subjects in the *F*-tests for Factor C, time, was significant for Behavior ($F(1, 208) = 4.86$, $p < .05$) and for the A X C interaction, treatment X time, ($F(2, 208) = 4.95$, $p < .01$). A pairwise t-test with Bonferroni adjustments showed that the NE treatment, No Email, for both parents and students was significant.

Table 3.

Means and Standard Deviations of Parental Involvement Subsets Pretest and Posttest by Treatment, Type of Rater, and Interaction

Subsets	Pretest Survey			Posttest survey		
	Behavioral	Cognitive	Personal	Behavioral	Cognitive	Personal
Factor A – Treatment						
TS – Total Rating (n = 32)	2.42 (.64)	2.66 (.71)	3.75 (.78)	2.45 (.58)	2.62 (.82)	3.47 (.93)
SS – Total Rating (n = 40)	2.60 (.77)	2.85 (.74)	3.92 (.72)	2.57 (.82)	2.74 (.88)	3.88 (.79)
NE – Total Rating (n = 32)	2.72 (.53)	2.58 (.75)	3.74 (.74)	2.41 (.59)	2.51 (.81)	3.64 (.74)
Factor B – Type of Rater						
P – Total Rating (n =52)	2.81 (.63)	2.99 (.64)	4.06 (.67)	2.64 (.60)	2.82 (.70)	3.93 (.68)
S – Total Rating (n = 52)	2.35 (.63)	2.42 (.73)	3.56 (.74)	2.32 (.73)	2.44 (.93)	3.42 (.90)
A X B Interaction						
TS – P (n = 16)	2.59 (.72)	3.00 (.72)	4.00 (.84)	2.61 (.52)	2.80 (.84)	3.67 (.88)
SS – P (n = 20)	2.89 (.71)	3.07 (.62)	4.19(.63)	2.72 (.73)	2.83 (.71)	4.15 (.55)
NE – P (n = 16)	2.92 (.35)	2.88 (.59)	3.96 (.53)	2.58 (.50)	2.82 (.57)	3.92 (.52)
TS – S (n = 16)	2.25 (.52)	2.31 (.52)	3.50 (.66)	2.29 (.61)	2.44 (.79)	3.26 (.96)
SS – S (n = 20)	2.30 (.72)	2.63 (.80)	3.65 (.72)	2.42 (.89)	2.65(1.03)	3.61 (.91)
NE – S (n = 16)	2.51 (.61)	2.27 (.78)	3.52 (.86)	2.24 (.63)	2.20 (.91)	3.35 (.83)

Note: TS = Teacher-Sent emails; SS = Student-Sent emails; NE= No Emails. P = Parent ratings; S= Student ratings; PS= Parent and Student ratings.

Table 4.

F-tests and Effect Sizes of Three Dependent Measures by Treatment, Type of Rater, Time, and Interaction

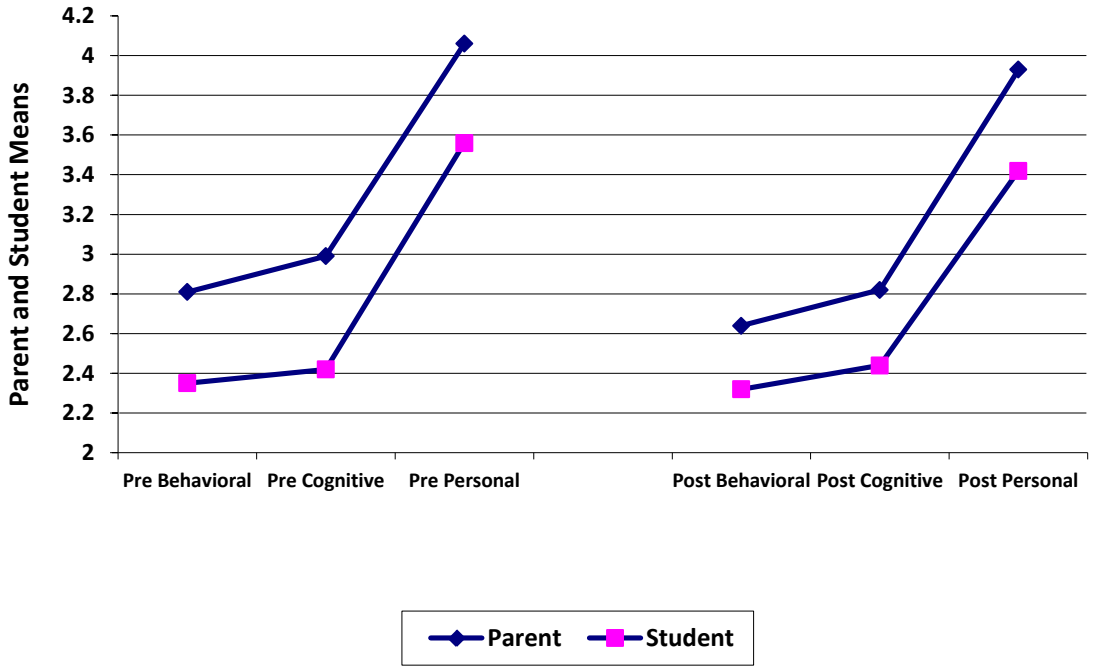
	Measure	*df*	*F*-test	Partial Eta
Between Subjects				
Type of Treatment (A)	Behavior	2	0.61	.01
	Cognitive	2	1.25	.03
	Personal	2	1.89	.04
Type of Rater (B)	Behavior	1	10.29**	.10
	Cognitive	1	12.95**	.12
	Personal	1	14.94***	.13
A X B	Behavior	2	0.08	.00
	Cognitive	2	0.48	.01
	Personal	2	0.04	.00
Within Subjects				
Time (C)	Behavior	1	4.86*	.05
	Cognitive	1	1.26	.01
	Personal	1	3.69	.04
A X C (Treatment X Time)	Behavior	2	4.95**	.09
	Cognitive	2	0.13	.00
	Personal	2	1.05	.02
B X C (Rater X Time)	Behavior	1	1.83	.02
	Cognitive	1	2.27	.02
	Personal	1	0.01	.00
A X B X C Interaction	Behavior	2	0.92	.02
	Cognitive	2	0.62	.01
	Personal	2	0.18	.00

Note: *$p < .05$; **$p < .01$; ***$p < .001$

Effect sizes. Table 4 presents the Effect Sizes (ES) of both between and within subjects of the repeated measures ANOVA. The ESs estimated with Partial Etas for hypotheses found to have significant differences were for Factor B, Behavior (.10), Cognitive (.12), and Personal (.13), for Factor C, Behavior (.05), and A X C, Behavior (.09).

Mean differences between raters. Inspection of the means and standard deviations for Factor B of the three dependent variables shows that parents rated themselves higher than students about their involvement in both the pretest and posttest surveys. Figure 2 presents these differences graphically.

Figure 2. Means results for total parent and student pretest and posttest.



Post-hoc tests on treatment groups. Factor C, time, was significant ($F(1, 208) = 4.86$, $p < .05$) as was the A X C interaction, treatment X time, ($F(2, 208) = 4.95$, $p < .01$ for only the Behavior variable. In order to determine which treatment contributed to A X C result, the pairwise comparison found that only the No Email group contributed to the interaction with a mean difference of .31, $p < .001$. The mean for the No Email pretest was 2.72 (.52), and the posttest was 2.41 (.59).

Differences for Individual Parent Involvement Variables by Factor B (Rater). A 3 X 2 X 2 MANOVA (treatment X rater X time) on the individual questions of the survey confirmed the results of the *F*-test significance between raters using the factor scores of Behavioral School ($F(15, 208) = 3.96$, $p < .001$) and Home ($F(8, 208) = 6.30$, $p < .001$), Cognitive ($F(7, 208) = 6.49$, $p < .001$), and Personal ($F(9, 208) = 5.56$, $p < .001$. The Behavioral measure was separated into School and Home involvement per the literature in Chapter 1, pg. 7. Table 5 presents the individual ANOVA tests on Factor B (Rater) that found 25 of 39 items to be significantly different at $p < .05$ between parents and students after using the Bonferroni correction procedure. The 25 included five items from Behavioral, four from Cognitive, and six from Personal significant at $p < .001$.

Table 5.

Differences Between Parent and Student Ratings by Item

Measure/Item	Parent	Student	*F*-test	Partial Eta
Behavior – School involvement				
1. Parent met teacher	2.13 (0.87)	2.38 (1.23)	2.85	.01
2. Parent went to open school night	1.72 (1.20)	1.49 (1.08)	2.12	.01
3. Parent went to school activity	3.20 (1.27)	2.88 (1.38)	2.97	.01
4. Parent talked with teacher on phone	1.45 (0.75)	1.24 (0.65)	4.76*	.02
5. Parent talked with teacher in meeting	2.06 (1.21)	1.66 (0.94)	6.91**	.03
6. Parent talked with teacher informally	1.90 (0.99)	1.87 (1.12)	0.07	.00

7. Parent sent an email to teacher	2.31 (1.04)	2.06 (1.00)	3.10	.02
8. Parent sent a note to teacher	1.62 (0.93)	1.53 (0.84)	0.62	.00
9. Parent went to advisory meeting	2.22 (1.16)	1.82 (1.08)	6.79*	.03
10. Parent went to conference	2.40 (1.41	1.91 (1.26)	6.98**	.03
11. Parent volunteered in the classroom	1.57 (0.93)	1.64 (1.01)	0.32	.00
12. Parent helped with fundraising	2.79 (1.24)	2.51 (1.15)	2.82	.01
13. Parent went to PTO meeting	1.83 (1.08)	1.64 (1.06)	1.51	.01
14. Parent checked child's assignment folder	3.42 (1.20)	2.71 (1.42)	15.29***	.07
15. Parent checked child's grades	4.07 (1.04)	3.67 (1.20)	6.42*	.03
Behavior – Home involvement				
1. Parent helped with homework	3.09 (1.06)	2.89 (1.31)	1.60	.01
2. Parent practiced spelling or skills	2.81 (1.26)	2.37 (1.15)	6.67*	.03
3. Parent checked that homework was done	3.58 (1.18)	2.85 (1.38)	16.88***	.08
4. Parent helped plan for homework	2.88 (1.21)	2.18 (1.22)	16.84***	.08
5. Parent listened to work done at school	3.27 (1.01)	2.47 (1.28)	25.05***	.11
6. Parent did homework with child	2.50 (1.13)	2.06 (1.10)	8.20**	.04
7. Parent worked with child on project	2.74 (1.17)	2.35 (1.32)	5.21*	.03
8. Parent talked to child about school	4.25(0.88)	3.63 (1.26)	16.65***	.08
Cognitive				
1. Parent took child to library	1.86 (1.06)	1.58 (0.94)	4.04*	.02
2. Parent talked to child about current events	3.63 (0.91)	2.92 (1.24)	22.27***	.10
3. Parent took child to plays, concerts outside	2.95 (1.18)	2.70 (1.17)	2.35	.01
4. Parent took child to museum	2.43 (1.06)	2.27 (1.15)	1.14	.01
5. Parent bought or played educational games	2.61 (0.99)	2.05 (1.19)	13.57***	.06
6. Parent took or bought books/magazines	4.13 (0.89)	3.52 (1.25)	16.76***	.08
7. Parent read books at home with child	2.72(1.17)	1.88 (1.14)	27.21***	.12
Personal				
1. Parent knew what child is learning	3.76 (0.97)	3.55 (1.12)	2.11	.01
2. Parent knew names of child's classmates	3.51 (0.96)	2.99 (1.09)	13.31***	.06
3. Parent knew activities child likes	4.23 (0.80)	3.76 (1.11)	12.29***	.06
4. Parent knew activities child dislikes	3.97 (0.98)	3.76 (1.24)	1.86	.01
5. Parent kept track of how child is doing	3.98 (0.92)	3.66 (1.10)	5.06*	.02
6. Parent asked child how things are going	4.38 (0.78)	3.88 (1.13)	13.35***	.06
7. Parent talked with child about struggles	3.92 (0.94)	3.07 (1.30)	29.50***	.13
8. Parent talked with child about interests	4.10 (0.81)	3.41 (1.19)	23.52***	.10
9. Parent talked with child about courses	4.12 (0.91)	3.36 (1.34)	23.37***	.10

Note: *$p < .05$; **$p < .01$; ***$p < .001$

The Effect Size for each item was small in all questions of the survey due to the small sample size. The Partial Etas ranged from .02 to the largest one, an item in the Personal category, "Parent talked with child about struggles growing up as a teenager," at .13.

Quantitative Question 2: Is there a relationship between type of communication, time period, and the number of emails received by teachers and middle school principal?

Relationships among emails received. Table 6 (See pg. 58) presents the number of emails that the principal and core teachers (Science, Language, History, and Math) received at six-week intervals during the semester (beginning, middle, and end). Ninety-nine emails were received during the semester. The middle school principal received 59, or 3.47 emails per week, and the four core subject teachers, Science, Language, History, and Math, as a group received 40, or 2.35 emails per week; thus, the average number of emails per week per subject teacher was .59 emails over the period of 18 weeks. A chi-square tested the number of emails received by the five staff members (principal, teachers). The chi-square found the receiver of emails to be significant at X^2 (4, 99) = 100.34, $p < .001$ with the principal clearly receiving the most emails. Furthermore, a chi-square tested the time (beginning, middle, end) emails were sent by parents to the principal and teachers and found that the time period was significant in the number of emails received X^2 (2, 99) = 8.62, $p < .05$. The middle period was higher than the other two periods.

The emails received by treatment group were Teacher-Sent, (n = 29), Student-Sent, (n = 27), and No Emails, (n = 31). Another homeroom not participating in the research was included in the analysis of which 12 emails were received during the research period. A chi-square tested the number of emails received by homeroom and found the homeroom to be significant at X^2 (3, 99) = 9.08, $p < .05$. The parents of the homeroom not participating in the research sent significantly fewer emails during the semester.

Table 6.

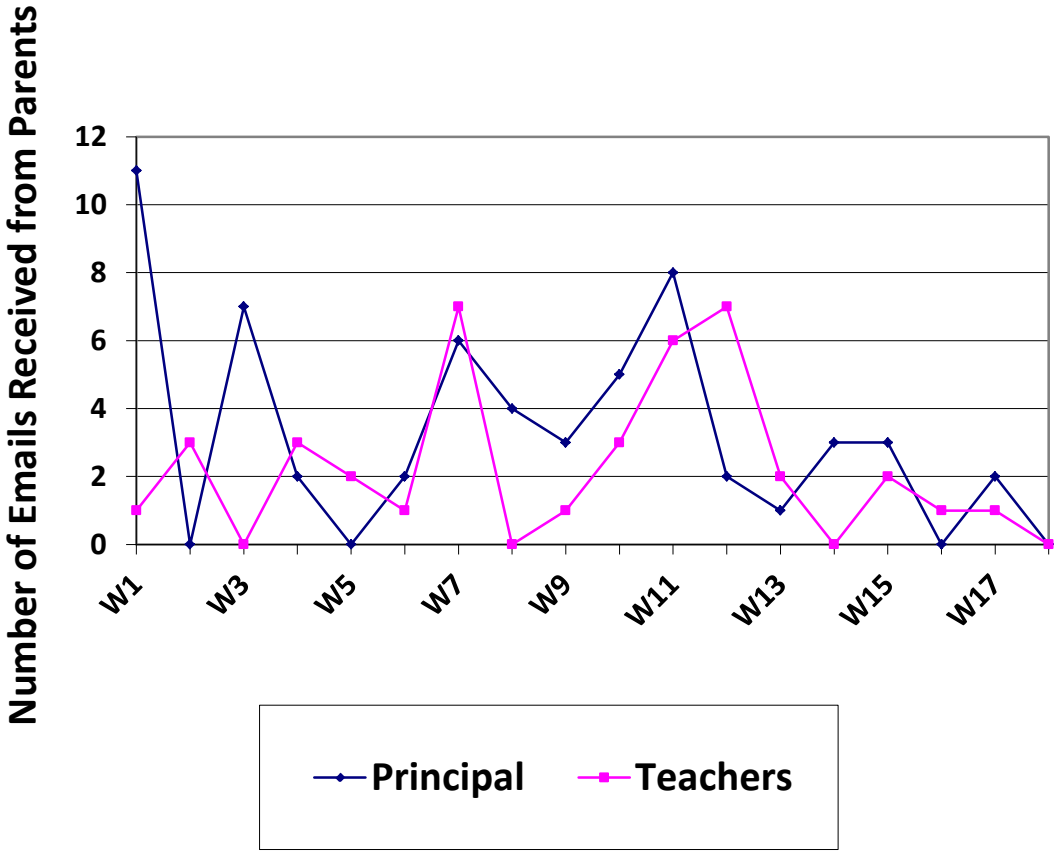
Email Count by Time and Teacher

Teacher	Time	Number of Emails	Total
Science	Beginning	1	5
	Middle	2	
	End	2	
Language	Beginning	1	14
	Middle	6	
	End	7	
History	Beginning	3	14
	Middle	7	
	End	4	
Math	Beginning	4	7
	Middle	3	
	End	0	
Principal	Beginning	20	59
	Middle	28	
	End	11	
Total	Beginning	29	99
	Middle	46	
	End	24	

The number of parents who sent emails appeared to be equally distributed across the treatment groups (TS = 9 of 16, SS = 11 of 20, and NE = 9 of 16). Furthermore, one parent in each of the TS and NE groups sent more than seven emails during the semester and thus may have overly contributed to the amount of emails received in those groups.

The number of emails received during the research period spiked on three occasions as seen in Figure 3. The first spike occurred during the first week of school in which the principal received the largest number of emails of any week. The second spike of emails occurred in week 7 as the Quarter 1 report cards were released and both the principal and core eighth grade teachers received a larger number of emails. The third spike occurred in weeks 11 and 12 during which a portion of Bangkok was flooded.

Figure 3. Emails received by the principal and teachers by week.



Manipulation Check

In order to check whether parents followed the test procedures, the researcher asked the following two questions to parents:

1. During the semester, I received an email from my student every two weeks.

   Twenty of 20 participating parents who received an email from their student-child responded, "Yes," and 16 of 16 participating parents who received no email from either the teacher or their student-child responded, "No," which is congruent with their assigned groups.

2. During the semester, I received an email from my child's teacher every two weeks.

   Fourteen of 16 participating parents who received an email from the teacher reported "Yes" and 2 responded "No."

Qualitative Questions

Qualitative question 1: Did the parents notice any differences in school-to-home communications this semester? What was good or not good about these differences?

Twenty-six out of 52 parents reported a positive difference in school-to-home communications. The distribution of parents reporting positive differences among treatments were 10 of 16 of Teacher-Sent Emails, 10 of 20 of Student-Sent Emails, and 6 of 16 of No Emails: a chi-square found the distribution of no significance X^2 (2, 26) = 1.16, *ns*.

Eighteen of 52 parents responded to the follow-up question of what was good or not good about the differences in communications. Five out of 18 parent responses were coded "positive content of communications" (PC - see codes in Chapter 2, p. 51, for a complete listing of the coding system for qualitative responses), 5 out of 18 "positive regularity/consistency/delivery of communications" (PR), and 5 out of 18 "positive efficiency via email" (PE). Two responses were coded as "positive interaction via email" (PI), and the remaining response addressed a "negative efficiency of email" (NE).

Four of the five responses coded PC, "positive content," came from parents of the two email treatments, Teacher-Sent emails and Student-Sent emails. Parents said they were happy to "know what activities their children were doing at school" and to "understand what and how to do in school-to-home." Information was "more detailed and . . . makes me more aware of what is going on at school."

Three of the five responses coded PR resulted from parents of the Student-Sent email treatment. One parent noted that a positive difference was "regular communication from teachers and administrators." Parents commented that they were happy to receive "more communication," both in terms of the number of emails and amount of detail they contained. One parent felt he/she "closely communicated with the school," as a result of "more communication." Another parent with a child in the Student-Sent email group had a similar response, "I was excited about knowing more so I could connect with my son more." The parent went on to explain that although the emails gave positive communication to parents, the information was often a repetition of the principal's email content. Three parents, from the bi-weekly email groups, commented positively on the increased use of email to give assignments. Parents from the email

treatment groups who received bi-weekly emails from teachers or students noticed changes in communications related to the volume, frequency, and clarity of email messages received.

One parent commented on the efficiency of email, PE, giving positive comments on the school's communication of changes in school schedules and "prompt alerts" in reference to administrative emails sent to all parents during the flood watch in Bangkok. The school sent these emails to all parents; however, two parents specifically mentioned the teacher's use of email to send assignments during that period.

Only one parent of the 18 who responded to the open-ended question reported "negative efficiency of email," NE. That parent explained that the email communication that he/she received was too general and did not give enough specific information on how his/her child was doing in the class, and the parent often did not find out what was needed to help his/her child until it was too late. The parent said there is a "gap of communication between parent(s) and [a] teacher(s)."

Qualitative question 2: Were the parents pleased with how ICS communicates what is going on at school and with their child? If not, what would they like to be changed? Ninety-six percent of parents reported they were pleased with how the school communicates what is going on at school. Only 2 of the 52 parents responded to the follow up question. One parent said he/she would like to get more papers and newsletters sent home from the teachers because the reporting system, Renweb, only shows grades and does not communicate what the students are learning or what they produced on tests and quizzes. The other response did not address school-to-home communications but rather drew attention to a curricular item that the parent would like to see changed.

Qualitative question 3: Do/Did the parents like receiving messages from their child or would they prefer that messages come from the teacher or the administrators without going through their child? If "yes," how has your child benefited from being involved in the communication process? Parents participating in all treatments (Teacher-Sent Emails, Student-Sent Emails, No Emails) of the research study were asked this question. Twenty-eight out of 52 parents preferred that their children send school-to-home messages. Of the three treatments, 65% of parents from the Student-Sent email group preferred that school-to-home messages come through the child compared to 56% of parents from the Teacher-Sent Email group and 38% of parents from the No Email group. The percentage of parents who preferred receiving messages through the student did not differ by treatment, X^2 (2, 28) = 2.84*, ns*.

Sixteen of 52 parents responded to the follow-up question of how their child benefited from being involved with school-to-home communications with 88% of those responses coming from the Teacher-Sent and Student-Sent Email treatment groups. Of the 16 parents who responded, 7 reported that the "student as originator of communications is positive due to content" (SPC) with all responses coming from parents of the Teacher- and Student-Sent email groups. Parents in this category were pleased that their children were better informed about what was going on in school both in academics and in school activities. As these comments came from the two email treatment groups, the source of the information was the bi-weekly email reports sent by teachers/students. Parents commented that the messages "updated and reminded" students about assignments and that their children "know more about what going on at school." One parent said, "My child knows what is going on at the same time as I do," and another added, "My child can [be] alert[ed]," through the messages.

Five parents out of the 16 responded that the "student as originator of communications is positive due to interaction" (SPI) with all the responses from parents of the Teacher-Sent and Student-Sent email groups. Several parents commented that their children's participation in the communication process helped involve their children in the education process. One parent said, "It's part of her plan for development in education. She can make her own comments on pro and con." Another parent said, "When my child does more or [is] involved in school, [it] makes my child happy and enjoy going to school and helps my child [become] more confident in himself." Others added that student involvement gives "more responsibility" to their children and the children "always reminds me to be part of [the communication.]

Only 2 parent comments among the 16 who answered the follow-up question were from the No Email treatment, and those parents responded that the "student as originator of communications was not a factor" (SPN). Parents from the No Email group said, "I prefer my child to be involved, but he is not responsible," and "I prefer my child to get involved in this process, but the problem is that my child doesn't want to get involved in this. . . . He doesn't even show me notes from his teacher regarding school activities."

The two remaining responses were not applicable as the parents replied, "Yes," and "No," to the follow-up question but did not elaborate on how the child did or did not benefit from the student sent messages. Qualitative question three asked, "Did the parents like receiving messages from their child, or would they prefer that messages come from the teacher or the administrators without going through their child?" There were no follow-up responses of which parents preferred messages from teachers or administrators rather than through the student.

Qualitative question 4: In the opinion of parents, how can ICS better use school-to-home communications to help parents become more involved with their child at school or

at home? Fifty-six percent of participating parents responded to this question. Eleven of the 29 responses said that the school should improve the "regularity/delivery of communications," (IR). Seven of the 29 responses reported that the school should "improve the content of communications," (IC), and 3 of the 29 responses desired the school to "improve the efficiency of emails," (IE). The remainder of the responses, 8 of 29, was not applicable, (NA), as they commented on ways to improve the curriculum, or that school-to-home communications were good, but the parents did not address ways to improve those communications.

A large number of parent comments addressed the regularity and delivery of communications, IR, which was one reason in sending the regular bi-weekly emails in the research study. Four parents said they would like the teacher to communicate with the parents "more often" and would like to know more about what the students are learning in school. One suggestion was for a class newsletter to be sent out regularly; another parent said, "I seldom hear anything from individual teachers; something like a class letter would be nice." Another suggestion was to supplement emails with quarterly parent-teacher conferences.

Several parents addressed another objective of the research, the delivery, or mode of email communications. One parent mentioned ICS communications should "have Thai translation." Other parents said they would like to see "the website updated in terms of more eye catching graphics and promos," and "emergency messages should be sent through the child and by email." Two parents responded that it was frustrating to get so many emails through Renweb, especially if the parent has a child in each school division. The parent at times received the same communication message three times since they have a child in elementary, middle school, and high school. A parent suggested "a bulletin board link of all information" on the school's

website. These comments are about communications in general and not specific to the research; however, other comments were more in line with the research.

One parent from the No Email group said communication about changes in the school schedule or current education should go home through the student, as well as to the parent. Another parent from the No Email group said some classes did not communicate with parents other than the school's grading portal, which is limited in its scope of communicating what is expected of students and their classes. Additional open-ended input revealed that parents preferred to receive additional student information such as syllabi, and course expectations by email in addition to hard copies requiring parent signatures. One parent commented regarding the course syllabus, "We sign and send [it] back and never give it another thought because the copy stays with the teacher." Another parent noted that communications by email often included attachments that a mobile phone application could not open and if the school sent an attachment that could be opened by mobile phone, it would save the parent a lot of time. With technological advances, more parents are using PDA's for communications, as seen in Qualitative Question 5.

Three parents responded that the school was already doing a good job in school-to-home communications, but the school should address the content of those communications, IC. Two parents said that they would like to know more about their child's behavior and about their child's presentations or awards so they could be more involved in their child's education experience. These parents responded that Renweb does not give this information, so teachers needed to send these messages home in other ways, but the parents did not specify how the teachers should do this. Three of the seven comments addressing content came from the No Email group, "More details would be necessary," and "I would like to know my child's homework, assignments, or tests." An additional comment was "I would love to see teacher's

comments about my child's school behavior and my child's progress from time to time through email." Another parent from the Student Sent group said, "I seldom hear anything from individual teachers." Similar comments were made by other parents that they would like to know more about "school activit[ies] through school-to-home communications because teen[s] will not talk or talk less about all activit[ies] at school." One parent said he/she would like to see communications "from all subject teachers." Another comment addressed the personal aspect of PI in the following statement:

> Teachers could invite us to come to presentations [or] experiments so we could feel a bit of the heartbeat of middle school. Admin or teachers could let us know when our child will be receiving a sports award or will participating in [an assembly.] Teachers could write us a line now and then if our child does something outstanding or commendable.

Three responses related to ways to improve the efficiency of emails, IE. Parents said to "send emails to both parents," "send emails to both students and parents," and to use emails as a way to let parents know how students are doing and how to improve their grade. A parent said that email communication was good but there "is no detailed explanation and sometimes [the teacher] is not responsive enough." The parent said that sometimes it was too late to follow up with the student on particular issues when the communication from the teacher was received.

Qualitative question 5: Where do parents receive school-to-home communications? At work, at home, or on PDA. Twenty-three of 52 parents reported "Always" receiving school-to-home messages by email on a computer at home. Eighteen of 52 parents reported "Always" using a Blackberry, iPhone, or other PDA device to receive school-to-home messages. Fourteen of 52 parents reported "Always" using email on a computer at work to receive school-to-home

messages. The responses were given on a Likert scale of 1, "Never," to 7, "Always," and the researcher did not limit the participant to only one answer per category.

Table 7.

Locus of School-to-home Email Reception

	Percent/number of parents who answered "Always"		
Treatment	Home	Work	PDA
8Z, Teacher-Sent	38% (6 of 16)	31% (5 of 16)	31% (5 of 16)
8M, Student-Sent	55% (11 of 20)	20% (4 of 20)	20% (4 of 20)
8J, No Emails	38% (6 of 16)	31% (5 of 16)	56% (9 of 16)
Total	44% (23 of 52)	27% (14 of 52)	35% (18 of 52)

Chapter 4

Discussion

During the semester in which the research was conducted, ICS principals sent one e-letter per month to parents of all enrolled students informing them of student-related activities and events at school. Other communications were spontaneous emails sent from teachers or principals to individual parents to address exigent issues, such as student academics, behavior, or health concerns. In addition to these communications, the researcher organized a study to send bi-weekly emails over an 18-week period to participating parents with children in three eighth-grade classes. The study included three treatments, one treatment administered to each classroom: Teacher-Sent Emails, Student-Sent Emails, and No Emails. The researcher hypothesized that the additional information conveyed in this way to parents would encourage them to become more involved in their children's education, and that this increase would be quantitatively found on Behavioral, Cognitive, and Personal measures of PI.

Data analyses on pretest and posttest Modified Parent Involvement Scales (MPIS) surveys revealed significant differences between parent and student perceptions of PI on all three measures and among email treatments by time for the Behavioral measure only. In addition, both parent and student ratings for items in Behavioral and Cognitive were low, averaging below 3.0 with a concentration of low ratings in the Behavioral subset of "School involvement." Based upon the results of the study, the researcher identified three themes for summarizing and interpreting the results: 1) differing perceptions of parental involvement between parents and their children, 2) the low ratings for Behavioral (School involvement), and 3) the non-effects of the email treatment.

Differing Perceptions of Parental Involvement Between Parents and Their Children

The significant difference between parent and student ratings of PI arguably represents the most compelling finding of this research. On pretest and posttest surveys, parents consistently reported higher PI scores on the Behavioral, Cognitive, and Personal measures than their children. Separate *F*-tests were conducted between raters (parents and students) on the pretest and posttest ratings for each of the 39 items on the MPIS. The *F*-tests found that 25 variables were significantly different for seven items ($p < .05$), three items ($p < .01$), and 15 items ($p < .001$).

Data analysis found important findings among the significant items in their distribution among the categories of PI when using the more complete definition of PI according to Grolnick et al. (1997). Of the 25 significant items, analysis found a concentration of significant items as follows: 6 of 15 Behavioral (School involvement) items, seven of eight Behavioral (Home involvement) items, five of seven Cognitive items, and seven of nine Personal items. Similarly, of the 15 items found to be significant at the .001 level, only one item came from the Behavioral (School involvement) category. Of the remaining 14 items, four were from the Behavioral (Home involvement) measure, four from the Cognitive measure, and six from the Personal measure.

Traditional definitions of PI (Haynes, Comer, & Hamilton-Lee, 1989; Morrison, 1978; Souto-Manning & Swick, 2006) limited PI to Grolnick's et al. (1997) category of Behavioral (School involvement), about which parents and students were closer in agreement yet with 40% of the items significantly different in this study. However, according to the broader definition of PI proposed by Grolnick et al. to include Behavioral (Home involvement), Cognitive, and

Personal involvement, parents and students showed differences in ratings on 79% of the variables. The current research suggested Grolnick's et al. definition of PI is more nuanced and complex than previous versions, with the result that the survey tool identified different perceptions in areas of PI previously receiving little attention by researchers in education. According to Grolnick et al. (2000), PI entails not only parental activity at school but provides support that builds motivational resources for students to make transitions to high school. Thus, how students perceive their parents to be involved may affect the students' motivation and self-efficacy (Grolnick et al., 2000).

Rater expectation of PI. One explanation for why parents and children disagreed so profoundly about the parents' level of PI may be attributed to the rater's expectation of what PI actually entails (Barnard, 2004; Laursen & Collins, 2004). Perhaps the issue is not whether parents were involved, but rather how they were involved. For example, Steinberg (2001) noted that parents often perceive conflict or confrontation with their children as situations demanding discipline, interpreted as performing reasonable behaviors expected of family members, whereas their children, especially during the adolescent period, think that their rights to personal choice are being violated. Steinberg explained that, for parents, cleaning a bedroom is "the right thing to do," while children may believe that it is their "own business" how clean their room is. Steinberg concluded, "When individuals define issues in such different terms, differences of opinion cannot be reconciled" (p. 6). Steinberg observed that differing perceptions of PI between parents and children were as much a product of incongruent expectations as they were of inadequate or insufficient communication. If parents and students possess different expectations of how parents should be involved in their children's academic lives, additional communication from school to

home may result in little beneficial effect on parent involvement unless those expectations are understood and addressed.

Barge and Loges (2003) found in a qualitative study that parents regarded PI as essentially communication between the home and the school focusing on academics. Parents understood their relationship with the school as a way to obtain information in order to support their children's education at school. For example, parents might be concerned about information on tests, homework, projects, and school attendance, believing that their awareness of this information would benefit their children. These items involve information transfer that Grolnick et al. (1997) categorized as Behavioral (School involvement). In contrast, Barge and Loges noted that students interpreted PI as a way for parents to relate to them, seeing their parents as partners in their education. For these students, features of PI tended to cluster around parents providing support and resources for academic development. Students also shared an expectation that parents would support them by giving them encouragement and showing them individual attention. These issues centered on parent-student relationships that Grolnick et al. categorized as Behavioral (Home involvement), Cognitive, and Personal, regarding which parents and students showed much divergence. The focus of parents on information transfer compared to the focus of students on the parent-student relationship may result in how each one interprets PI and places importance on particular behaviors. For example, parents may believe they are positively involved with planning for college because they have asked for and received information about six different colleges, the courses they offered, and the cost of the colleges. Students, however, may think their parents are not involved in college preparation because the parents have not discussed their college choices, their interests in what they would like to study in college, their feelings about moving away from home, or their preparation for college.

The significance found in the differing perceptions on the Personal measure provides further support to the idea that students interpret PI more in terms of relationships and parental support than information transfer. In the current study, four of the seven Personal variables deemed significant at $p < .05$ focused on parent-student discussions at home. According to the reports, students perceived their parents to be less involved in parent-student discussions than their parents did. Other research found that even though the frequency and content of parent-student communication may fluctuate, parents remained the most influential figures for their children at this age (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). If parents have such influence on their children, then parents need to be aware of how frequently their children's perspectives of PI vary from their own.

Given the apparent differences in what parents and students may value in terms of PI, more research is needed to determine the optimal way for educators to identify and communicate PI definitions and expectations to parents and their students in order to diminish differing perceptions. Eccles and Harold (1993) found that parents reported that lack of information regarding what parents could do to be involved and a history of negative interactions with the school contributed to a lack of PI. Eccles and Harold suggested that schools go beyond traditional approaches to communications and information transfer such as parent-teacher conferences and Open House events. In addition to communicating PI expectations, schools need to find a way to identify negative interactions and decrease their incidence.

Perhaps one way to achieve this objective would involve a commitment to encourage PI by establishing a contact person for each family/student dyad to promote more personal relationships between parents and their children. These relationships would provide a supportive

environment in which educators could meet with parents/students in order to identify what parents/students understand as PI (Eccles & Harold, 1993). If the parents/students do not mention personal kinds of behavior, then the contact person should explain the school's conception of PI and the importance of recognizing and nurturing personal relationships with their children – beyond information exchange. Then, educators and school administrators would be able to communicate directly to parents various opportunities for PI at school and address how to be involved in their children's lives at home. As educators communicate clearly what they define and expect for PI, differences in perceptions of PI may diminish (Bridgemohan et al., 2005) thus improving student motivation and self-efficacy (Bandura, 2006; Grolnick & Slowiaczek, 1994).

Student disengagement. According to the research, the student's attitude toward their parents' involvement, resulting in student disengagement, may contribute to parents and children differing in their perceptions of PI (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Adolescent children tend to desire autonomy and independence, resulting in less time spent with parents. Larson et al. found that between fifth and ninth grade, student time spent with families declined by 40%, as adolescents spent more time alone during this period. In the current study, perhaps the student's desire to be independent and the parent's willingness to allow their children to be on their own resulted in more time spent apart. Thus, fewer parent-child interactions may have influenced the child to rate PI low because many of the PI variables were based on parents and children doing things or talking together either at school or at home. From the parents' perspective, the level of their commitment to be involved may have been unchanged, thus parents may have maintained a higher rating of PI. As such, the literature has suggested a need for families to make up for this separation and to develop higher levels of trust through increased

discussion of shared topics and personal concerns of children (Burgis, 2000; Coleman, 1961; Epstein, 1995; Larson et al., 1996).

Including students in the communication process is among the most promising ways to address and diminish student disengagement. Communication exchanges between parents and students allow trust to develop and provide opportunities to improve interpersonal connection (Eccles & Harold, 1993; Hoover-Dempsey & Sandler, 1997). Students need to know what educators are communicating to their parents. They must also have the opportunity to participate in that exchange. Educators may facilitate this exchange by providing opportunities for communication exchanges to occur based on PI variables previously identified by an instrument such as the MPIS. Barge and Loges (2003) noted that unless parents and students "begin to talk about differences in meaningful ways and create some type of consensus regarding issues [of differing perspectives], it will be difficult to foster significant parental involvement" (p. 161). When parents and students communicate more effectively and frequently, addressing differences in expectations between all parties, differences in perspectives may narrow (Riel & Levin, 1990).

The literature suggested targeting school and home behavior such as designing activities for families in order to encourage PI and student responsiveness. Such activities focus on the quality of parent-student interaction, not the number of interactions, and would be designed to include a parent's response in the activity (DeGennaro, 2010; Izzo, Weissberg, Kasprow, & Fendrich, 1999). For example, an ICS intervention might assign students to keep a diary or daily log of conversations with their parents regarding family issues, family events, and school activities in which this process would culminate with students presenting a video of the "best

conversation." Students could then present the videos at a parent-teacher dinner for all parents in the class with both students and parents voting on the top three. The parent/student winners could receive a substantial reward such as tickets for the family to attend a cultural event. Such an activity addresses the PI variable "Parent talked with children about current events."

Ames (1993) found that children's perception of PI was related with their perceived academic self-competence. When children believed their parents were involved in their education, their intrinsic motivation was more positive. As children see parents and schools working together to support their education, they receive the message that PI is important—this recognition, in turn, can motivate the student to be more dedicated in pursuit of academic goals (Dauber & Epstein, 1993).

Additional research has found that improved motivation in students might influence parents to become further involved (Gonzalez-DeHass, Willems, & Doan Holbein, 2005). Motivated children respond to communicated expectations by "pushing parents to be involved" at school, a phenomenon described by Grolnick and Slowiaczek (1994) as "child-to-parent pathways." For example, a student's parent might attend a parent-teacher meeting and read a student's essay on "sharks." In this case, ideally the parent would return home and talk to the child about the essay, a discussion that could result in the parents and student going to the local aquarium together. PI thus follows "circular pathways," where initial involvement may positively affect the students' perception of their parents' support, and then the students' improved motivation encourages further PI (Gonzalez-DeHass et al., 2005).

Although the MPIS did not show a difference in PI ratings among the treatment groups, qualitative data in the current study indicated that student involvement in email communications

was beneficial and promoted positive consequences. The current research is among the first treatments in which the students were involved in email communications. Open-ended responses from several parents of the Student-Sent Email group reported that their children were better informed about what was going on at school than when the email intervention began, and that their children "could take more responsibility" in their education. By providing additional content in communications and involving students in school-to-home communications, educators may assist students in becoming more involved in their own education, which may consequently increase PI.

Accuracy of measurement. A third possible reason for the differing perceptions of PI between parents and students consists of the validity of the measurements. If parents were less involved with the school (personnel, academics, programs, activities), as reflected in the low ratings in the Behavioral (School involvement) category, then perhaps they may have been reluctant to admit the true degree of their involvement on the MPIS. Therefore, parent ratings may have reflected inflated perceptions regarding the degree of their involvement. These perceptions may be conceived as a Halo Effect in which the parents reported what they wished or believed to be true about their level of involvement (Nisbett & Wilson, 1977). In earlier studies, literature demonstrated both parents and students desired an increase in PI (Epstein, 1986). Likewise, in the current study, the high ratings by parents and students on PI variables in the Personal category, although differing significantly, suggest both parties recognized that parents had a high interest in their children.

Although parents may have overestimated the degree of their involvement, students may also have had inaccurate perceptions of PI. Previous research has questioned the validity of

student perspectives on PI due to the bias that students may hold (Izzo et al., 1999; Reynolds, 1992). For example, Barnard (2004) questioned the use of student data regarding PI because students may perceive parents coming to school or talking with teachers as negative behaviors. Students may interpret these behaviors as arising from academic problems at school and resulting in disciplinary problems at home. Researchers often discount adolescent student data on PI because of the view that young teens are in a period of conflict and disengagement, and their opinions would reflect negative opinions of their parents. However, the literature has shown that student perceptions of PI should not be ignored because they are influential on student motivation and academic achievement (Gonzalez-DeHass et al., 2005; Grolnick & Slowiaczek, 1994; Marchant, Paulson, & Rothlisberg, 2001).

More data are needed to determine the accuracy of the ratings of variables in the MPIS in order to determine whose perspectives of PI are more accurate. A possible addition to the research would be to include a Teacher Report (see Appendix D), in which teachers, in addition to parents and students, would provide a rating of PI on the survey instrument. Teacher observations and other independent reports of PI would aid educators in clarifying the degree of divergence because data triangulation through direct observation provides an independent perspective to validate ratings (Gonzales, Cauce, & Mason, 1996).

Another possible addition to the current research would be to gather more in depth explanations of PI from three focus groups (parents, students, and teachers). The focus groups would be queried at the beginning, middle, and end of the research period. The purposes would be to 1) review survey data (pretest and posttest) provided by parents and students and solicit more elaborate explanations of their responses, and 2) gather their observations that may help

clarify differences in perception of PI on variables during the middle of the research. The collected data from the focus groups would aid researchers in identifying potential reasons that support the collected ratings or help explain discrepancies in perceptions that were found.

Low Scores on Behavioral (School involvement)

Parental involvement scores in the Behavioral and Cognitive measures indicated low involvement with ratings generally between 2.5 and 3.0. However, in the subset of the Behavioral category, School involvement, parent and student responses on combined surveys showed 7 of 15 variables with a rating below 2.1. Of the seven variables, four involved parent-teacher communication, including "Parent talked with the teacher formally in a conference," "Parent talked with the teacher informally before or after school," "Parent talked on the phone with the teacher," and "Parent sent a note to the teacher." Perhaps the low ratings on these variables reflected a need for improvement in parent-teacher communications. Parents and students rated only one other variable on the MPIS below 2.1, the Cognitive involvement measure "Parent took child to the library." The instrument used in the present study of 39 PI variables does not expect parents to be fully involved on each item, but rather the survey is intended to be used to identify areas of needed improvement as well as to compare parent and student perspectives of PI.

Research is limited in recording the degree of PI among schools. Do low ratings on these items reveal a general trend among parents of less involvement in school activities and of less communication about their children's academic performance with teachers? Is this a trend only among schools in Asia, or could there be environmental factors the study failed to account for during this study? For example, perhaps the idiosyncratic structure of ICS led to low ratings of

PI. Could the low PI ratings be only among parents and students at ICS? More research is needed to identify whether the low ratings in this category are prevalent in other kinds of schools and geographical regions for this age group. In the next section, the researcher offers suggestions for expanding upon the current research to potentially answer these questions of scope and inherent bias.

Additionally, research is needed to identify if a core set of PI practices is essential for all schools. Perhaps a workable definition of PI should be smaller than the 39 items on the MPIS. Are certain variables more important for understanding PI than others? Earlier research suggested that the degree of parent participation at school and attending PTO meetings had little correlation on academic achievement (Ho Sui-Chu & Willms, 1996). However, PI at home such as helping children plan for their education and discussing school activities had the strongest correlation with improved student achievement (Epstein, 1986; Ho Sui-Chu & Willms, 1996). The identification of core PI variables may facilitate educators in communicating expectations of PI to parents and students that may result in improved PI (Hoover-Dempsey & Sandler, 1995; Swick & Williams, 2006). Improving PI, and more importantly student perception of PI, may result in students better supported in their educational development, thus more prepared for higher academic achievement (Epstein, 1986; Grolnick et al., 1997).

Non-effects of the Email Treatment

The researcher expected to see improvements in all dependent measures over the course of the research. However, the email treatments had little effect on the MPIS ratings; the Behavioral measure for the No Email group being the exception. Combined parent and student ratings for PI in the No Email group dropped significantly from pretest (2.72) to posttest (2.41)

surveys. Although the drop-off may seem to imply a negative relationship between lack of email communication and high PI ratings, more research is certainly necessary because the samples used in this study were small.

However, open-ended responses from parents on the post-test survey provided feedback concerning parent expectations in school-to-home communications. Consistent with other research (Epstein, 1996; Epstein & Dauber, 1991), qualitative data indicated that parents preferred regular, specific information regarding what students were learning and how they could support their children's academic activities. Parents specifically stated they desired depth of content and regularity of communications. For example, one parent reported wanting to be "provide[d] [with] quarterly or monthly email[s] from [the] homeroom or core subject's teacher." Additionally, parents communicated a desire for improvement in the content and scope of emails specific to what their children were doing in school. A parent said, "Knowing what's happening will be better to communicate with my child. Maybe [the school should send] a school newspaper every week?" Another parent reported, "Let me know more about school activit[ies] through school to home communications." The above comments showed the parents' involvement tended to focus on transfer of information with very little attention, either positive or negative, on parent-student relationships as identified by Barge and Loges (2003).

Perhaps the email treatment did not result in improved PI ratings because the emails did not properly communicate expectations for PI. Parents may not have known what to do with the information in the emails or how to respond to the sender of the emails. Other research found parents thought that they should help if teachers gave them activities to do at home (Epstein, 1986). Thus, with proper understanding of expectations, parents may have been able to better

support their children in their education. While communicating expectations of PI does not necessarily mean parent-student engagement will occur or increase, educators should take advantage of the opportunity to design treatments and programs that might result in convergence of parent and student expectations of PI (Cohen et al., 1994; Hoover-Dempsey & Sandler, 1995).

Additional research is needed to identify the relationship between communicating school policies and practices of PI expectations through email, and how this positively or negatively impacts the degree of PI. Epstein (1986, 1995) found that school policies on PI, in addition to school and teacher practices of communicating those policies, were strong predictors of PI at home and at school (Dauber & Epstein, 1993). As schools commit to promoting PI, educators should direct efforts into regular school-to-home communication practices. In a case study of middle-school PI, Hutchins (2011) identified that a school district had high expectations for schools to promote PI. In response to low PI at school events, middle-school principals began to cultivate parent partnerships through activities both on and off campus, such as parent-teacher coffees and parent-teacher school policy meetings. In this way, parents were encouraged to give direct feedback to administrators identifying barriers and challenges to PI and how educators could respond with modified school expectations for PI. Such exchanges do not need to be in-depth. Bouffard (2006) noted that occasional communication between parents and schools might be enough to encourage parents to have more conversations with their children about education. Perhaps regular school-to-home communications, such as bi-weekly emails, containing PI expectations would encourage further PI.

As proposed in this study, email may play an essential role in communicating these expectations. Parent and student ratings on Behavioral (School involvement) were low, below

2.1, on items of parent-teacher communication as discussed earlier. These ratings probably show that parents admitted that their involvement, and their children's perceptions of that involvement, was limited in parent-teacher communications. If parents and teachers do not often meet face-to-face, or communicate by note or phone, communication of PI expectations defaults to other methods of communication, the most efficient and convenient being email. Due to a lack of research on email treatments, research does not provide empirical support to educators suggesting specifics about the regularity or content of emails. However, research on parent-teacher communication overwhelmingly supports regular communication (Epstein & Dauber, 1991; Haythornthwaite & Wellman, 1998; Izzo et al., 1999; Reed, 2008). With trends in global communications moving to more mobile-oriented methods (PDA, iPhones, SMS messaging) and less paper and face-to-face communication, the method of school-to-home communications will likely include electronic messaging (Koch, 2010; Shayne, 2008). The question for educators is what will schools communicate in those messages?

Limitations and Contributions to the Research

The results of this study provide some interesting though limited contributions to the literature because of conditions under which the research was conducted. First, the study was limited to parents and students in three classes in one grade at one school, resulting in small sample sizes that were not equal in each of the treatment groups. The researcher recommends the current email research on a larger sample. A larger sampling increases the power of the study to reject the null hypothesis of no change in PI ratings among the treatments.

Second, the research was conducted at a private international school in Southeast Asia with a range of ethnic and socio-economic populations. The findings cannot be generalized to

samples such as those found in United States public schools, or other international schools with different ethnic populations. Perhaps other schools, international or domestic, public or private, would produce a different range of parent and student perceptions of PI. Local neighborhood characteristics such as safety concerns, ethnic communities, socio-economic variables, and availability of resources may affect PI (Eccles & Harold, 1993). Parents and students from different geographic areas and socio-economic level may have differing perspectives on what PI means. Conversely, populations of various culture groups within the same geographic region may hold differing parent and student perceptions of PI (Hill et al., 2004).

Third, the research period was limited to one semester. Perhaps the time allowed for the treatment was too short given the significant differences in rater perception reported on the MPIS. According to Rogers' (2003) Diffusion of Innovation theory, prolonged interaction with innovations in technology is necessary as users participate at different levels and degrees. Blaua and Hameiri's (2012) longitudinal test of this hypothesis found that parents increased their frequency of email communications with teachers by 100% during a three year period. Perhaps a similar longitudinal treatment is necessary for email communications to produce significant effects (Walther, 1995). The researcher recommends research using email treatments for 1-3 years in order to allow raters to feel comfortable enough with the treatment technologies to effect change among PI practices.

Fourth, the age of the students participating in the email treatment was perhaps too late in adolescence for students to change their perceptions of PI. Eighth-grade students are in the period that Larson et al. (1996) described as disengagement and they may have established their attitudes toward their parents prior to the treatment. Laursen and Collins (2004) noted that

students with healthy communicative relationships in pre-adolescence are better prepared for the turbulent middle-school years. By beginning the process of student involvement in communications at an earlier age, students and parents might establish patterns of behavior that would extend throughout adolescence (Eccles & Harold, 1993; Laursen & Collins, 2004). Commencing the email treatment when students are still in elementary school would therefore pre-empt the disengagement stage of adolescence.

Additional Research Questions

The use of email logs in the current research provided insight into email practices of parents. Use of email logs in future research may provide useful data on parent-teacher email practices. However, at this point insufficient data are available on the frequency of email communications by parents and educators, the face-to-face connections of the sender and receiver of emails, and the parent-student perceptions of PI. The following questions could be posed using email logs and the MPIS:

Question 1: Is there a relationship between face-to-face connections of parent and teachers and email communications between home and school? Anecdotal data from conversations between the researcher and the principal and teachers who participated in the study suggested that relationships existed between the frequency of face-to-face contact between parents and the principal/teachers and the frequency of emails received from the parents. Additional research is needed to test whether such a relationship may be found. Other research found that face-to-face encounters were positively related to better communications (Haythornthwaite & Wellman, 1998; Izzo et al., 1999). Given that electronic forms of communication are increasing and parents are communicating less by paper and phone (Freytag,

2001, November; Koch, 2010; Shayne, 2008), opportunities to develop "connectedness" between parents and teachers relies primarily on in-person meetings and email communication. Although schools cannot control what takes place at home, schools can provide avenues and opportunities for in-person discussions and face-to-face connections (Falk & Harrison, 1998) which in turn may influence email communications.

Question 2: Is there a relationship between frequency of parent-teacher communications and parent/student perception of PI? The low number of emails teachers received from parents during the study was a surprise to the researcher. However, the number of emails appears consistent with the low ratings that parents and students reported on the MPIS survey concerning how often parents sent emails to teachers. Other researchers found similar results indicating the low frequency of email contacts between parents and teachers (Bouffard, 2006; Thompson & Mazer, 2012). Thompson (2008) concluded that parents and teachers do not communicate as often as some educational literature states (Chickering & Ehrmann, 1996). To date, research has not determined how much email communication is conducted between schools and parents. Regardless of the frequency, how much communication is enough to engage parents actively? However, Barnard's (2004) longitudinal study of 1165 elementary public school parents found that parents rated themselves as "average" while reporting they were involved in school activities at least once a month. This involvement included attending school events, helping in the classroom, and communicating with teachers. While schools cannot control how often parents contact teachers, schools could encourage teachers to contact parents on a regular basis to promote enhanced parent-teacher communication. More research is needed to identify if there is a relationship between frequency of parent-teacher email communications and parent/student perceptions of PI.

Conclusion

Analysis of the MPIS ratings found differing perceptions of parents and students on the degree of PI in students' academic lives and attempted to identify which factors were most significant in affecting PI. Research has found that PI, and student perception of PI, is related to improved student motivation and self-efficacy (Grolnick et al., 2000). Therefore, educators need to identify areas of low PI and factors affecting differing perceptions of PI in order to design innovations to encourage parents to become more involved in their children's lives.

Encouraging PI becomes more difficult as competitions for parents' time and energy escalate. Data on the MPIS indicated limited PI in the School involvement category, especially in areas of parent-teacher communication. Because work and other demands may include more commuting time for travel or other commitments such as after work demands or even multiple jobs and extended family events, parents may not be able to come to school as often to talk with teachers. Thus, educators should use advances in technology to enable parents and teachers to communicate with each other more easily. Accordingly, the researcher developed a bi-weekly, semester-long email treatment to inform parents of what their children were studying at school in addition to their activities on campus. The hypothesis was that the increase in school-to-home communications would give parents more ideas of how to be involved, thus improving PI. However, the posttest data found little improvement on PI. One reason the treatment did not yield more results that are significant may be due to differing expectations of PI between parents and students. Parents may have understood PI to focus on information transfer, whereas their children may have understood PI to focus on the parent-child relationship. The email treatment provided improved frequency and amount of information communicated to parents, but did not communicate what parents were to do with that information to best assist their children. As

educators adapt email content to communicate PI expectations to parents, the focus should be on lucidly informing parents how to help their children succeed at school.

The results of this study and the current state of literature calls for professionals to consider a paradigm shift in how schools think about improving PI and how they communicate their plan to parents, students, and teachers. Recent research has questioned the level of understanding among educators of what is needed to identify and address parent/student needs and how to effectively communicate to parents how to be involved with their children in education (Bullen, 2012; Ferrara, 2009; Maghrabi, Carr, Heath, & Reitzug, July 29, 2012; Wiseman, 2010). Do schools have a strategic plan to improve PI? Are teachers aware of that plan and understand their role in making it successful? If PI is fundamental and essential in successful education, then what is the plan to support parents in their involvement? Do parents and students understand and contribute to communicating and implementing the school's strategic plan? What are schools doing to bring parent and student needs to awareness to better address those needs? The paradigm shift that is needed is that email should not be seen by schools as merely a time-saver and mass communication device, but rather a tool used in tandem with regular and timely parent-student-teacher conversations in order to more effectively meet the needs of parents and students.

Educators should use the results of this study to form better initiatives to improve PI and students' perceptions of PI. Educators should communicate to parents what they can do to improve their children's perceptions of PI and help parents understand how to be involved and how their children perceive their involvement. If students have an improved perception of PI, they may perform better in school and demonstrate more self-confidence and motivation. Thus, school-to-home email may represent a conscious decision to forego simply communicating

generic information to a communication effort dedicated to demonstrating how parents may improve PI in a way that will also improve their children's perception of PI.

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Appendix A: Sample Email for 8G and 8C

Week One: January 7-11

School events

8 Jan Writing club – contact ben_r@icsbangkok.com

10 Jan Basketball tryouts for U-15 boys and girls

10 Jan Science project due for 8G

Links: (URL) weekly homework and grades

(URL) school calendar

School experience

This week 8th grade is studying heredity in Science. We are looking at hair color, eye color, and difference between dominant and recessive traits. Students may look at the below links to find information on genes and heredity. Take a look at John's video log on heredity at the link below.

Links: (URL) resource for heredity

(URL) John's video

Student development

Middle school students need support in making decisions that will affect their future educational opportunities. In March, students will need to take an Algebra test to see if they are ready for Algebra I, Algebra II, or if they will need to take pre-Algebra again. Parents may contact their child's math teacher for more information on this test. A letter and email will be sent home in late February concerning the Algebra test.

Link: (URL) math letter copy

Teacher Contacts and Attachments of PDF files of any hard copy letters sent home that period

Ben_r@icsbangkok.com

Appendix B: Parent Involvement Scales (PIS)

Parent, Child, and Teacher Survey instrument adapted from Grolnick et al. (2000)

Parent – may be either mother or father

Teacher- the child's homeroom teacher

Parent Survey

School Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**
1. How often have your or your spouse done the following this semester?					
1. Met my child's teacher.	1	2	3	4	5
2. Went to open school nights. (e.g., Friday Fellowship).	1	2	3	4	5
3. Went to a school activity (e.g., sports, plays, concert).	1	2	3	4	5
4. Talked to my child's teacher on the phone.	1	2	3	4	5
5. Talked to my child's teacher face-to-face in a scheduled meeting.	1	2	3	4	5
6. Talked to my child's teacher face-to-face informally before or after school.	1	2	3	4	5
7. Sent email to my child's teacher	1	2	3	4	5
8. Sent a note to my child's teacher.	1	2	3	4	5
9. Went to a parent advisory meeting at school					

(e.g., Renweb training)	1	2	3	4	5
10. Went to a parent-teacher conference.	1	2	3	4	5
11. Volunteered in my child's classroom.	1	2	3	4	5
12. Helped with fundraising or goodwill events for the school (e.g., clothing donation).	1	2	3	4	5
13. Went to a PTO meeting.	1	2	3	4	5
14. Check my child's assignment folder	1	2	3	4	5
15. Check my child's grades on Renweb.	1	2	3	4	5

Home Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**

2. How often have you or your spouse done the following this semester?

1. Helped with my child's homework.	1	2	3	4	5
2. Practiced spelling or other skills with my child before a test.	1	2	3	4	5
3. Checked to see my child has done his/her homework.	1	2	3	4	5
4. Helped my child plan for homework.	1	2	3	4	5
5. Listen to something my child wrote or produced in school.	1	2	3	4	5
6. Did a homework assignment with my child.	1	2	3	4	5
7. Worked with my child on a school project	1	2	3	4	5
8. Talk to my child about school.	1	2	3	4	5

Cognitive Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**

3. How often have you or your spouse done the following this semester?

1. Taken my child to the library.	1	2	3	4	5
2. Talked about current events with my child.	1	2	3	4	5
3. Taken my child to plays, concerts, or cultural shows outside of school.	1	2	3	4	5
4. Taken my child to a museum.	1	2	3	4	5
5. Bought or played educational games with my child.	1	2	3	4	5
6. Taken my child to the bookstore or bought books or magazines for my child.	1	2	3	4	5
7. Read books together with my child at home (the same books or different books)	1	2	3	4	5

Personal Involvement	**Never True**	**Rarely True**	**Sometimes True**	**Often True**	**Very True**
Likert Scale	**1**	**2**	**3**	**4**	**5**

4. How true are the following statements?

1. I know what my child is currently learning in school.	1	2	3	4	5
2. I know the names of my child's classmates.	1	2	3	4	5

3. I know the activities in school my child likes.	1	2	3	4	5
4. I know the activities in school my child dislikes.	1	2	3	4	5
5. I keep close track of how well my child is doing in school.	1	2	3	4	5
6. I ask my child how things are going in school.	1	2	3	4	5
7. I talk with my child about his/her struggles with growing up as a teenager.	1	2	3	4	5
8. I talk with my child about his/her interests.	1	2	3	4	5
9. I talk with my child about course selection at school (e.g. band, choir, Algebra track).	1	2	3	4	5

Child Survey

School Involvement	Never	Rarely	Sometimes	Often	Very Often
Likert Scale	**1**	**2**	**3**	**4**	**5**

1. How often has one or both of your parents done the following this semester?

1. Met my teacher.	1	2	3	4	5
2. Went to open school nights (e.g. Friday Fellowship).	1	2	3	4	5
3. Went to a school activity (e.g., sports, plays).	1	2	3	4	5
4. Talked to my teacher on the phone	1	2	3	4	5
5. Talked to my teacher face-to-face in a scheduled meeting	1	2	3	4	5
6. Talked to my teacher face-to-face informally before or after school.	1	2	3	4	5
7. Sent an email to my teacher.	1	2	3	4	5
8. Sent a note to my teacher.	1	2	3	4	5
9. Went to a parent advisory meeting (e.g. Renweb training).	1	2	3	4	5
10. Went to a parent-teacher conference.	1	2	3	4	5
11. Volunteered in my classroom.	1	2	3	4	5
12. Helped with fundraising or goodwill events for the school (e.g., clothing donation)	1	2	3	4	5
13. Went to a PTO meeting.	1	2	3	4	5

14. Checked my assignment folder. 1 2 3 4 5

15. Checked my grades on Renweb. 1 2 3 4 5

Home Involvement Never Rarely Sometimes Often Very Often

Likert Scale 1 2 3 4 5

2. How often has either one or both of your parents done the following this semester?

1. Helped me with homework. 1 2 3 4 5
2. Practiced spelling or other skills before a test. 1 2 3 4 5
3. Checked to see I have done my homework. 1 2 3 4 5
4. Helped me plan for homework. 1 2 3 4 5
5. Listened to something I wrote or produced in school. 1 2 3 4 5
6. Did a homework assignment with me. 1 2 3 4 5
7. Worked with me on a school project 1 2 3 4 5
8. Talked to me about school. 1 2 3 4 5

Cognitive Involvement Never Rarely Sometimes Often Very Often

Likert Scale 1 2 3 4 5

3. How often has either one or both of your parent done the following this semester?

1. Taken me to the library. 1 2 3 4 5
2. Talked to me about current events. 1 2 3 4 5

3. Taken me to plays, concerts, or cultural shows outside of school. 1 2 3 4 5
4. Taken me to a museum. 1 2 3 4 5
5. Bought or played educational games with me. 1 2 3 4 5
6. Taken me to a bookstore or bought books or magazines for me. 1 2 3 4 5
7. Read books together with me at home (Either the same books or different books) 1 2 3 4 5

Personal Involvement **Never True Rarely True Sometimes True Often True Very True**

Likert Scale **1 2 3 4 5**

4. How true are the following statements?

1. My parents know what I am currently learning in school. 1 2 3 4 5
2. My parents know the names of my classmates. 1 2 3 4 5
3. My parents know the activities in school that I like. 1 2 3 4 5
4. My parents know the activities in school that I dislike. 1 2 3 4 5
5. My parents keep close track of how well

I am doing in school.	1	2	3	4	5
6. My parents ask me how things are going in school.	1	2	3	4	5
7. My parents talk with me about my struggles with growing up as a teenager.	1	2	3	4	5
8. My parents talk with me about my interests.	1	2	3	4	5
9. My parents talk with me about course selection at school (e.g. band, choir, Algebra track)	1	2	3	4	5

Teacher Report (Teachers survey homeroom students only)

School Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**

1. How often have you observed either one or both parents of (student) doing or have evidence of doing this semester (August 2010 – December 2010)?

1. Met the child's teacher.	1	2	3	4	5
4. Talked to the child's teacher on the phone.	1	2	3	4	5
5. Talked to the child's teacher face-to-face in a scheduled meeting.	1	2	3	4	5
6. Talked to child's teacher face-to-face informally before or after school.	1	2	3	4	5
7. Sent an email to the child's teacher.	1	2	3	4	5
8. Sent a note to the child's teachers.	1	2	3	4	5
10. Went to a parent-teacher conference.	1	2	3	4	5
11. Volunteered in the child's classroom	1	2	3	4	5
14. Checked the child's assignment folder.	1	2	3	4	5
15. Checked the child's grades on Renweb Evidenced by the child's admission.	1	2	3	4	5

Student ID (randomly assigned by the teacher beforehand _____

Appendix C: Pilot Study Email and Consent

Dear Parents of Selected 7th grade students,

I am requesting your agreement to participate in my dissertation pilot study on school-to-home email and parental involvement. This study is part of a doctoral degree through Lehigh University's Department of Education. The study will test the relationship between regular, structured bi-weekly emails from teachers and students and the degree and frequency of parental involvement in three areas: school and home, cognitive, and personal. Mr. Darren Gentry, headmaster of ICS and Mr. Stephen Ladas, Middle School principal of ICS, have given approval for this study. Dr. Ron Yoshida of Lehigh University is the supervisor of this research. I would appreciate your help in piloting the experimental study that I have designed.

I am asking for five parents and students from 7A and five parents and students from 7B to help with the pilot study. Parents and students will be asked to take a survey using the same questions in order to identify differences between parent and student perception. If you agree to participate in this study, in addition to the current survey, you will receive two piloted emails. Your 7th grade student will also fill out the child report of the same survey and will take the survey in the school computer lab. The survey will be sent by email and will use a program called SurveyMonkey, which will keep your name and email address confidential in the report. It will not be possible for anyone to personally identify you in my research report or any other report published from the data. Parent/student surveys will be randomly coded by pairs before the beginning of the pilot study. Your responses will be completely confidential, and only the researcher will be able to view the results of individual coded surveys. The results of individual surveys will not be shared with anyone or published in any way. The survey contains about 40 questions and will take about 10 minutes to fill out.

Your participation is voluntary. You will not receive any payment, but your participation will aid in helping me to make any necessary adjustments to my research. The benefits of participating in this pilot study include helping to improve school-to-home communications and providing feedback on how ICS can support parents in their child's education. Additionally, at the end of the pilot study, I would welcome any comments if you wish to meet with me in a focus group meeting. You may also phone or contact me by email if you wish to offer any feedback on the project.

I do not foresee any risk resulting from your participation in the study. Other students, those not participating in the study, will not be receiving the structured emails; however, they will receive their normal school-to-home communications.

You are encouraged to contact me at any time if you have any questions. I can be reached at 086-976-2523 or 02-183-6794 or by email at ben_r@icsbangkok.com. My supervisor, Dr. Ron Yoshida, can be reached at Lehigh University (telephone 009-1-610-758-6249 or email rky2@lehigh.edu). Please fill out the parental and student consent on the next page if you are willing to participate in the pilot study.

Pilot Study Consent Form

Statement of Consent: I have read the pilot study research information. I have received answers to any questions I asked of the researchers. (Please turn in to child's homeroom teacher)

Print Full name of student:_____

Student's Homeroom Teacher:_____

Parent email to be used for the study:_____

Student email to be used for the study:_____

Signature of Mother:_____ Date: _____

Signature of Father: _____ Date: _____

Signature of Student _____ Date: _____

Signature of Investigator:_____ Date: _____

Appendix D: Modified Parent Involvement Scales (MPIS)

Parent and Child Pre/Posttest Survey instrument adapted from Grolnick et al. (2000)

Parent – may be either mother or father

Teacher- the child's homeroom teacher

Parent Survey

School Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**
1. How often have your or your spouse done the following this semester?					
1. Met my child's teacher.	1	2	3	4	5
2. Went to open school nights. (e.g. Friday Fellowship).	1	2	3	4	5
3. Went to a school activity (e.g., sports, plays, concert).	1	2	3	4	5
4. Talked to my child's teacher on the phone.	1	2	3	4	5
5. Talked to my child's teacher face-to-face in a scheduled meeting.	1	2	3	4	5
6. Talked to my child's teacher face-to-face informally before or after school.	1	2	3	4	5
7. Sent email to my child's teacher	1	2	3	4	5
8. Sent a note to my child's teacher.	1	2	3	4	5
9. Went to a parent advisory meeting at school					

(e.g. Renweb training)	1	2	3	4	5
10. Went to a parent-teacher conference.	1	2	3	4	5
11. Volunteered in my child's classroom.	1	2	3	4	5
12. Helped with fundraising or goodwill events for the school (e.g., clothing donation).	1	2	3	4	5
13. Went to a PTO meeting.	1	2	3	4	5
14. Check my child's assignment folder	1	2	3	4	5
15. Check my child's grades on Renweb.	1	2	3	4	5

Home Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**

2. How often have you or your spouse done the following this semester?

1. Helped with my child's homework.	1	2	3	4	5
2. Practiced spelling or other skills with my child before a test.	1	2	3	4	5
3. Checked to see my child has done his/her homework.	1	2	3	4	5
4. Helped my child plan for homework.	1	2	3	4	5
5. Listen to something my child wrote or produced in school.	1	2	3	4	5
6. Did a homework assignment with my child.	1	2	3	4	5
7. Worked with my child on a school project	1	2	3	4	5
8. Talk to my child about school.	1	2	3	4	5

Cognitive Involvement	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Likert Scale	**1**	**2**	**3**	**4**	**5**

3. How often have you or your spouse done the following this semester?

1. Taken my child to the library.	1	2	3	4	5
2. Talked about current events with my child.	1	2	3	4	5
3. Taken my child to plays, concerts, or cultural shows outside of school.	1	2	3	4	5
4. Taken my child to a museum.	1	2	3	4	5
5. Bought or played educational games with my child.	1	2	3	4	5
6. Taken my child to the bookstore or bought books or magazines for my child.	1	2	3	4	5
7. Read books together with my child at home (the same books or different books)	1	2	3	4	5

Personal Involvement	**Never True**	**Rarely True**	**Sometimes True**	**Often True**	**Very True**
Likert Scale	**1**	**2**	**3**	**4**	**5**

4. How true are the following statements?

1. I know what my child is currently learning in school.	1	2	3	4	5
2. I know the names of my child's classmates.	1	2	3	4	5

3. I know the activities in school my child likes.	1	2	3	4	5
4. I know the activities in school my child dislikes.	1	2	3	4	5
5. I keep close track of how well my child is doing in school.	1	2	3	4	5
6. I ask my child how things are going in school.	1	2	3	4	5
7. I talk with my child about his/her struggles with growing up as a teenager.	1	2	3	4	5
8. I talk with my child about his/her interests.	1	2	3	4	5
9. I talk with my child about course selection at school (e.g. band, choir, Algebra track).	1	2	3	4	5

Child Survey

School Involvement	Never	Rarely	Sometimes	Often	Very Often
Likert Scale	**1**	**2**	**3**	**4**	**5**

1. How often has one or both of your parents done the following this semester?

1. Met my teacher.	1	2	3	4	5
2. Went to open school nights (e.g. Friday Fellowship).	1	2	3	4	5
3. Went to a school activity (e.g., sports, plays).	1	2	3	4	5
4. Talked to my teacher on the phone	1	2	3	4	5
5. Talked to my teacher face-to-face in a scheduled meeting	1	2	3	4	5
6. Talked to my teacher face-to-face informally before or after school.	1	2	3	4	5
7. Sent an email to my teacher.	1	2	3	4	5
8. Sent a note to my teacher.	1	2	3	4	5
9. Went to a parent advisory meeting (e.g. Renweb training).	1	2	3	4	5
10. Went to a parent-teacher conference.	1	2	3	4	5
11. Volunteered in my classroom.	1	2	3	4	5
12. Helped with fundraising or goodwill events for the school (e.g., clothing donation)	1	2	3	4	5
13. Went to a PTO meeting.	1	2	3	4	5

14. Checked my assignment folder. 1 2 3 4 5

15. Checked my grades on Renweb. 1 2 3 4 5

Home Involvement Never Rarely Sometimes Often Very Often

Likert Scale 1 2 3 4 5

2. How often has either one or both of your parents done the following this semester?

1. Helped me with homework. 1 2 3 4 5
2. Practiced spelling or other skills before a test. 1 2 3 4 5
3. Checked to see I have done my homework. 1 2 3 4 5
4. Helped me plan for homework. 1 2 3 4 5
5. Listened to something I wrote or produced in school. 1 2 3 4 5
6. Did a homework assignment with me. 1 2 3 4 5
7. Worked with me on a school project 1 2 3 4 5
8. Talked to me about school. 1 2 3 4 5

Cognitive Involvement Never Rarely Sometimes Often Very Often

Likert Scale 1 2 3 4 5

3. How often has either one or both of your parent done the following this semester?

1. Taken me to the library. 1 2 3 4 5
2. Talked to me about current events. 1 2 3 4 5

3. Taken me to plays, concerts, or cultural shows outside of school. 1 2 3 4 5
4. Taken me to a museum. 1 2 3 4 5
5. Bought or played educational games with me. 1 2 3 4 5
6. Taken me to a bookstore or bought books or magazines for me. 1 2 3 4 5
7. Read books together with me at home (Either the same books or different books) 1 2 3 4 5

Personal Involvement **Never True Rarely True Sometimes True Often True Very True**

Likert Scale **1 2 3 4 5**

4. How true are the following statements?

1. My parents know what I am currently learning in school. 1 2 3 4 5
2. My parents know the names of my classmates. 1 2 3 4 5
3. My parents know the activities in school that I like. 1 2 3 4 5
4. My parents know the activities in school that I dislike. 1 2 3 4 5
5. My parents keep close track of how well

I am doing in school.	1	2	3	4	5
6. My parents ask me how things are going in school.	1	2	3	4	5
7. My parents talk with me about my struggles with growing up as a teenager.	1	2	3	4	5
8. My parents talk with me about my interests.	1	2	3	4	5
9. My parents talk with me about course selection at school (e.g. band, choir, Algebra track)	1	2	3	4	5

Appendix E: Final Parent Report Open-Ended Questions

1. Did you notice any differences in school-to-home communications this semester? What was good or not good about these differences?
2. Are you pleased with how ICS communicates what is going on at school and with your child? If not, what would you like to be changed?
3. Do/Did you like receiving messages from your child or would you prefer that they come from the school without going through the child?
4. What can ICS do through school-to-home communications to help you become more involved with your child at school or at home?
5. How do you most often receive communications from school?

Appendix F: Email and Parental Involvement Research Consent Form

Dear Teachers and Parents of Selected 8th grade Homerooms,

I am requesting your agreement to participate in my dissertation research study on school-to-home email and parental involvement. This study is part of a doctoral degree through Lehigh University's Department of Education. The study will test the relationship between regular, structured bi-weekly emails from teachers and students and the degree and frequency of parental involvement in three areas: school and home, cognitive, and personal. Mr. Darren Gentry, headmaster of ICS and Mr. Stephen Ladas, Middle School principal of ICS, have given approval for this study. Dr. Ron Yoshida of Lehigh University is the supervisor of this research. I would appreciate your help in the experimental study that I have designed.

I am asking homeroom teachers, parents, and students from three 8th grade homerooms to help with my research study. Parents and students will be asked to take a parent involvement survey using the same questions in order to identify differences between parent and student perception. If you agree to participate in this study, parents will receive an initial survey at the beginning of the study and the same survey again at the end of the study in December 2011. Parents of the three selected homerooms will receive either bi-weekly emails, from the teacher or the student, or no bi-weekly emails. Eighth grade students will also fill out the child report of the same survey and will take the survey in the school computer lab. Teachers will take an abbreviated survey of eight questions.

The surveys will be sent by email and will use a program called SurveyMonkey, which will keep your name and email address confidential in the report. In addition, homeroom teachers and the middle school principal will keep a record of emails received during the research period; however, email content will be confidential and not part of the research. The results of the research will be shared in an open meeting at the end of the research.

Informational Meeting: I will hold an informational meeting for any parents and students involved in the research study. I encourage you to participate in this study, as the findings will be valuable to help the communication and partnership process at ICS. The meeting will be held in the Conference room of the Bedford building at 7:30 AM on Monday, August 15, 2011. I will also be available after school on Monday by appointment. You may turn in your consent forms to your child's homeroom teacher at any time before or after the informational meeting.

Confidentiality: It will not be possible for anyone to personally identify you in my research report or any other report published from the data. Parent/student surveys will be randomly coded by pairs before the beginning of the pilot study. Your responses will be completely confidential, and only the researcher will be able to view the results of individual coded surveys. The results of individual surveys will not be shared with anyone or published in any way. The survey contains about 40 questions and will take about 10 minutes to fill out.

Voluntary Nature of the Study: Your participation is voluntary. You will not receive any payment, but your participation will aid in helping me to make any necessary adjustments to my research. The benefits of participating in this study include helping to improve school-to-home communications and providing feedback on how ICS can support parents in their child's education. Additionally, at the end of the study, I would welcome any comments if you wish to meet with me. You may also phone or contact me by email if you wish to offer any feedback on the project.

I do not foresee any risk resulting from your participation in the study. Other students, those not participating in the study, will not be receiving the structured emails; however, they will receive their normal school-to-home communications.

Contacts and Questions: You are encouraged to contact me at any time if you have any questions. I can be reached at 086-976-2523 or 02-183-6794 or by email at ben_r@icsbangkok.com. If you have any questions or concerns regarding this study and would like to talk to someone at ICS other than the researcher, you are encouraged to contact Mr. Stephen Ladas, ICS middle school principal, at Stephen_l@icsbangkok.com. My supervisor, Dr. Ron Yoshida, can be reached at Lehigh University (telephone 009-1-610-758-6249 or email rky2@lehigh.edu). You may also contact Susan E. Disidore at (telephone 001-1-610-758-3020 or email: sus5@lehigh.edu) of Lehigh University's Office of Research and Sponsored Programs. All reports or correspondence will be kept confidential.

You will be given a copy of this information to keep for your records.

Email and Parental Research Study Consent Form

Statement of Student Assent: I have agreed to participate in the research as explained by Mr. Ben Radin (See Copy of Student Assent Certificate Attached).

Signature of Student:_____Date: _____

Statement of Consent: I have read the research study information. I have received answers to any questions I asked of the researchers.

(Please turn in signed consent form to child's homeroom teacher)

Print Full name of student:_____

Student's Homeroom Teacher:_____

(Please print email addresses clearly. Second parent email is optional)

Parent email to be used for the study:_____

Second parent email to be used for the study:_____

Signature of Parent/Guardian:_____ Date: _____

Signature of Teacher:_____ Date_____

Signature of Investigator:_____ Date: _____

Informed Assent Form for ICS Email Research Study

This informed assent form is for students in the 8th grade at ICS who are invited to participate in a research study using email to improve parental involvement.

Introduction

My name is Mr. Ben Radin and I teach ESL at ICS. I have been a teacher here for 14 years. I am going to give you information and invite you to be part of a research study. You can choose whether or not you want to participate. I will discuss this research with your parent(s)/guardian and ask for their participation. If you are going to participate in the research, your parent(s)/guardian also have to agree. But if you do not wish to take part in the research, you do not have to, even if your parents have agreed.

Purpose: Why are you doing this research?

The purpose of this study is to see if communication by email from the school to the home on a regular basis has any effect on your educational experience. With technology today, more students and parents are using I-phones and electronic devices to communicate and it is changing the way schools get in touch with parents. I want to find out how the changes in technology can help you have a better educational experience. To do that, we have to test the method of communication. Emails to parents will be of a general nature and will not address personal student issues.

Choice of participants: Why me?

Eighth grade students are at the edge of being adults. You are important to this study as you are becoming more independent and taking on more individual responsibility. This study recognizes your need for independence and will test how the school can give important information without treating you still as you were in elementary school. Without your help, we cannot do this study.

Voluntary Participation: Do I have to?

You don't have to be in this research if you don't want to be. It's up to you. If you decide not to be in the research, it's okay and nothing changes. Your grade in school or relationship with your teacher will not be affect by your participation or lack of participation. Even if you say "yes" now, you can change your mind later and it's still okay.

Procedures: What is going to happen?

I am asking homeroom teachers, parents, and students from three 8th grade homerooms to help with my research study. Parents and students will be asked to take a parent involvement survey using the same questions in order to identify differences between parent and student perception. If you agree to participate in this study, three things will happen:

1. You will take a survey before the research starts regarding your perception of your parents' involvement in your educational experience.

2. You will be in one of three groups that receive no regular emails, receive an email from school once every two weeks, or send out an email directly to your parents from the computer lab once every two weeks. A sample copy of the email will be given to you today.

3. At the end of this semester, you will take the same survey you took at the beginning of the study to see if your perception has changed of your parents' involvement.

Confidentiality: Will anyone see what I say?

The surveys will be sent by email and will use a program called SurveyMonkey. Your name and email address will be confidential. No one will see your name as only the answers from the whole group together will be analyzed. Your homeroom teacher and the middle school principal will also keep a record of how many emails they receive during this time, but will not keep a record of what those emails were about. The survey contains about 40 questions and will take about 10 minutes to fill out.

Risks and Benefits:

You will not receive any payment, but the benefits of participating in this study include helping to improve school-to-home communications and providing feedback on how ICS can support parents in their child's education. Additionally, at the end of the study, I would welcome any comments you may have to improve ICS communications. I do not see any risk resulting from your participation in the study. Other students, those not participating in the study, will not be receiving the structured emails; however, they will receive their normal school-to-home communications.

Informational Meeting:

I will hold an informational meeting for any parents and students involved in the research study. I encourage you to participate in this study, as the findings will be valuable to help the communication at ICS. The meeting will be held in the Conference room of the Bedford building at 7:30 AM on Monday, August 15, 2011. I will also be available after school on Monday by appointment.

Who to Contact: Who can I talk to or ask questions to?

You can ask me questions now or later. I can be reached at 086-976-2523 or 02-183-6794 or by email at ben_r@icsbangkok.com. If you would like to talk to someone at ICS other than me, you may contact your teacher or Mr. Stephen Ladas, ICS middle school principal, at Stephen_l@icsbangkok.com. My supervisor, Dr. Ron Yoshida, can be reached at Lehigh University (telephone 009-1-610-758-6249 or email rky2@lehigh.edu). You may also contact Susan E. Disidore at (telephone 001-1-610-758-3020 or email: sus5@lehigh.edu) of Lehigh University's Office of Research and Sponsored Programs. All correspondence will be kept confidential.

Certificate of Assent

I understand the research is about testing email communication from ICS to home and its effect on parental involvement. I understand that I will take a survey before and after the research period and that my answers will be confidential. I understand that emails sent home will not be of a personal nature but will contain general school and developmental information that is provided for the benefit of the student.

I have read this information. I have had my questions answered and know that I can ask questions later if I have them. If I choose to be part of this research, I will be given a copy of this paper to keep for myself.

Only if student assents:

I agree to take part in the research.

Print name of student _____

Signature of student: _____

Date:_____

day/month/year

OR

I do not wish to take part in the research and I have not signed the assent above._____(initialed by student)

I have accurately read or witnessed the accurate reading of the assent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given assent freely.

Print name of researcher: _____

Signature of researcher: _____

Date: _____

day/month/year

Appendix G: Headmaster Permission Letter

March 7, 2011

To Whom It May Concern,

I have read through the materials associated with Mr. Ben Radin's proposed research and do hereby approve Mr. Radin to do an email research study at International Community School during the Fall semester of 2011. Specifically, I understand that the research questionnaire will be sent to 68 ICS parents and their respective students from three class of the 8th grade, as well as three homeroom teachers of the students. I further understand that the questionnaires will be sent my email to the participants as explained in the consent letter and form. I understand that the participants will be identified by Ben Radin based on availability and willingness to join the study and that participation is voluntary and parents and students will not be identified in any way by the researcher. In addition, no harm or identification will come to students and/or their parents if they choose not to participate in this study. I will be available to answer any questions parents may have about the research project and will send a letter to parents in support of Mr. Ben Radin's research at ICS.

I look forward to the results from the final research.

Sincerely,

Darren Gentry

Headmaster

Appendix H: Headmaster Invitation Letter

Dec. 17, 2010

Dear Parents of 8th grade students,

I would like to invite you to participate in the research project by Ben Radin, Secondary ESL teacher at ICS. Mr. Radin has been teaching at ICS for 14 years and is currently working on a Doctorate in Education at Lehigh University. Mr. Radin's research project will study the relationship between school-to-home emails and parental involvement in their student's educational experience.

ICS encourages our teachers and staff to continue to develop professionally and also desires to improve school-to-home communication in support of our mission statement "in partnership with parents." This study will fulfill both of these goals by supporting Mr. Radin's research and helping ICS gain better understanding of how parents are currently involved with their students, as well as identify ways that ICS can improve in our communications in light of the changing role of technology in our lives.

As headmaster, I have reviewed Mr. Ben's research surveys and experimental project and support his research endeavor. Participation in this research is voluntary, and parents and students will not be identified in any way by the research. Your willingness to participate or not will in no way affect your relationship with ICS nor affect your student in any way, academic or otherwise. No harm or identification will come to students and/or their parents if they choose not to participate in this study. Additionally, I will be available to meet with you should you have any questions or concerns during the course of the research.

Sincerely,

Darren M. Gentry
Headmaster

Appendix I: Email with Survey Link (Pretest/Posttest)

August 2011 Survey One

December 2011 Survey Two

Dear Parents (Students),

Thank you for agreeing to help with a research study on email and parental involvement. Your contribution with answering this survey is important in order for the school to look at how to improve communications and work together with families in a better way. Please follow the link below to access the survey.

Please contact me if you have any questions or concerns.

(attach link)

Sincerely,

Ben Radin
Ben_r@icsbangkok.com
086-976-2523

Appendix J: Email Verification Sheet

TS: Computer teacher sent email to parent

TR: Computer teacher received email read receipt that email was read

SS: Computer teacher received cc of email sent by student

SR: Computer teacher receives printed read receipt from student whose parent read an email

Experiment Group 1 Teacher sent email (name/class)	Block One Aug. 22	Block Two Sep. 5	Block Three Sep. 19	Block Four Oct. 3	Block Five Oct. 17	Block Six Oct. 31	Block Seven Nov. 14	Block Eight Nov. 28
Jon Choi	TS, TR	TS, TR	TS, TR	TS, TR	TS, TR	TS, TR	TS, TR	TS, TR
Charles Smith	TS, TR	TS	TS, TR	TS	TS, TR	TS	TS	TS, TR

Experiment Group 2 Student sent email (name/class)	Block One Aug. 22	Block Two Sep. 5	Block Three Sep. 19	Block Four Oct. 3	Block Five Oct. 17	Block Six Oct. 31	Block Seven Nov. 14	Block Eight Nov. 28
Jack Choi	SS, SR	SS, SR	SS, SR	SS, SR	SS, SR	SS, SR	SS, SR	SS, SR
Nathan Smith	SS, SR	SS, SR	SS, SR	SS	SS, SR	SS	SS	SS, SR

Appendix K: Teacher Email Received Tally Sheet

Recording emails of 8J, 8M, 8Z, and 8K parents

Week Number _____ Date_____

Teacher's Name_____

Date	Sent By Parents of (name)	Student Homeroom	Initial Thread	Follow Up Email

Appendix L: Middle School Principal Email Received Tally Sheet

Recording emails of 8J, 8M, 8Z, and 8K parents

Week Number _____ Date_____

Principal's Name_____

Date	Sent By Parents of (name)	Student Homeroom	Initial Thread	Follow Up Email

Appendix M: Email Follow-up to Posttest Survey

December 2011

Dear ICS parents involved in email communications study,

If you have not completed and returned the online survey on email communications I recently sent to you, please consider participating in this study. A large number of responses will improve the validity of the study and provide useful information for improving communications at ICS. If you did not receive the online survey, please contact me at ben_r@icsbangkok.com or 086-976-2523.

Additionally, the final survey includes a page of open-ended questions that allow you to give anonymous feedback to ICS for improving school-to-home communications. If you would like further input into the development of communications at ICS, please send an email to one of our school principals. Thank you for your participation.

Sincerely,

Ben Radin

Appendix N: Email Validation Spreadsheet

		Teacher 8J	Teacher 8M	Teacher 8Z	Principal
Block 1	Aug. 22				
Block 2	Sep. 5				
Block 3	Sep. 19				
Block 4	Oct. 3				
Block 5	Oct. 17				
Block 6	Oct. 31				
Block 7	Nov. 14				
Block 8	Nov. 28				

Appendix O: Vitae

BENJAMIN THEODORE RADIN
88/19 Phanason
Kanchanapisek 46
Bangkok, Thailand 10250
e-mail: ben_r@icsbangkok.com

PERSONAL DATA

Birthplace	Shreveport, LA
Birth date	February 21, 1964
Marriage Status	Married; three children ages 5, 14, and 16

EDUCATION

Bob Jones University; Greenville, SC, USA		
	B.A. Theology	1987
	M.A. Theology	1989
Carson-Newman College; Jefferson City, TN, USA		
	B.A. Communication Arts	1992
Cambridge University Extension; Budapest, Hungary		
	TEFLA Certificate, (RSA examinations)	1996
University of Wollongong; New South Wales, Australia		
	M.Ed. TESOL	2001
Cambridge University Extension; Barcelona, Spain		
	DELTA Certificate, (RSA examinations)	2001
Lehigh University; Bethlehem, PA, USA		
	Principal certification	2007
	D.Ed. Educational Leadership	2012

OCCUPATIONAL BACKGROUND

Sept. '89 - Sept. '91	Secondary Teacher
Emmanuel Christian School	Hartsville, SC
Sept. '91 - May '92	Soccer Coach
Carson-Newman College	Jefferson City, TN
May '92 - May '94	Secondary Teacher
Emmanuel Christian School	Hartsville, SC
May '94 - June '96	ESL Teacher
Trefort Agoston Szakozzepiskola	Budapest, Hungary
Aug. '96 - May '97	Secondary Teacher
Trinity Christian School	Rock Hill, SC

June ‘97 - May ‘98	ESL Teacher
Panda Bilingual School	Nonthaburi, Thailand
June ‘98- Present	ESL Teacher
International Community School	Bangkok, Thailand

PROFESSIONAL ACHIEVEMENTS

- Presented Second Language Teaching seminar for Thai teachers with ISAT
- Presented workshops at Thai TESOL and CamTESOL conferences
- Organized and evaluated annual school wide 6-Trait writing assessments at ICS
- Served as Self Improvement Leadership Team coordinator for 2009
- Served as ESL Accreditation chair for 2009
- Served as ESL Subject And Curriculum Team chair for 2008-2012
- 10th grade Serving And Learning Together coordinator for 2009 – 2011