

RUNNING HEAD: USING TECHNOLOGY TO COMMUNICATE WITH PARENTS

You've Got Mail: Using Technology to Communicate with Parents

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ABSTRACT

Communication between schools and families is essential for building trusting relationships that foster parental involvement. Parental involvement in the middle grades is necessary for adolescents to develop successfully and to make decisions that will have positive outcomes for their futures. This study examines the role of communications technologies in fostering parental involvement in middle schools and uncovers barriers that prevent usage of technology to promote communication.

INTRODUCTION

As society becomes increasingly dependent on technology, schools are investing more time and money in technological means of communication (Blanchard, 1997). Access to computer and Internet technologies is increasing in America's public schools and work places and is providing both educators and parents with access to electronic communication. Since 1984, the U.S. Census Bureau has recorded an increase in computer usage by Americans. For instance, in 1984 only 8.2% of the households surveyed had computers, while in 2003, 61.87% of the households had computers and 54.7% had Internet access. Furthermore, 88% of home Internet users reported using the Internet for sending or receiving e-mail (Day, Janus, & Davis, 2005). If 88% of America's home Internet users are utilizing e-mail communication and nearly 100 % of the public schools in the United States have computers with Internet access, teachers and administrators can make use of this technology to reach out to families and keep them informed of school activities and volunteer opportunities (Parsad & Jones, 2005).

Researchers have noted the importance of parental involvement in the middle school grades (Epstein & Lee, 1995; Rutherford & Billig, 1995). Rutherford and Billig (1995) argue that middle school children struggle with educational and personal issues. There is a significant need for parental involvement as students struggle with adolescent development and educational decisions with serious consequences for their futures.

Yet, Epstein and Lee (1995) uncovered a serious lack of parental involvement during the middle school years. Using data from the National Longitudinal Study of 1988 of U.S. middle schools, they gathered information from administrators, parents, and

students. The three groups concurred in their reports that parents were minimally involved at school and little communication existed between parents and schools.

Other research has shown that family-school partnerships tend to decline across the grade levels unless schools and teachers work to develop appropriate grade level practices (Epstein, 1995; Maiké, 1996). As children move from the elementary school grades into middle school, communication patterns between schools, families, and students change. The students' schedules become more fragmented with many more teachers and subjects, there are added extra-curricular opportunities, and the curriculum grows increasingly complex (Rutherford & Billig, 1995).

Innovative technologies such as cell phones, e-mail, and websites provide schools with new tools for reaching middle school parents and keeping them informed about their children. Traditional methods of communication such as face-to-face meetings have been found to be effective (Decker & Decker, 2003); however, these methods require time that both working parents and teachers lack. Educators are often very good at mass communications via newsletters, calendars, letters, and handbooks, but mass communications are not effective in shaping or changing attitudes. In order to change attitudes, educators must become effective at interpersonal communication with a target audience. Targeting specific audiences allows schools to shape attitudes and improve student educational opportunities (National Middle School Association, n.d.). Datta and de Kanter (1998) report usage of traditional modes of communication such as newsletters and telephone calls to be 75% and 73% as opposed to newer technologies such as websites and e-mail which are both less than 15%. Technology has been heralded as a

tool that can provide new avenues for communication, but studies show that parents and teachers are not embracing them.

Little research has been done to evaluate the role of emerging technologies in enhancing communication practices between middle schools and parents/guardians. The purpose of this study is to evaluate the role of two interpersonal communications technologies; cell phone and e-mail, and one mass communication technology; school websites. Additionally, these communication modes will be appraised for their efficacy in facilitating parental involvement in middle schools. By gathering data from middle school stakeholders including parents, teachers, administrators, and other school personnel, the study aims to evaluate the roles communication technologies play in building the six types of parental involvement identified by Epstein (1992). Furthermore, an effort will be made to identify barriers that impede the use of communication technologies in parent-school communication. This study aims to ascertain the role of innovative technologies such as cell phones, e-mail, and websites in communication with middle school parents to facilitate parental involvement.

OVERVIEW OF THE RESEARCH

Parental involvement, as defined by Kohl, Lengua, and McMahon (2000), encompasses three areas: direct contact with teachers, parental actions at school, and parental actions at home. Communication between teachers and schools fosters parental involvement that has been shown to increase academic success (Epstein, 2005), as well as improve student behavior (Constantino, 2003; Fehrmann, Keith, & Reimers, 1987; Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins, & Closson, 2005; Keith, Keith, Quirk, Sperduto, Santillo, & Killings, 1998). Finally, technology has been shown

to increase means by which parents and teachers communicate (Bernstein, 1998; Davenport & Eib, 2004; Furger, 2006).

Congress has also shown support for parental involvement in schools with its Goals 2000 legislature that encourages voluntary partnerships for all schools (Goals 2000, 1998). Title 1 specifies that schools form practices of partnerships in order for schools to qualify for federal funding. The legislation calls for the accountability of both parents and schools (No Child Left Behind Act Section 118, 2001).

In 1988, Epstein developed a framework for creating parent-school partnerships and described five types of parental involvement that lead to successful partnerships: obligations of parents, obligations of schools, involvement at school, involvement at home, and involvement in decision making. In 1992, Epstein introduced a sixth type of involvement, collaboration with community organizations. Together these six types of parental involvement are thought to develop successful family-school-community partnerships.

Type 1, basic obligations of parents, includes the obligation of parents and families to provide safe, healthy home environments. The school can aid parents by providing workshops, presentations, and general information about health and safety issues. (Epstein, 1988, 1992). E-mail offers an easy, convenient way of informing parents when and where workshops will take place. Bernstein (1998) reported that administrators who use e-mail to communicate with parents find it an easy, cost-efficient, quick method of communication. Written communication that once was intercepted by the child now finds its way home. Technology offers the means to inform parents of school-sponsored events that will facilitate Type 1 parental involvement.

Type 2, obligations of schools, asks the schools to communicate regularly with parents and keep them informed about school programs and their children's progress in school (Epstein, 1988, 1992). Schools can communicate with parents in a myriad of ways including traditional venues such as newsletters, notes, and telephone calls (Epstein, 1992). In today's technological society, these traditional forms of teacher communications can be supplemented electronically with e-mails and website information (Alexiou-Ray, Wilson, Wright, & Peirano, 2003; Bernstein, 1998; Davenport & Eib, 2004). Furger (2006) calls for schools to enhance parental involvement through increased communication by providing teachers with e-mail addresses, developing or enhancing school websites, delivering school newsletters electronically, allowing parents access to student data online, and distributing laptops to families in need.

Type 3, involvement at school, requires the schools to be proactive by inviting parents to participate in school activities and provide ample volunteer opportunities (Epstein, 1988, 1992). Giving parents the information they need about opportunities to volunteer is one way to increase family involvement (Feuerstein, 2000; Hoover-Dempsey, et al, 2005).

Schools can support type 4, involvement at home, by providing parents the information needed to assist their children with homework and other assignments (Epstein, 1988, 1992). Innovative technologies may assist schools by providing a means of disseminating information to parents. Electronic communication formats such as websites give families access to homework information and require little time or effort to access (Decker & Decker, 2003).

Type 5, involvement in decision making, means giving parents the tools they need to become active members of governance councils. Type 6 involvement, collaboration with community organizations, intends for schools to help families make links with businesses and organizations that can be of assistance in the future of their children (Epstein, 1992). Frequent communication from schools is essential for achieving both type 5 and type 6 parental involvements. Dorman (1998) stated that e-mail is advantageous since it can be quickly composed and can arrive at its destination in minutes. Chaboudy, Jameson, and Huber (2001) reported that the use of the school website has reduced barriers to parental involvement caused by time and geography. The website has allowed families to access school information 24 hours a day from any place in the world.

Epstein's six types of involvement establish the framework for constructing successful family-school-community partnerships that in turn foster academic achievement and behavioral success (Epstein, 1992). Sanders, Epstein, and Connors-Tadros (1999) and Swick (2003) make the case for school communication as essential for developing successful partnerships. Swick contends that empowering parent-teacher and family-school-community relationships are obtained through the use of communication behaviors that enrich the partners.

Researchers have heralded the importance of parental involvement in the middle grades (Epstein & Lee, 1995, Rutherford & Billig, 1995). Rutherford and Billig (1995) maintain the importance of middle school years in adolescent development and the importance of parental involvement in their child's middle school career. Due to the difference between middle school and elementary school structure, parents are forced to

change the ways they communicate with schools. Research has shown that partnerships tend to decline across the grade levels unless schools and teachers work to develop appropriate grade level practices (Epstein, 1995; Maike, 1996). As children move from the elementary school grades into middle school, communication patterns between schools, families, and students change. The students' schedule becomes more fragmented with many more teachers and subjects, there are added extra-curricular opportunities, and there is an increasingly complex curriculum (Rutherford & Billig, 1995). Parents of elementary school children often have one primary teacher. As their children move into middle and high school, parents' trust begins to decline due to a lack of a personal relationship with one teacher (Adams & Christenson, 2000). However, one-on-one communication between parents and teachers helps build a supportive environment for the middle school grades (Rutherford & Billig, 1995).

Many forms of communication exist including oral, either face-to-face or via the telephone; print, either newsletters or notes; and electronic, either e-mail or websites (Berger, 2000; Decker & Decker, 2003; Gestwicki, 2000). According to Decker and Decker (2003), oral, face-to-face communication is the most effective. Face-to-face communication allows for the participants to perceive visual cues in addition to the oral message and reduces the chances for misinterpretation of tones. In addition, schools can also make use of the telephone for two-way communication between teachers and parents as well as general communications from the school regarding school events. Gestwicki (2000) says that telephone communication facilitates two-way communication and parents may feel more at ease asking questions over the telephone wires as opposed to face-to-face. According to Constantino (2003), the telephone has the advantages of

familiarity, easy use, and widespread availability. The disadvantage is the lack of availability of telephones in teachers' classrooms, thus making telephone communication inconvenient for the teacher. The increased availability of cellular phones now adds a new dimension to telephone communication. The number of cell phone subscribers has risen from 340,213 (1985) to 207,896,198 (2005) and thus offers a new, readily available mode of telephone communication for both parents and teachers (Information Please, 2006).

Constantino (2003) argued that although communication has been recognized as important to engaging families in school partnerships, barriers exist that make this venture difficult. Families often include two parents who work full-time or single parent families. There is little time available for face-to-face communication with teachers. Technology provides several answers to the problem of lack of time, including voice-mail systems and web-based interactions. A second barrier to parent-school relationships acknowledged was culture. In today's public schools, there are often non-English speaking parents. Technology is available that allows messages to be sent in native languages to ensure that parents receive accurate information about school events. Title 1 specifies that schools form practices of partnerships in order for schools to qualify for federal funding. The legislation calls for the accountability of both parents and schools (No Child Left Behind Act Section 118, 2001). Swaim (2006) identified scarcity of time and language barriers, as well as apathy and inadequate budgets as barriers to ongoing communication with parents. Swaim argued that traditional venues for communication such as telephone calls, notes home, and face-to-face conferences are important avenues for communication; however, electronic communication such as e-mail, e-newsletters,

Web pages, and online grading and planning books extend the possibilities for communicating with parents.

METHODS

Purpose

The purpose of this study was to evaluate the role of two interpersonal communications technologies, cell phone and e-mail, and one mass communication technology, school websites in facilitating parental involvement in middle schools. This study also aims to identify barriers that hinder communication efforts.

Research Question

What role are cell phones, e-mail, and websites playing in communication with middle school parents to facilitate parental involvement?

Sample

The state of Alabama enrolls 730,140 students with 51.6% of the students eligible for free/reduced lunches (National Center for Education Statistics, 2006). Three middle schools in the University of Alabama West Alabama In-Service area were chosen for this study, so a purposeful sample of socioeconomic status could be obtained. One school had a low SES as measured by 84.8% of the students eligible for free/reduced lunches; one had a mid-level SES (50.9% free/reduced lunches); and one had a high SES (33.4% free/reduced lunches). The low SES school had 45 teachers and an enrollment of approximately 503 students. The mid-level SES school had 32 teachers and an enrollment of approximately 595 students. The high SES school had 27 teachers and an enrollment of approximately 478 (J. S. Driver, personal communication, November 9, 2006).

Instrumentation

To obtain data for this study, two methods of collection were employed. First, to gather descriptive data regarding parent involvement and communication methods as well as demographic information such as level of education attainment, income, and ethnicity, a survey instrument for parents was developed based on both a previous study by the researcher and the literature. A survey instrument was constructed for gathering teacher data with items that paralleled the parent survey instrument.

Survey items regarding parental involvement were developed around Epstein's (1992) six types of parental involvement in order to obtain information on how technology was being used to facilitate parental involvement. Items regarding communication methods were ones identified from the literature and used in a previous study administered to parents and teachers in a k-12 private school. Many forms of communication exist, including oral; face-to-face or via the telephone; print, either newsletters or notes; and electronic, either e-mail or websites (Berger, 2000; Decker & Decker, 2003; Gestwicki, 2000). The data from the researcher's previous study revealed that parents preferred face-to-face communication, whereas teachers were more accepting of e-mail. The previous study also revealed that both teachers and parents preferred the printed newsletter as a means of gaining information about school events compared to the electronic website. The previous study survey items regarding preferred modes of communication were modified in an effort to obtain more specific data regarding how e-mail, websites, and cell phone technologies were being used to facilitate Epstein's six types of parental involvement and what barriers prevented their use.

The demographic items for the survey instrument were identified from the literature and included level of educational attainment, income, and ethnicity. Day, et al. (2005) reported that computer ownership and Internet access differed by income, educational attainment, and ethnicity. Smerdon, Cronen, Lanahan, Anderson, Iannotti, and Angeles (2000) also revealed usage of electronic technologies in schools differed based on SES, minority enrollment, and level of income.

The second aspect of this study was qualitative in nature. First, both survey instruments contained sections with open-ended questions. These open-ended questions allowed parents and teachers to respond freely to a set of questions regarding their feelings about communication and parental involvement. Second, separate focus groups were planned consisting of parents and teachers; however, due to the number of parents and teachers who participated, the focus groups were conducted as informal interviews. Three parent/guardian interviews as well as three teacher interviews were conducted to obtain valuable insights into parental involvement and communication.

Data Collection

One survey instrument per student was sent home in hopes of getting a sample of about 217 participants per school (National Education Association, 1960). A sample size of 217 respondents was determined acceptable based on numbers reported for sample size by the National Education Association. The data collection process began after receiving approval from The University of Alabama's Institutional Review Board, both the Tuscaloosa County and City assistant superintendents, and the three principals of the individual middle schools. The principals agreed to allow the surveys to be sent home with a cover letter that explained the purpose of the study, the due dates, and the

incentives for participating in the study. The survey packet was distributed to the students during the last period of the day along with their progress reports for the six weeks grading period. Sending the packet home with the progress report was an effort to ensure that the parents were expecting to receive a communication from the school on that date. The principals all agreed to remind students to return the surveys in their morning announcements.

After the initial week of distribution, a reminder was sent home to encourage the parents to return the surveys and to remind the students of the incentives. Finally, a \$20 gift card was awarded in hopes of encouraging a few more participants to return the surveys. Upon noting that the return rate was low, the principals were asked about future Parent Teacher Organization meetings, but none were on the calendar for the rest of the year.

The distribution of the teacher surveys was at the discretion of the principals. The middle and high SES principals asked that the surveys be placed in the teachers' boxes at school. The surveys included a cover letter that explained the purpose of the study as well as the incentives for participation, but this yielded a very low response. The high SES's principal then requested that the procedure be repeated. With the second survey, the cover letter pleaded for participation from the faculty. The results were better. The principal of the middle SES school allowed the surveys to be administered at a faculty meeting. This too helped with teacher participation. The low SES principal initially allowed the surveys to be administered at a faculty meeting, but the response was low. Next, the surveys were distributed in the teachers' boxes and this got no response. The principal again allowed a third distribution of the surveys at a faculty meeting and this

time the response was better. Refreshments were offered at the faculty meetings as well as pens to complete the surveys. Pens were attached to the high SES surveys.

Despite the various attempts to collect additional responses, the survey return rates were very low. A total of 1584 parent surveys were distributed and 162 were returned completed. A total of 104 teacher surveys were distributed and 48 were returned completed. The total number of surveys returned was 210. After the initial return of the surveys, any survey that did not have a signed consent but that contained contact information for the parent received a call requesting an address and subsequently received a self-addressed stamped envelope along with the consent form for them to sign and return. Thirty additional surveys were returned but could not be used due to the lack of a signed consent form.

Although the return rate was low, the sample was representative of the population. Mittag and Thompson (2000) stated, “The critical question when such response rates are realized is whether the respondents are still representative of the population to which the researcher wishes to generalize” (pp. 14-15). Mittag and Thompson (2000) further suggested that the response profiles should be analyzed in order to resolve this issue. Alabama’s public school ethnic demographics indicated that 59.7% of the population was Caucasian, 36.1% was African American, 2.4% was Hispanic, and 1.8% other (National Center for Education Statistics, 2006). The sample generated in this study was consistent with the state demographics: 60.5% Caucasian, 37.7% African American, 1.2% Hispanic, and 0.6% other. Furthermore, state statistics indicated that 51.6% of public school students were eligible for free or reduced priced lunches. The overall percentage of students eligible for free or reduced priced lunches in this sample was 43.2%. Upon an

examination of the individual schools, the low SES school reported 84.1%, the middle SES school reported 50.9%, and the high SES school reported 33.4% (Alabama State Department of Education, 2006). The sample indicated low SES, 85.7%; middle SES 56.9%; and high SES, 24.7%. The sample appears to be representative of both the state ethnic demographics as well as the state and local socioeconomic demographics, thus making the sample an adequate representation of the population.

The cost of redistributing the surveys to the entire three middle school populations as well as the time and effort involved were problematic. Champion (2002) argued that the sample needed to be large enough to generate confidence with stakeholders, yet small enough to be cost-efficient and easy to manage. The sample for this study met these criteria. Salkind (2003) asked, “How big is big?” in a discussion of appropriate sample size. The answer provided was “The sample should be big enough to answer the question, but not so big that the process of sampling becomes uneconomical and inefficient” (p. 95). Finally, Creswell (2005) concluded that 350 individuals were needed for a survey study, but that this size would vary depending on the study. Based on these standards, the sample generated in this study is capable of sufficiently answering the questions put forth.

Parents/guardians who were willing to participate in the focus groups were asked to provide their contact information on the initial survey instrument and those names were pooled and drawn randomly to select 6 people for the focus groups. The recommended number of participants for focus groups varies from five to about 12. For the specific purpose of in depth discussions, Jayanthi and Nelson (2002) suggest 6-8 participants. Larger groups with 10-12 participants may cause delays and make people

wait too long to respond (Levy, 1979). All of the respondents who indicated interest were eventually contacted due to conflicting schedules and no answers. Finally, a pool of 6 parent participants from each school agreed to attend the focus group meetings; however, once the meeting dates arrived one parent appeared from the low SES school, one parent from the middle SES school, and only two parents from the high SES school were present. The focus groups changed into informal interviews because the number of participants fell below the recommended 6-8 individuals (Jayanthi & Nelson, 2002)

A parallel procedure was followed for selecting teachers/school personnel for school personnel focus groups at each school. A personal plea was made at each school's faculty meeting for more volunteers for the focus group, yet the middle and high SES school resulted in one teacher each volunteering for the focus group while the low SES school had four teachers volunteer. Three teacher meetings were conducted as informal interviews.

RESULTS

The low response rates from each school precluded any comparative analysis among the schools; however, frequency of responses to each item provided valuable insights into trends in parent-teacher communication (see Appendix A and Appendix B). The survey contained items constructed around Epstein's six types of parental involvement. Each item was analyzed to determine the mode of communication being used to facilitate parental involvement. The parent survey data (see Appendix A) revealed a strong reliance on traditional modes of communication such as newsletters, notes, and home phones. For type 1 involvement, parent survey responses indicated that newsletters were their primary source of information regarding health and safety information.

Twenty-five percent of the parents indicated that teachers used cell phone contact for immediate concerns such as behavior (type 2) while 30% responded that other methods were used including notes and house phones. Parents were informed of academic problems and successes (type 2) through traditional progress reports, notes, or phone calls. Newsletters informed parents of opportunities to volunteer (type 3), sporting events (type 3), and parent-teacher organization meetings/activities (type 5). Contradictory to the survey results, the interviews of parents at all three schools revealed that they were not informed about parent-teacher organization meetings or opportunities to volunteer at school. A parent from the high SES school replied, “If they have a P.T.O., I’ve never gotten communication from P.T.O. I’ve never personally received an invitation or any request for help...”. Parents indicated that information about homework (type 4) came mostly through notes and assignment books; while many felt that little or no information was provided about missing assignments. Interviews of parents at the high SES exposed a frustration that they were not informed of missing assignments until it was too late to correct the problem before final grades were assigned. According to one parent, “If you had an A, two zeroes and it kills them. You get a D”. Finally, the parent survey pointed toward newsletters as the mode of communication regarding community organizations willing to collaborate (type 6) with parents and provide free services for the children. Contrary to this, the interviews of both parents and teachers indicated that most referrals to community services were made to individuals not through mass communications.

The data from the teacher survey exposed a difference in views between parents and teachers in the mode of communication used by the school in some areas (see Appendix B). Teachers reported using the school website as well as the newsletter to

inform parents about health and safety issues, opportunities to volunteer, parent teacher organization meetings/activities, sporting events, and community groups that offer free services. Interviews with teachers from all three schools supported these data, yet most parents reported receiving this information primarily from newsletters.

Responses from the teachers concerning behavior and academics indicated that teachers use a myriad of communication tools to contact parents including cell phones, school phones, e-mail, conferences, progress reports, and letters. The teachers interviewed pointed to the fact that the method teachers use to contact parents often depends on the resources of the parents. The teachers at both the middle and high SES school reported that they preferred using e-mail to communicate with parents, but parents often did not have Internet connected computers. The teacher at the high SES school replied, "I prefer e-mail, if they have it, because if students are working on an assignment I can quickly send parents an email versus a note that the kids may not take home. E-mail is private, it's quick, it's something I can do in the room with other students". The teachers at the low SES school were divided in their preferred method of communicating with parents. Two of the teachers preferred direct communication of the telephone, while two of the teachers preferred e-mail. One teacher said, "I would choose the telephone because that's a kind of direct communication, if they have a working telephone...I would like that I talked to them personally, so as there is no excuse that they did not know."

The survey also included a free response area. Examination of the free responses contained in the parent and teacher surveys were informative. Responses to the first question, "Why don't you use technologies such as e-mail and websites to communicate

with the school?” included lack of computer and Internet resources, lack of time, frustration with the lack of updated websites, and lack of response from teachers as reasons. Fifty percent of the respondents from the high SES school and 38% of the respondents from the middle SES claimed that they do use these methods of communication, while none of the respondents from the low SES school indicated that they used these technologies. In comparison, 87% of the teachers from the high SES school, 69% from the middle SES school, and 37.5% from the low SES school alluded to the use of technology for communication with parents. Those teachers who did not use technology referred to a lack of parent resources, lack of time, lack of parent e-mail addresses, and fear of receiving numerous e-mail communications.

The second free response question, “How can the school improve communication with parents?” uncovered a feeling from both parents and teachers that most schools were doing all that they can. Some responses from parents called for more frequent communications. Others included keeping the website up to date, posting grades on the Internet, getting updates from teachers before progress reports and report cards, notes, and use of e-mail. Teacher responses to this question were varied. The teachers from the high SES school called for the parents to take greater responsibility and to respond to the communication efforts currently being made. Teachers from the middle and low SES schools suggested having a parent technology class, using the media, voice messaging systems, and making the website more user friendly.

Finally, parents and teachers were asked, “What method of communication do you prefer?” Almost all of the teachers responded that e-mail was their choice for

communication, whereas, most parents indicated that they preferred a phone call, newsletter, or note.

DISCUSSION

The data show that different modes of communication are being used for each of Epstein's six types of parental involvement. For example, type 1 involvement, obligations of parents is supported primarily by the dissemination of school newsletters. Some discrepancy exists between parent and teacher opinions, as teachers indicated that newsletters and websites are being used equally for this purpose. Parents, however, indicated that they are receiving this information through school newsletters, not websites. Schools need to examine the cost effectiveness of publishing this information on websites, if it is not reaching its intended audience. More financial resources could be put into postage to ensure delivery of the newsletters. In response to what kind of communication she preferred, one teacher from the low SES school stated “.not just the newsletter being sent home by the child, but actually put postage on it. I know that it is more expensive, but I think it has a better chance of parents actually opening that type of communication.”

Parents reported that type 2 involvement, obligations of schools, is being maintained through a variety of methods including cell phones, house phones, conferences, and printed materials such as progress reports and notes. Again, there was a discrepancy between the parent and teacher reports. Teachers maintained that parents were being informed by cell phones, e-mail, printed materials, school phones, and in person. Teachers indicated the use of interpersonal communication technologies, while parents reported the use of more traditional forms of communications. Even in

interviews, teachers reported using multiple means to communicate information to parents. School systems should examine why parents are not receiving communications via technology. Parents in this study pointed toward a lack of computer technology in their homes, a lack of time to use the technology, and frustration with trying to use a website that was not updated or getting no response from teachers through e-mail attempts. Parents claimed that communication was easier via the telephone and allowed for a more personal type of communication. One parent from the high SES school said, “I feel better talking to the teachers. A lot of time, we don’t see their faces. We don’t know the teachers. It makes it more personable.”

Lack of parent resources and technology skills is a societal problem that must be addressed at the state and national level. Parents in this study overwhelmingly responded that lack of technology in the home, lack of time due to work schedule, and lack of technology skills prevented them from using technology to communicate with the schools. First, the problem of computer access must be addressed. Programs that place computer and Internet technology in local community centers is needed to bridge the digital divide between parents and schools. A U. S. Department of Education 2003 report on Internet access in public schools reported nearly 100 % of the public schools in the United States had computers with Internet access. Also in 2003, 95 % of the schools with Internet access used broadband connections. Eighty-eight percent of public schools with Internet access indicated they had websites (Parsad & Jones, 2005). However, inequity in computer ownership and Internet capability does exist. Data collected by the Census Bureau in 2003 shows discrepancies in ownership of computers and Internet access by income, educational attainment, and race or ethnicity. Families with incomes in excess of

\$100,000 reported 95% had at least one computer with 92% reporting at least one family member using the Internet compared to families with incomes less than \$25,000 where 41% had access to a computer and only 31% had Internet access. Only 47% of children living in households with the householder having less than a high school education had a computer compared to 94% of the children living in households where the householder had at least a bachelor's degree. Children's access to computers varied by ethnicity. Approximately 85% of non-Hispanic Caucasian or Asian children reported computer access at home, while only 54% of African American or Hispanic had home computers (Day, et al., 2005). Programs that place technology in the hands of parents are necessary to increase communication between schools and parents and in turn foster parental involvement.

Second, programs are needed that train parents how to use computers for communication purposes. Computer labs often lay unused in the evenings. A training program that teaches computer skills, e-mail, and Internet usage would benefit both the schools and parents. Parents may be willing to take a computer class in order to build technology skills that they could use not only for communicating with teachers but also use in the workplace.

Newsletters informed parents of volunteer opportunities, parent-teacher organization meetings and activities, sporting events, as well as community groups that offered free services to families. According to parent reports, the traditional school newsletter fostered type 3, involvement at school; type 5, involvement in decision making; and type 6, collaboration with community organizations. Decker and Decker (2003) proposed that newsletters provide educators with a one-way form of

communication to present classroom information and engage parents in their children's learning. The drawback to newsletters is that they do not offer a means of two-way communication. Teachers, while acknowledging the use of the school newsletter, once more viewed the website as a primary source of information for volunteer opportunities, parent-teacher organization meetings and activities, sporting events, and community group free services.

Finally, many parents expressed a lack of information about homework and missing assignments. Teachers acknowledged a lack of time to contact each family about a child's missing assignments; however, most teachers indicated that they used a variety of methods of communicating with parents about missing assignments including the cell phone, e-mail, conferences, school phones, notes, progress reports, and report cards. Thus, type 4, involvement at home, is fostered through the use of a mixture of communication methods.

Parental involvement is multifaceted by definition. Kohl, et al (2000) defined parental involvement to mean direct contact with schools, parent actions at school, and parent involvement in educational activities at home. The multiplicity of parental involvement leads to the need for the use of an assortment of communication methods to achieve family-school partnerships. As a teacher from the low SES school said:

It's a little bit of everything. Some works with phone calls, but others you call and their phones are cut off. Some kids will take the papers home, so that's good. Sometimes if we put it on the marquee outside, that's good. We've even sent flyers around to local churches. I think everything has to work together in order for you to have a good turn out.

Educators must use resources to reach out to families to build family-school partnerships that will enhance the educational experience of the child. Middle school children and parents are especially vulnerable to the changing structure of the educational setting compared to their elementary school experience. As a parent from the high SES school exclaimed, “They used to have one teacher over there for the whole thing, but here it’s mind boggling! Trying to open your locker, peer pressure, people bumping you in the hallways, trying to find your classes is a lot of stress.” Schools must build partnerships with middle school families that keep parents involved in their children’s education as students struggle with adolescent development issues and decisions that impact their futures.

IMPLICATIONS

Findings from this study support the importance of comprehensive communication efforts to reach as many parents as possible. The results indicate that many parents still rely on the traditional forms of communication such as landline phones, newsletters, and face-to-face means of communication, which means that educators and parents alike are not taking full advantage of the convenience and quickness of communicating through electronic means such as e-mail and websites. This could be due to a number of factors, including lack of technological equipment and lack of knowledge of how to use equipment. Schools invest time in training teachers and money for technology, yet this study indicates that schools may not be seeing a promising return for their investment. Technology provides promising avenues for disseminating information to parents such as voice mail, language translation programs, and voice interpretation programs (Constantino, 2003; Davenport, & Eib, 2004; Decker & Decker,

2003). Technology also provides a means of quick and frequent communication between teachers and parents, much more than can be accomplished through conventional means. Although a teacher may not be able to take a telephone call during class, they can often take just a moment to check through emails. Programs must be developed that fund computer ownership, Internet access, and technology training. Once parents have technology access and the skills to use it, educational systems are likely to see an increase in electronic communications and parental involvement

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Parent Survey Response Percentages	Parent Survey Response Percentages						
	Cell Phones	Email	In Person	Newsletter	Web	Not Applicable	Other
Workshops about health and safety issues	6.2	8.0	5.6	70.4	7.4	11.7	12.3
Information to you about health and safety issues	4.3	6.2	6.2	75.3	6.8	8.0	8.0
Child's behavioral problems	25.3	8.6	14.2	12.3	0.0	31.5	30.2
Child's academic problems	16.7	9.3	13.6	19.8	1.2	25.9	35.2
Child's academic successes	14.8	8.6	14.2	23.5	1.2	8.6	50.6
Opportunities to volunteer	4.3	9.3	3.7	68.5	10.5	11.7	12.3
Child's homework assignments	6.2	4.9	4.9	20.4	18.5	22.2	38.3
Child's missing assignments	13.6	4.9	6.8	19.1	3.1	27.8	39.5
Parent Teacher Organization (P.T.O.) meetings	4.3	11.1	2.5	71.6	15.4	3.7	19.1
Parent Teacher Organization (P.T.O) sponsored activities	3.1	12.3	4.3	69.1	19.1	3.7	15.4
Sporting events	2.5	8.6	5.6	67.3	22.2	7.4	13.0
Community groups that offer free services	3.7	4.9	4.9	56.8	8.6	22.2	17.9

Appendix B

Teacher Survey Response Percentages	Teacher Survey Response Percentages						
	Cell Phones	Email	In Person	Newsletter	Web	Not Applicable	Other
Workshops about health and safety	2.1	8.3	22.9	75.0	39.6	14.6	2.1
Information to you about health and safety issues	2.1	12.5	29.2	83.3	35.4	10.4	4.2
Child's behavioral problems	54.2	58.3	56.3	12.5	4.2	2.1	43.8
Child's academic problems	39.6	54.2	60.4	10.4	4.2	2.1	50.0
Child's academic successes	29.2	54.2	56.3	16.7	4.2	2.1	52.1
Opportunities to volunteer	8.3	27.1	22.9	77.1	50.0	2.1	8.3
Child's homework assignments	12.5	18.8	18.8	16.7	64.6	2.1	31.3
Child's missing assignments	29.2	35.4	29.2	6.3	8.3	4.2	50.0
Parent Teacher Organization (P.T.O.) meetings	2.1	14.6	22.9	72.9	56.3	4.2	16.7
Parent Teacher Organization (P.T.O.) sponsored activities	0.0	16.7	22.9	79.2	58.3	4.2	16.7
Sporting events	2.1	14.6	22.9	70.8	68.8	4.2	8.3
Community groups that offer free services	2.1	8.3	16.7	79.2	45.8	6.3	10.4