

PARENT PERCEPTIONS OF THE EFFICACY OF ELECTRONIC SCHOOL-HOME COMMUNICATION METHODS USED BY THE FACULTY AND ADMINISTRATION OF A RURAL HIGH SCHOOL IN SOUTHERN GEORGIA

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ABSTRACT

The purpose of this study was to determine parent perceptions of the efficacy of the use of three forms of electronic school-home communication used by faculty and staff in a rural high school in Southern Georgia - e-mail, PowerSchool, and School Messenger. An anonymous survey instrument containing Likert scale questions, yes/no questions, and open-ended questions was completed by parents of students in the school. Surveys were returned by 354 of the 879 potential participants. Data were analyzed descriptively, and open-ended responses were analyzed qualitatively to identify common themes. Respondents gave overall favorable reviews to School Messenger, but found accessibility to current grades in PowerSchool to be lacking. Participants also indicated that e-mail was effective and appropriate, but cited that teachers in the school rarely used this medium of communication.

Keywords: Educational Technology, Home-School Communication, Parent Involvement.

INTRODUCTION

The 21st century world relies on nearly instantaneous communication, and secondary teachers may adapt new methods of informing parents of current events in their classrooms, especially those relating to a student's achievement and discipline. Technology has emerged over the last decade which allows for this immediate feedback. All three stakeholder groups - teachers, parents, and students - feel the impact of emerging technology in the 21st century, and each group must accept more accountability and responsibility in the learning process. Children are held accountable for test scores and attendance, while parents have no reason to let problems linger for weeks because of the easy access to information about their child.

Literature Review

Literature in the field of education suggests that while parent-teacher partnerships are important, parents have identified a need for greater access to information about their children's performance in order to be more actively

involved in their education (Beverly, 2003). Effective communication must occur regularly throughout the school year, and teachers who maintain contact with their students' parents say "I care, I am interested, and I want to set up an ongoing, mutually beneficial dialogue with parents" (Johnson, 1999, p. 123).

Communication between teachers and parents in the 21st century has moved beyond notes handwritten by the teacher and sent by way of the student. Technology now allows for the use of e-mail, school websites, electronic grade books, and automated telephone dialers for almost instantaneous communication with parents. Due to mandates in No Child Left Behind (2001) and Goals 2000: Educate America Act (1994), effective partnerships and communication between schools and parents are more important than ever. Technology now provides the opportunity for parents and teachers to interact without meeting face-to-face and to have dialogue when the time is convenient for each party. Through electronic methods, the potential for improved and increased

parental involvement in children's education becomes real.

Technological advances allow for more means of communication between parents and teachers than ever before without creating a large investment of time and work for the teacher. The increased communication allows for more two-way dispersal of information and increases parental involvement, which often results in more positive attitudes about the school on the parents' behalf (Beverly, 2003; Hartman & Chesley, 1997). Accountability for student performance on behalf of all stakeholders parents, teachers, and students increases with the use of electronic technology as a means of communication (D'Orio, 2000). Parents can access information at their convenience and become more involved in their child's learning. Students can follow their academic progress, and teachers who use electronic communication methods effectively can build more positive relationships with parents.

Although positive outcomes of using technology as a school-home communication tool have been reported, stakeholders have also identified barriers to teacher-parent electronic communication. Teachers identified time, lack of training, heavy workload and unwillingness to regularly update information, and not wanting to spend their evenings writing e-mails as inhibitors (Trejos, 2000). Parents identified lack of support from administrators, lack of time, lack of positive feedback, and lack of response by teachers to their e-mails as barriers to communication between teachers and parents (Plevyak & Heaston, 2001; Rogers & Wright, 2007). Epstein, Munk, Burcuk, Polloway, and Jayanthi (1999) identified five problem areas: initiation, timeliness, and frequency/consistency of communication, follow through, and clarity/usefulness of information. Not only the mode of communication must be available, but the teachers must use the tools to disseminate the information in a manner in which all stakeholders benefit.

Others reported that parents may be "resistant to, uncomfortable with, or unable to use technology" (Ramirez, 2001, p.31). Further, not all families have computers, some may lack internet access, and some

may not have the technical skills or knowledge to effectively use what is available (Beghetto, 2001; Nelms, n.d., Rogers & Wright, 2007). Further barriers include parents' inability to check e-mail or speak to teachers on the telephone while at their workplace (Strom & Strom, 2002-2003).

In spite of the barriers to the effective use of electronic school-home communication, it is a growing trend. A study by Vaden-Kiernan, McManus and Chapman (2005) indicated that overall, 49% of parents had received e-mail from teachers, 42% had received phone calls, and 91% received newsletters or notices. However, although the percentage of parents receiving electronic communication had increased over recent years, communication from teachers decreased as students' grade levels increased (Bauch, 1994; Bird, 2006; Vaden-Kiernan, McManus, & Chapman, 2005).

For the purpose of this study, three specific forms of electronic communication were studied:

(a) PowerGrade: An online grade book and attendance program, which allows parents to access their child's grades at any time by simply signing in to their account (Trejos, 2000).

(b) School Messenger: An automated attendance clerk, automatically dials parents of students absent from school or a particular class that day (The benefits of, n.d.), and

(c) e-mail: This allows quick and convenient communication between teachers and parents over concerns each may have.

Electronic Grade Books: PowerGrade

Electronic grade books, commonly part of student information systems (SIS), are web-based versions of the long-used paper grade book but with added components available to allow parents instant access to a student's progress in school (Bird, 2006). The school in this study uses PowerSchool, originally from Apple, but now owned by Pearson Education. However, the school has not granted full access to all parents to use the program. Only the weekly e-mail reports of current grades and attendance have been made available by the school.

Parents may access via the internet or telephone information about their child's grades, class attendance and tardiness, discipline, homework, schedule, and demographic information through the use of electronic grade book programs such as PowerSchool (Trejos, 2000; Web-based student, 2000). An e-mail component in PowerSchool allows weekly e-mail updates of a child's progress (Web-based student, 2000).

Teachers face more accountability as schools use online grade book programs, as informed parents may inquire when a teacher takes a great deal of time to record grades (D'Orio, 2000). The policies of some school systems enforce this accountability by requiring teachers to update their electronic grade book on a weekly basis.

Voice Mail Programs and Dialers

Voice mail programs allow for voluntary parent or student access and for automated dialing by the school computer. One such program is School Messenger from Reliance Communications. According to the company website (www.schoolmessenger.com), the program delivers 250 million voice messages per year for school districts in 48 states and Canada. The program allows principals and teachers to send voice messages to parents and students, ensuring that more families receive information about their child's education including such things as attendance, grades, events, and transportation. According to Cameron and Lee (1997), teachers found voice mail to be the best medium for transmitting specific messages, reminders, and announcements, and that teacher indicated improved relationships with parents in the areas of responsiveness, support, and quality of communication. Bauch (1997) added that school-based computer systems for voice mail solve the problems of time limitations, schedule conflicts, distance, and bureaucratic barriers.

E-Mail as a Communications Tool

In 1999, Spurr, (as cited in Freytag, 2001, p. 5), reported that internet sources were just beginning to make their way into the literature but that e-mail "should be considered a potentially powerful tool" for timely communication with parents. Since then, more data

have become available regarding using e-mail, but Jacobsen (2005) cited the scarcity of surveys on teachers' use of this method. As the use of e-mail as a communications tool has increased, some school faculty have become aware that it should not replace traditional forms of informing parents, but it should serve as a supplement. The use of e-mail also aids schools' public relations efforts and increases responsiveness to parents. Jacobsen further stated that checking e-mail has become a routine part of the school day just like taking attendance and listed some uses of e-mail such as informing parents of upcoming test dates and relaying data about the classroom curriculum, classroom activities, or other special events. (Williams, n.d.) mentioned the benefit of distribution lists to allow mass communication with parents through e-mail. E-mail can be useful in contacting parents who travel as part of their job, live in another city, or who have shared custody after divorce, and it helps to inform parents who would more than likely not attend meetings (Jacobsen, 2005). Further, the speed, informality, and cost-effectiveness makes e-mail an attractive communication alternative.

Drawbacks to e-mail as a teacher-parent communication tool include parents giving the teacher an e-mail address and then rarely checking their messages as well as a stunting of the more natural flow of conversation (Bushweller, 2005). A survey by the Center for the Study of Education Policy (2004) indicated that some parents distrust e-mail and voice mail, raising concerns about the privacy of the information. The survey also revealed that while 96% of teachers have access to the internet, only 55% of parents do. Further criticisms of e-mail relate to parents' inability to promptly check e-mail and children intercepting e-mails from school while their parents are away (Strom & Strom, 2002-2003).

Advances in technology bring with them more opportunities and more responsibilities when it comes to teacher-parent interaction. While these new modes of communication exist, care must be taken to consider those who do not have internet access at home, because not all electronic methods reach all parents. For this reason, older, established methods should not be

completely abandoned. To improve the important parent-teacher relationship a blend of electronic and non-electronic means of communication may be best.

Purpose of the Study

Empirical research related to the efficacy of specific electronic communication methods is sparse. The need for more research in the area of school system use of electronic grade books, automated voice mail programs, and e-mail became apparent. Therefore, the purpose of this study was to determine whether the selected high school uses the three selected means of electronic communications effectively in the eyes of its stakeholders. Data were gathered from parents of students at the selected high school through surveys in an effort to determine the parents' perceptions of the effectiveness of electronic communications used by the school and its teachers. The following research question was examined:

What are parents' perceptions of the efficacy of the PowerSchool online grade book program, the School Messenger attendance dialer program, and e-mail communications between the school and the home?

Methodology

The selected school for this study has a population of 879 students, with a racial makeup of approximately 80% White, 16% Black, 3% Hispanic, and 1% other. Students with disabilities account for 9% of the student population, while 51% of the student body is eligible for free/reduced price meals. Based upon demographic information provided by the 354 respondents to the survey, each group in the sample is represented in similar percentages to the entire population. Survey percentages showed a racial makeup of 79% White, 14% Black, 3% Hispanic, and 4% other. The percent of respondents reporting eligibility for free/reduced price meals matched the 51% of the actual school population.

Data were collected through a survey developed by the first author, based upon a review of the literature and feedback from a panel of classroom teachers and administrators, who recommended potential questions to include in the survey. Items on the survey were reviewed

by the panel to establish face and content validity. Following the development of the survey, a short pilot study was conducted during fall 2007 with parents of fifteen students in the first author's class. The purpose of the pilot study was to solicit feedback from parents concerning appropriateness and clarity of the questions, and to increase the content validity of the survey. The directions to the Likert scale portion were amended as a result of the pilot.

Procedure

In February 2008, the first author distributed surveys to all students at the high school. Students were instructed to take the survey home, ask their parent(s) to complete the survey, and return the survey to the school. Parents were informed of the purpose of the study, and that the data collected may aid the school in improving and modifying its use of the methods included on the survey. The high school has a student population of 879, and a potential of over 700 responses existed, after considering students with siblings also attending the school. After two weeks, 354 surveys had been returned. Due to the adequate response rate, a follow-up survey was not sent home to parents who had not participated.

Results

The survey in this study contained Likert scale questions, yes/no response questions, and open-ended questions to be addressed by parents. Due to the descriptive nature of the study, reporting includes the frequency of each response, the means, and standard deviations. To aid in the computation of the statistics, SPSS software was employed. Additionally, open-ended responses were coded and categorized according to common themes by compiling these in a Word document. The following section presents the results of the study in the following order: School Messenger automated attendance dialer, PowerSchool reports, and teacher use of e-mail.

School Messenger Automated Attendance Dialer

In Part One of the survey, parents were asked five questions related to their experience with the School Messenger automated attendance dialer that calls the home when a student is absent from one or more classes

in a particular school day. Of the 354 respondents, 288 (81%) reported that they had received an automated phone call from the program, 34 (10%) reported they had not, and 30 (8%) answered that their child had not been absent/tardy during the first semester. Eighty-nine percent of parents who had received an automated call reported that they were aware of the absence, while 5% revealed their child was absent without their knowledge. Six percent of parents who had received a call stated that the call was a result of teacher error in marking attendance. However, of the small sample (n= 19) that received a call in error, only 32% had contacted the school to clarify the mistake.

All parents were then asked to choose from a list the comment that best described their opinion of the School Messenger automatic dialer. Perceptions were divided between appreciating the notification and finding it unnecessary. The comment "My child is seldom/never absent or tardy, but I would appreciate the notification by the automatic dialer" was selected by 41% of the respondents, while the comment "I am typically aware of my child's absences and find the automated message to be unnecessary" was chosen by 40%. Seventeen percent elected the comment "School Messenger has allowed me to be more informed about my child's attendance patterns, and the remaining 2% selected "Other". Explanations for the "other" response typically stated that the parent was aware of the absence but still appreciated the notification.

The final question in Part 1 asked parents for their perception of the effectiveness of the School Messenger automatic attendance clerk. The five choices range from "very effective" to "very ineffective." Of the 354 respondents, 111 (32%) stated they believed the program was very effective, and 88 (26%) said it was somewhat effective. Ninety-seven (28%) parents said the program was effective, while only 38 (11%) declared School Messenger to be somewhat ineffective and 10 (3%) deemed the program very ineffective. Somewhat similar figures were found among all demographic groups and in a comparison of eligibility for free/reduced price meals Table 1 presents parent perception of

Race	Very Effective	Somewhat Effective	Effective	Somewhat Ineffective	Very Ineffective
White	32%	26%	29%	10%	3%
Black	33%	25%	25%	15%	2%
Hipanic	36%	18%	18%	18%	9%
Others	29%	29%	36%	0%	6%
All Groups	32%	26%	28%	11%	3%
Free / Reduced Meals	Very Effective	Somewhat Effective	Effective	Somewhat Ineffective	Very Ineffective
Yes	33%	26%	29%	8%	4%
No	32%	26%	28%	13%	1%

Table 1. Parent Perceptions of Effectiveness of School Messenger

effectiveness of School Messenger.

PowerGrade E-Mail Reports

To establish the number of parents able to receive the weekly PowerSchool reports with their child's current averages and attendance, the first question in Part 2 asked parents whether they had provided the school with a working e-mail address during the semester. Overall, 61% of parents stated that they had provided the school the information, while 39% had not. When the data were examined across demographic groups, White parents (66%) were more likely to report having given the school their e-mail address than other subgroups (44%). Similarly, 75% of parents of students not eligible for free/reduced price meals had provided the school with an e-mail address, but only 48% of those who were eligible did so.

Those who had not provided the school with an e-mail address were asked to choose the reason that best explained why. Of the 128 respondents who had not given the school a working e-mail address, 64% stated it was because they did not have internet access, 17% stated they were not aware they could receive the grade reports, and 19% chose "other". Nearly half of the parents who chose "other" said they had no computer and/or e-mail address. Additional responses included comments that e-mail is impersonal, that their child was an honor student, that report cards are enough, and that they had not taken the opportunity to provide their e-mail address to the

school. Those who were unaware that they could receive the weekly PowerGrade reports were asked how likely they would be now to give the school their e-mail address. Of these parents, 49% stated they would likely (15%) or very likely (34%) now provide the information to the school, however, 25% still stated no likelihood at all.

Parents who did provide the school with a working e-mail address were asked to rank on a scale of 1-5 with 1 being "never" and 5 being "always" how regularly they received the weekly e-mails from PowerGrade. Eleven percent stated that although they had given the school an e-mail address, they never received the weekly reports. Four percent said they almost never received the weekly reports, 9% sometimes received them, 25% almost always received the reports, and a little over half (51%) always received the weekly reports (Table 2).

Parents who received the weekly reports were asked to describe how current the grades were on a typical week's report. Forty-two percent of the parents responding to this question (n=204) stated that grades in all or most all classes were up-to-date, while 35% reported that most grades were current but at least one class was usually behind in updating. Eighteen percent said that some classes were kept up-to-date, but at least one class usually had little or no grades listed for the semester, and the remaining 5% said that few grades were ever up-to-date.

Parents were then asked to rank how useful the weekly e-mailed grade reports were to them in monitoring their child's progress. Across all demographic groups, 55% considered the reports to be very useful, 18% somewhat useful, and 17% useful. Only 7% of the 212 respondents to this question said the PowerGrade reports were not

Race	Never	Almost Never	Sometimes	Almost Always	Always
White	12%	4%	7%	25%	52%
Black	11%	5%	11%	31%	42%
Other	0%	0%	30%	20%	50%
All Groups	11%	4%	9%	25%	51%

Table 2. Percentage of Parents Receiving Weekly PowerGrade E-Mails

Note. Percentages are based upon responses of parents who had provided the school with a working e-mail address during fall semester 2007.

useful at all. A lower percentage of parents whose child was eligible for free/reduced price meals found the reports to be very useful than those who are not eligible (49% compared with 58%), and a higher percentage found the reports to be not useful at all than did those who are not eligible (10% compared with 5%) (Table 3)

Parents were then informed on the survey about PowerSchool, which is an internet-based companion program to PowerGrade. This program allows parents to see the same information as on the weekly e-mail reports and other information as well. The school in this study had not made the site available to parents other than those employed by the school system. On the survey, one question asked to parents was about their level of interest in accessing the website. Using a Likert rating of 1 = "not interested at all" and 5 = "very interested", 52% of all parents responding to the question (n=308) stated they were very interested, and 18% chose the second highest level of interest, with 70% of those surveyed showing a moderate to high interest in being able to access their child's information online. Only 7% reported no interest at all.

	Usefulness				
	Not				Very
Race	1	2	3	4	5
White	7%	3%	14%	19%	57%
Black	0%	10%	35%	15%	40%
Other	0%	0%	36%	9%	55%
All Groups	7%	3%	17%	18%	55%

	Usefulness				
	Not				Very
Free or Reduced Meals	1	2	3	4	5
Yes	10%	2%	23%	16%	49%
No	5%	4%	13%	20%	58%

Table 3. Parents' Reporting of Usefulness of PowerGrade E-mail Reports

(Note. Hispanic, Asian, and Other groups were combined due to low number of responses from those groups. These percentages are based upon responses from parents who had provided the school with a working e-mail address during the first semester 2007-2008.)

The final question regarding PowerGrade was an open-ended question through which parents could share thoughts on how the school could make weekly e-mail reports more useful. These comments were compiled into a Word document. Common themes that emerged were related to the e-mails already being useful enough, comments about grades not being up-to-date, format and frequency of the reports, availability of the reports, and requests for information that PowerGrade is not capable of sending.

At least twenty parents responded that the weekly reports were fine as they were. Some parents wrote comments thanking the school system for starting the program, while others related how they discuss the grade reports with their children every Monday night. One parent indicated "I find it very useful as it is now. I get a summary of classes and if I'm concerned about a grade in any one, I can go to the details of that class. I love getting these e-mails each week."

Although many parents were satisfied with the weekly reports, 35 respondents criticized the school for weekly reports not being up-to-date and accurate. Others commented that they would like to see a cleaner format to the weekly e-mails, more information on them, or that they would prefer to receive the e-mails on a basis other than weekly. A few parents also took the school to task for not doing a better job of informing parents of the availability of the PowerGrade e-mails.

Some parents requested information that PowerGrade is not capable of sending, but some of the suggestions could be handled by other electronic means such as regular e-mail sent by teachers. Among the parental requests not possible to address with the current program were suggestions to list the most recent grades first and to highlight the failing grades. Items noted by parents were those that cannot be sent by PowerSchool but handled in other manners included notification of upcoming tests and assignments, how to make up missed work, weighting of grades in the class, and teacher contact information.

Teacher Use of E-Mail

Parents who had provided the school an e-mail address

were asked how many teachers contacted them by this method, the department in which these teachers were employed, and the frequency of contact. Further questions asked were how often teachers used e-mail to relate information regarding good news/positive comments, a newsletter of current events, reminders of upcoming assignments/tests, overdue assignments, attendance, discipline, and other reasons. All parents (regardless of their access to the internet) were asked how effective and appropriate they considered e-mail to be as a communication tool. Finally, an open-ended question gave parents the chance to give reasons for using e-mail that the school staff is not currently using.

The school utilizes a block scheduling system, so each student has four teachers each semester. Only 8% of the 234 parents responding to this question reported having received e-mail contact from all four teachers during the first semester of the school year. Eleven percent reported contact from three teachers, 12% from two teachers, and 15% had contact from only one teacher. The remaining 54% of parents in this survey stated that although they had given the school an e-mail address, they had received no contact by this means of communication.

In reporting which teacher(s) had used e-mail communication the most, parents were most often likely to select teachers from academic departments. Reporting was unequal because some parents only chose one teacher, while others chose multiple departments. However, in this survey the mathematics department received 44 votes, English/language arts 29, science 25, and social studies 20. The physical education department was chosen by 12 parents, followed by agriculture with 9, and business education and family and consumer sciences with 6 each.

Attention then turned to the frequency of e-mail contact by the teachers. Of the 202 parents responding to the question, 52% stated that they had never received e-mails from teachers during the first semester of the 2007-2008 school year. The remaining 48% were spread somewhat evenly over the other choices provided. The choices and percentages reported were as follows: daily (2%), weekly (16%), 2 or 3 times per month (10%), once a

month (8%), every 5 or 6 weeks (5%), and every 8 or 9 weeks (7%). Not surprisingly, when parents were asked how often they received e-mails from teachers for a particular reason, "never" made up an overwhelming percentage of the responses for each category. The results of teachers' use and frequency of e-mail communication are summarized in Table 4.

All parents, regardless of their access to the internet, were asked their opinion of e-mail's effectiveness for each of the categories previously discussed. Using a five-point scale and ranking from not effective at all to very effective, parents in the survey gave very effective rankings of at least 42% to every category. Late assignments received the highest very effective ranking at 53%, followed by attendance (51%), assignments/tests (50%), discipline (49%), good news/positive (44%), and newsletters (42%). When considering the top two choices of very effective and somewhat effective, the lowest combined rating for any category was 62%. However, each of the categories received not effective at all votes from 12-15% of the respondents. Good news/positive and attendance receive low votes from 12% of those answering, while discipline received the highest negative rating at 15%. The findings of this question are seen in Table 5.

Similar figures were found when parents were asked to judge the appropriateness of the use of e-mail to deliver news to parents for each of the same categories. Information regarding attendance, upcoming assignments/tests, and late assignments were given the highest approval rankings for appropriateness, while newsletters still received the lowest very effective rating from the parents surveyed. Table 6 also reveals lower

Reason	Frequency				
	Never				Frequently
	1	2	3	4	5
Positive reports	66%	8%	11%	6%	9%
Newsletter	71%	7%	11%	5%	6%
Assignments/Tests	69%	5%	12%	7%	7%
Late assignments	74%	5%	9%	6%	6%
Attendance	55%	5%	7%	7%	26%
Discipline	72%	6%	10%	5%	7%

Table 4. Teachers' Use and Frequency of E-mail Communication

percentages of parents stating e-mail is not appropriate at all than who stated it was not effective.

The final question relating to teachers' use of e-mail was an open-ended question which allowed parents to describe reasons that teachers might use this method of communication that the school is not currently using. Respondents repeated some of the categories surveyed in previous questions in this part of the survey instrument, including informing parents of upcoming tests and assignments, grades, and discipline issues. One parent commented that they would like to hear more information about what occurs in the classroom or school in general. Another stated that she could be of better assistance to her child if the teachers would stay in contact. Nine parents asked the school to use e-mail as a tool to relay information about upcoming school holidays, school closings, or other calendar related items. Five responses relating to counseling and guidance issues such as testing and scholarship information were tallied.

Additional Comments from Parents

The concluding portion of the survey instrument allowed parents to make any additional comments of their choosing that had not already been addressed elsewhere. Most of the comments were of general nature with no overall theme emerging. Some parents expressed their appreciation that the technology is now available. Others indicated that the technology is only as good as the extent to which teachers are willing to use it and keep the information current. Some took the opportunity to vent their frustrations with certain teachers and administrators, while others applauded the convenience that e-mail communication afforded them.

Reason	Effectiveness				
	None				Very
	1	2	3	4	5
Positive reports	12%	8%	18%	18%	44%
Newsletter	13%	9%	16%	20%	42%
Assignments/Tests	14%	4%	14%	18%	50%
Late assignments	13%	4%	12%	18%	53%
Attendance	12%	3%	14%	20%	51%
Discipline	15%	5%	14%	17%	49%

Table 5. Parents' Opinion of Effectiveness of E-mail Communication

Reason	Appropriateness				
	None	2	3	4	Very
	1				5
Positive reports	11%	7%	18%	13%	51%
Newsletter	10%	8%	20%	16%	46%
Assignments/Tests	9%	7%	16%	16%	52%
Late assignments	9%	5%	17%	14%	55%
Attendance	9%	6%	13%	15%	57%
Discipline	11%	7%	17%	13%	52%

Table 6. Parents' Opinion of Appropriateness of E-mail Communication

Discussion and Recommendations for Future Research

The intent of this study was to determine parents' perceptions of how effectively the school uses three means of electronic communication, namely e-mail, PowerSchool weekly reports, and the School Messenger automated attendance clerk. Of the three main topics on the parent survey, only the automated attendance clerk received consistently positive remarks. Based on the survey responses, disparities exist between parents' expectations and the realities of how teachers at the school use e-mail as a communication tool. Parents also revealed numerous problems with the effectiveness of the weekly PowerSchool e-mail reports. Finally, survey findings also revealed parental misunderstandings of the capabilities of the technologies and lack of knowledge of what is already available online. With this information, the school staff can now take steps to more effectively serve the parents and keep them actively involved in their children's education.

Disparities in E-mail Expectations and Reality of its Use

As pointed out earlier in Tables 5, 6, and 7 disparities exist at this school in parents' expectations of the effectiveness and appropriateness of e-mail versus the reality of how often they actually received information from teachers in those same areas. A troubling statistic was the 52% of parents who reported providing an e-mail address but then never receiving e-mail from any teacher during the first semester 2007-2008. Unfortunately, these results mirror those of other researchers such as Vaden-Kiernan, McManus, and Chapman (2005), who reported that only 42% of parents of ninth and tenth graders and 38% of parents of juniors and seniors received e-mails from

teachers.

Several reasons may exist that could explain why parents never heard from teachers even after providing an e-mail address. The child may have been doing well in the class, in which case the teacher missed an opportunity for positive communication. For some, it may have been the teachers' heavy workloads or lack of time or desire to send e-mail (Trejos, 2000).

How PowerSchool Reports Can be Made More Effective

While many parents were very satisfied with the weekly PowerSchool reports they received by e-mail, areas of concern did arise from this study. A minor percentage of parents stated that they had provided the school with an e-mail address but had never received any of the reports. Of the parents not providing an e-mail address to the school, 17% stated that they were not aware the reports were available. A combined 58% of those receiving the weekly reports stated that typically grades in one or more classes were not current on a regular basis. Parents who were satisfied with the weekly reports from PowerSchool probably were so because of the timeliness and completeness of the information and their ability to remedy academic problems before they became worse. Parents citing grades rarely up-to-date were reasonable in their dissatisfaction, because teachers were not supplying reliable data by which to gauge the students' progress

To remedy these problems, school staff could verify parent e-mail addresses at the beginning of the year and contact those parents whose e-mail was returned as not valid. In some cases, the address may have been entered incorrectly into the data bank. In others, it may have been misinterpretation of handwriting that caused the issue. The school staff could make the availability of reports more widely known by sending out information at the beginning of the year, and teachers could be held more accountable by the administration for inputting grades on a more timely basis.

Similarly, since 70% of the parents responding to the survey indicated either high or very high interest in the availability of PowerSchool's companion program

PowerSchool, the school in this study could make grade and attendance reporting more convenient by issuing user names and passwords to all parents in the future. In a study at the middle grades level Hampton, Anderson and Sigman (n.d.) found that 69% of parents surveyed in their study viewed PowerSchool as beneficial. Because PowerSchool is accessible by both internet and telephone, this would make the program available to a wider number of families. Its presentation of the data would also be clearer for those having trouble interpreting the format of e-mail reports.

How the School Staff Can Help Parents

Desires for easier access to information and more current and complete information, and lack of awareness of what is currently available electronically seemed to be themes arising from both constructed response and free response questions in the questionnaire. As pointed out earlier, 17% of the parents who did not provide the school with an e-mail address were not aware that they could receive weekly PowerSchool reports. Similarly, when asked to list items they would like to see available on the school website which were not currently available, many parents asked for things already available but not readily accessible. Many parents noted lack of current and/or complete information about school, club, and athletic events. These responses indicate the school's need to better meet the expectations of its stakeholders and to be more proactive in letting parents and students alike know what information in the school office is available in electronic format.

The flow of information can be improved by sending home information about the staff's use of electronic communication tools at the beginning of each school year. This could be accomplished by fliers sent home with the students and by publication of news articles in the local newspaper. Parents can be reminded that by providing a working e-mail address they can receive the weekly PowerSchool reports and information from the teachers. Parents can also be notified of what is available on the school website and where to access it, along with how to handle calls from School Messenger which were made in error. In this way parents can be better informed

about how they can stay involved in their children's education.

Statistics from this research project can be used in staff development training relating to the use of e-mail, the school website, and teacher websites. By using the data, teachers will see that parents of this school's students desire to engage the school more effectively through electronic means. Teachers, coaches, and club sponsors should be able to gain a better understanding of the necessity of keeping information on their web pages current

Although this study was directed at parent perceptions of how well the selected school's staff used electronic communication, future research aimed at the teacher's perspective may also be considered. Teachers' use of e-mail and PowerGrade in particular showed mismatches between parent beliefs and expectations about these tools and the reality of their usage. Perhaps further study could be conducted to uncover reasons why teachers do not employ e-mail more often as a communication tool with parents, particularly at the high school level. Additionally, further inquiry could take place into why the PowerGrade electronic grade book program is not better utilized.

As technology continues to evolve and provide educators more avenues for informing parents, school personnel need to evaluate how effectively they are using the tools available to them. As research by Freytag (2001), Nelms (n.d.), and Williams (n.d.) indicated, more exploration of the educational uses of communications technology should occur. This study, like many others, was descriptive in nature, but the shortcomings of the selected school's use of e-mail, PowerGrade, and School Messenger may now be addressed with an eye toward future improvements in their implementation. With these results in mind the school administration may now aid its staff in more productively involving parents through the use of today's technologies.

Limitations of the Study

There were numerous limitations related to this study, including that it was limited to one school, one school

year, one data collection instrument, and the electronic communication means the school used. Results could have been significantly different if any of these factors were different. In addition, surveys were distributed to students, who were asked to take them home and return them. The response rate may have been limited by the number of forms that were never received by the parents and by the number of questionnaires that were not submitted. Further limitations include the fact that this study was based upon a single semester snapshot of one school's use of electronic communication. Data were collected only by the use of a single survey, and because multiple electronic grade book programs and automated attendance dialer programs exist, the capabilities of those programs used in other schools may vary from those used at the school in this study.

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Appendix

Questionnaire

Please answer all questions based upon classes your child was enrolled in during fall semester 2007.

Part 1. School Messenger

School Messenger is an automated telephone dialer that contacts parents when a student is either absent from or tardy to one or more classes during the school day.

1. If your child missed a class or was tardy during first semester 2007-2008, were you contacted by the School Messenger?

- a) Yes
- b) No
- c) My child was not absent/tardy during first semester.

2. If you were contacted by School Messenger during the first semester 2007-2008, which statement below best describes the reason for the call(s) in MOST cases?

- a) Student was absent and I was already aware of the absence
- b) Student was absent/tardy, and I was not aware of the absence/tardy
- c) Phone call was result of teacher error in marking attendance

3. If you checked the line for teacher error in #2, did you contact the school to clarify the error?

- a) Yes
- b) No

4. Please check the comment below that best describes your opinion of the School Messenger automatic dialer.

- a) My child is seldom/never absent or tardy, but I would appreciate the notification by the automatic dialer.
- b) I am typically aware of my child's absences and find the automated message to be unnecessary.
- c) School Messenger has allowed me to be more informed about my child's attendance patterns.

Other (Please explain)

5. Please rank your perception of the effectiveness of the School Messenger automatic attendance clerk.

- a) Very effective
- b) Somewhat effective
- c) Effective
- d) Somewhat ineffective
- e) Very ineffective

Part 2. PowerGrade E-Mail Reports

Provided the parent has given the school a working e-mail address, an e-mail with the student's grades in each class is sent early on Monday morning of each week during the semester.

1. Did you provide Berrien High School with a working e-mail address during the first semester 2007-2008?

- a) Yes
- b) No

2. If you answered "NO" to #1, please check the reason that best explains why. Otherwise, go to question #3.

- a) I have no internet access.
- b) I was not aware that I could receive the e-mailed grade reports.
- c) Other (Please explain)

3. If you answered "YES" to #1, did you receive the weekly e-mails on a regular basis? Please rank on a scale

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of 1-5 with 1 being "never" and 5 being "always".

Never 1 2 3 4 5 Always

4. In a typical week which statement below BEST describes how current the grades were in the e-mailed reports you received during first semester 2007-2008?

- a) Grades in all or most all classes were up-to-date
- b) Most grades were up-to-date but at least one class was usually more than a week late in updating grades
- c) Grades in some classes were up-to-date, but at least one class usually had little or no grades listed for the semester
- d) Few grades were up-to-date

5. Considering the semester as a whole, how useful were the weekly e-mailed grade reports to you in monitoring your child's progress? Please rank on a scale of 1-5 with 1 being "not useful at all" and 5 being "very useful".

Not useful 1 2 3 4 5 Very Useful

6. If you were unaware that you could receive the weekly e-mail reports from PowerGrade, how likely would you be now to provide the school with an e-mail address to which the reports could be sent? Please rank on a scale of 1-5 with 1 being "not likely at all" and 5 being "very likely".

Not Likely 1 2 3 4 5 Very Likely

7. PowerSchool is a web-based program that coordinates with PowerGrade. This program allows parents not only to view their child's grades but their attendance patterns and other information as well. At present Berrien High School has not made this program available on a widespread basis. If the site were made available to parents, what would be your level of interest in accessing this website to monitor your child's progress? Please rank on a scale of 1-5 with 1 being "not interested at all" and 5 being "very interested".

Not Interested 1 2 3 4 5 Very Interested

8. How can Berrien High School make the weekly PowerGrade e-mails more useful to you as a parent?

Part 3. Teacher Use of E-Mail

Please answer the following questions based upon the use of e-mail by your child's teachers during the first semester of the 2007-2008 school year.

1. If you provided Berrien High School with a working e-mail address during the first semester 2007-2008 how many teachers contacted you by e-mail at least once during the semester? Please circle the appropriate response.

0 1 2 3 4

2. If you were contacted by e-mail by your child's teachers, please select the department(s) for the teacher(s) who communicated with you most by e-mail. Agriculture

- a) Business Education
- b) English/Language Arts
- c) Family and Consumer Sciences
- d) Fine Arts (Art, Band, Chorus)
- f) Foreign Language
- g) Mathematics
- h) Physical Education
- i) Science
- j) Social Studies
- k) Other

3. Considering the teacher(s) who contacted you by e-mail the most often, which of these choices best describes the frequency with which you were contacted?

- a) Daily
- b) Weekly
- c) 2-3 times per month
- d) Once a month
- e) Every 5-6 weeks
- f) Every 8-9 weeks
- g) Never

4. How frequently did you receive e-mail communications for the following reasons? Please rank each on a scale of 1-5 with 1 being "never" and 5 being "frequently".

Never					Frequently
Good news / positive comments					
1	2	3	4	5	
Newsletter / current events					
1	2	3	4	5	

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Upcoming Assignments/Tests

1 2 3 4 5

Overdue assignments

1 2 3 4 5

Attendance

1 2 3 4 5

Discipline

1 2 3 4 5

Other (please specify)

1 2 3 4 5

5. (This question is for all parents regardless of access to internet. Parents without internet should answer as if access was available.)

In your opinion how effective is e-mail for the following situations? Please rank each on a scale of 1-5 with 1 being "not effective at all" and 5 being "very effective".

Not Effective Very Effective

Good news, positive comments

1 2 3 4 5

Newsletter current events

1 2 3 4 5

Upcoming Assignments/Tests

1 2 3 4 5

Overdue assignments

1 2 3 4 5

Attendance

1 2 3 4 5

Discipline

1 2 3 4 5

Other (please specify)

1 2 3 4 5

7. Similarly, how appropriate do you believe e-mail is for delivering news about the following situations? Please rank each on a scale of 1-5 with 1 being "not effective at all" and 5 being "very effective".

Not Effective Very Effective

Good news / positive comments

1 2 3 4 5

Newsletter/ current events

1 2 3 4 5

Upcoming Assignments/Tests

1 2 3 4 5

Overdue assignments

1 2 3 4 5

Attendance

1 2 3 4 5

Discipline

1 2 3 4 5

Other (please specify)

1 2 3 4 5

8. What would be a reason to use e-mail that Berrien High School is not currently using?

Part 4: Other Electronic Communications Means

Berrien High School Website

1. Were you aware that Berrien High School has a school website accessible from the county schools website at www.berrien.k12.ga.us?

a) Yes

b) No

2. If you answered "Yes" to #1, how often do you visit the Berrien High School site? Please rank on a scale of 1-5 where 1 is "not at all" and 5 is "frequently".

Not at all 1 2 3 4 5 Frequently

3. If you answered "Yes" to #1, how useful to you as a parent is the website in its current format? Please rank on a scale of 1-5 where 1 is "not useful at all" and 5 is "very useful".

Not useful 1 2 3 4 5 Very Useful

4. How important is it in your opinion for Berrien High to maintain an overall school website? Please rank on a scale of 1-5 where 1 is "not important at all" and 5 is "very important".

Not Important 1 2 3 4 5 Very Important

5. Please list up to three items you would like to see available on the website which are not currently already

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available online.

- 1.)
- 2.)
- 3.)

Teacher-Created Webpages

1. How many of your child's teachers during the first semester of the 2007-08 provided you with their own personal webpage address for information relating to the class?

0 1 2 3 4 5

2. Based on either your own visits to these sites or your

child's, how useful were the teacher-created web pages? Please rank on a scale of 1-5 where 1 is "not useful at all" and 5 is "very useful".

Not Useful 1 2 3 4 5 Very Useful

3. How important is it in your opinion for each teacher at Berrien High to maintain a website for his/her class? Please rank on a scale of 1-5 where 1 is "not important at all" and 5 is "very important".

Not Important 1 2 3 4 5 Very Important

Please make any additional comments in the space below.

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