Technology Utilization in the Field of School Counseling:
An Action Research Study

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Abstract: The purpose of this study was to analyze how school counselors utilize technology in their school counseling programs and to generate methods for encouraging such use within the Georgia School Counselors Association. Several variables were examined in this study. The main variable examined was counselor use of technology. Counselor use of technology was defined as the type, frequency, and location of technology use by the counselor. Other variables that were examined that influence counselor adoption and use of technology included administrator support for technology use, funding to acquire technology, access to the technology, level of comfort using technology, college training for using technology in counseling, motivation to use technology, counselor willingness to participate in staff development, and school location – rural or urban. The participants of this study included 145 elementary, middle, and high school counselors from eleven states. The instruments used in the study assessed the counselors' frequency of technology use for clerical tasks, teacher training, parent training, individual counseling, group counseling, classroom guidance, communication, and Internet searches. The study discovered that school counselors are using technology for a variety of tasks from the mundane clerical tasks to innovative interactive lessons. In addition, it was concluded that school counselors are interested in staff development on technology if it can benefit their programs. Many participants involved in this research utilize technology in innovative ways. The innovative ideas discovered in this study have assisted me in designing professional development for GSCA, and other counselors, on innovative uses of technology.

Introduction

Since 1997, I have been a member of the Georgia School Counselors Association. The Georgia School Counselors Association (GSCA) is an organization for school counselors that sets ethical guidelines, provides a voice, and sets acceptable standards for members of the school counseling profession. GSCA has a diverse membership of almost 2000, including counselors from the elementary level to the post-secondary level. In the spring of 2001, the GSCA President-elect, Joey Brewer, invited me to serve on the GSCA Leadership Team as information technology chairperson. I accepted the position and attended the GSCA Leadership Development Institute (LDI) conducted on the campus of Berry College in Rome, Georgia. While in attendance at LDI, and after consultation with the GSCA president, I obtained a clear picture of the technology goals of the organization. One goal of GSCA is to promote technology use by school counselors. Since increasing technology usage is a goal of GSCA, I deemed it necessary to analyze how school counselors use technology.

The literature, although limited, supports the idea of school counselors using technology. Bleuer and Walz (as cited in Sabella, 1996) provided the following examples of computer-managed counseling (CMC): counselee record-keeping, counseling activity logs, attendance records for counselees, scheduling of counseling services, records of grades, counselor resource files, and word processing. Counselees also benefit from counselors using technology. Casey (1992) indicated that counselors use technology in relationship building, needs assessments, and interventions. Casey also stated that counselees benefited from the use of technology because technology addresses multiple learning modalities including visual, auditory, and kinesthetic modalities. Computer technology allows children to retry errors without group embarrassment.

Although the advantages of using technology are numerous, counselors are at various levels in their adoption rates of technology in their counseling environments. Casey (1995) suggests that counselor adoption of technology is closely related to the stages of adoption mentioned in Rogers (1995). Casey states that counselors fall into particular categories when it comes to technology adoption. Those categories include innovators, early adopters, opinion leaders, mass acceptors, and laggards.

Counselors can utilize technology from the elementary level to college level. However, Owen (1999) reported that elementary school counselors seem to use their computers less and feel less confident in their computer skills than middle and high school counselors. Regardless of the level of the counselor, a review of the literature offered an abundance of counseling and guidance software titles that address multiple topics at all levels. As is evident in the literature, technology is an effective and useful resource for counselors. For a more complete review of the literature on this topic, please see *Technology Utilization in the Field of School Counseling* by Michael B. Creamer.

In order to promote technology use by school counselors, it seemed prudent to examine how counselors are currently utilizing technology. Therefore, the purpose of this action research study was to analyze how school counselors use technology in their counseling and guidance programs and to generate methods of encouraging such use.

To gain a better understanding of counselor adoption and use of technology, I examined several variables. The main variable, counselor use of technology, was defined as the type, frequency, and location of technology use by the counselor. Other variables that were examined that influence counselor adoption and use of technology included administrator support for technology use, funding to acquire technology, access to the technology, level of comfort using technology, college training for using technology in counseling, motivation to use technology, counselor willingness to participate in staff development, and school location – rural or urban.

Another major factor concerning counselor use of technology was counselor innovativeness. Casey (1995) stated that counselors fall into particular categories when it comes to technology adoption. Those categories included innovators, early adopters, opinion leaders, mass acceptors, and laggards. School counselors who are members of GSCA are at various levels of technology adoption and utilization. Some are innovators, but most appear to be closer to the mass acceptor end of the continuum. As GSCA information technology chairperson, I would like to see more opinion leaders and early adopters. In order to increase technology utilization among school counselors and to increase the number of opinion leaders and early adopters, a study of current technology use was appropriate to discover how innovative school counselors use technology and to gather ideas for professional development.

The research questions that were examined are listed below

Research Questions

1. What factors are related to counselor adoption of technology?
   a.   Does the administrator support technology use by the counselor?
   b.   Is there funding available to acquire technology?
   c.   Does the counselor have easy access to technology?
   d.   Is the counselor aware of the usability of the technology in the counseling profession?
   e.   Is the counselor comfortable using technology?
   f.   Did the counselor receive college training in technology utilization?
   g.   Is the counselor motivated to use technology?
   h.   What is the counselor's job location (rural, suburban, or urban)?
2. How are counselors utilizing technology in their programs?
3. How can the results of this study be utilized in designing professional development for counselors?

Methods

Participants

The participants in this study included 145 school counselors from elementary, middle, and high school work-settings in Georgia, Indiana, Michigan, Massachusetts, South Carolina, New Jersey, Tennessee, Kentucky, Missouri, New York, and California. The participants were invited to participate in this study through several means. One method used to solicit participation was an email message to a variety of listservs, including the Georgia Counselors Network (GCN), the International Counselors Network (ICN), the American School Counselors listserv (Yahoo eGroup), and other state listservs for the states listed above. The email message directed the counselors to the Georgia School Counselors Association website where they could complete an online survey about

their level of technology use. Survey results were automatically emailed to me. Counselors were also invited to participate at a regional Counselors Coalition meeting. Counselors in attendance at this meeting also represented all grade levels, were based in First District RESA, and completed the Local Counselor Survey in lieu of the online survey. Any visitor who visited the GSCA website had the opportunity to complete the online survey also.

Legal and ethical guidelines were observed at all times during the course of this research. Access was obtained from the GSCA president granting permission for me to conduct research on the membership of GSCA. All surveys also contained an informed consent statement that informed the potential participant participation was voluntary and promised anonymity. In addition, specific information concerning the purpose of the research was given along with contact information for additional information.

Data Collection

Two instruments were used to collect the data for this action research. The main instrument used was a web-based survey (WBS) that was accessible on the GSCA website located at http://www.gaschoolcounselors.com. The second instrument used to collect data was a local counselor survey (LCS) that was administered to counselors in attendance at a regional Counselors Coalition meeting. The content of the WBS and LCS was exactly the same. Both required the participants to complete a 25 question survey that assessed their use of technology. The medium of delivery and completion was what differed. The WBS could be completed at anytime the participant chose. However, the LCS could only be completed during the Counselor Coalition meeting and had to be returned before the end of the day.

The WBS and LCS were designed to assess how school counselors were using technology.   The instruments assessed whether or not counselors used technology for clerical tasks, teacher training, parent training, individual counseling, group counseling, classroom guidance, communication, or Internet searches. The instruments asked the respondents how often, if ever, they used technology for the tasks mentioned above. The frequency of technology usage included: not using technology for this task, daily, weekly, or monthly or less. The instruments also asked the respondents whether they had access to technology in their office, or if they were required to use a computer that was located in another office. In addition, the instruments examined other variables that might influence technology use, including administrator support for technology use, funding to acquire technology, access to the technology, usefulness of the technology, level of comfort using technology, college training for using technology in counseling, motivation to use technology, willingness for technology training, and school location – rural or urban.

Procedures

Throughout the data collection phase of the research, I administered and supervised all data collection activities. The WBS was available to the participants for the entire month of October 2001. As participants completed the WBS, their responses were automatically emailed to me. Participants of this study initially received an email message via their state or the International Counselors Network listserv that invited them to visit the GSCA website to complete a technology survey that assessed counselor use of technology. Participants who chose to complete the survey visited the GSCA website and clicked on the link for the technology survey. Respondents were provided contact information for the researcher in the event they had questions. Respondents were asked to check a box agreeing that they consent to the research and agree to participate. The directions for completing the survey stated that the survey inquired about counselor use of technology in their school counseling program. For the purposes of this study, technology use was defined as the use of a computer, software, and other hardware.

Individuals who completed the LCS were asked to do so at a regional Counselor Coalition meeting. School counselors from First District RESA are members of the Counselors Coalition. Participants at the meeting were given the LCS, informed of the nature of the survey, and advised that their participation was completely voluntary. The LCS had the same information concerning consent and anonymity as the WBS.

Microsoft Excel was used to organize the data collected. A spreadsheet was created for all school counseling work-settings, including elementary, middle, and high school. Some questions required open-ended responses. However, most questions required the participant to make a selection from available answer choices. Each spreadsheet was organized in the following categories:

- school location
- graduate school attended
- comfort level using technology
- technology training received
- computer availability
- Internet access
- frequencies of technology use for clerical tasks

- parent training
- group counseling
- teacher training
- individual counseling
- classroom guidance
- communication
- additional tasks
- awareness and use of counseling software
- willingness to use technology
- administrative support for technology
- funding for technology
- awareness of the benefits of technology
- willingness to participate in staff development

Results

For organizational reasons, the results from the surveys will be presented by school level beginning with the elementary level.

Elementary Level

Of the 73 elementary counselors who participated in this research, 54% worked in rural schools, 30% in suburban schools and 16% in urban schools. The majority of elementary counselors surveyed indicated that they were very comfortable or comfortable using technology. Fifty-six percent indicated they were very comfortable using technology and 43% indicated they were comfortable using technology. Only 1% stated they were uncomfortable using technology. Most of the elementary school counselors in this study attended universities that did not offer any technology training. Only six of the elementary counselors surveyed had any technology training in their counseling graduate programs. Of the six who received training, one took a course on computer-based statistical research and the other took a course discussing the use of Internet resources in career development. The remaining four did not indicate what training they received. Although few graduate schools offered technology training in their graduate counseling programs, 53 of the participants have since participated in some sort of state sponsored technology such as Georgia's InTech program.

Computer access was a very important variable in this action research. All of the elementary counselors surveyed had access to a computer connected to the Internet. Sixty-nine have computers in their offices and the remaining three have access to a computer. In addition, 65 of the counselors have home computers.

The elementary counselors who participated in this research indicated that they use technology in a variety of ways including the following tasks: clerical, parent training, group counseling, teacher training, individual counseling, classroom guidance, communication, and counseling related Internet searches. Table 1 below depicts the percentages of counselors who use or do not use technology for the indicated tasks.

	Yes	No
Clerical	99%	1%
Parent training	38%	62%
Group counseling	41%	59%
Teacher training	48%	52%
Individual counseling	53%	47%
Classroom guidance	50%	50%
Communication	100%	0%
Counseling related Internet searches	99%	1%

Table 1: Tasks completed using technology

Elementary counselors use of technology varies in frequency. See Table 2 below for the frequencies of technology use. (Note: All respondents did not respond to all items and percentages are rounded. Therefore, percentages might not always equal 100%.)

	Don't use	Daily	Weekly	Monthly or less
Clerical	1%	80%	16%	3%
Teacher training	44%	1.4%	13%	41%
Parent training	55%	0%	4%	41%
Individual counseling	44%	4%	30%	23%
Group counseling	61%	0%	21%	18%
Classroom Guidance	44%	5.5%	19%	31%
Communication	0%	93%	4%	3%
Internet searches	3%	38%	47%	12%

Table 2: Frequency of technology use

In addition to the general tasks above, the elementary counselors surveyed used technology for additional specific tasks as well. Counselors indicated that they used technology to track student counseling information such as referral data, session notes, contact information, and coordinating student support team (SST) programs. Technology was also used to track student performance on tests. Databases and computer programs such as Ready Reports were used to maintain and disaggregate test data. Graphs and charts that depicted test data were also created by participating counselors using technology. The elementary counselors surveyed do not just use technology with testing to track test data. They also use it to administer tests online. One counselor surveyed reported that she used technology to administer the NWEA online.

Several counselors surveyed also used technology to create and maintain a school counseling website. Most of the websites mentioned by the respondents were informational in nature. However, one counselor created a unique website. The website was called a peer helper website. In addition to using technology for website creation and management, counselors surveyed indicated that they use technology specifically to communicate with students and parents via email. Elementary counselors surveyed reported additional innovative uses of technology. Some of the reported uses include:

- parent newsletters, publications, annual reports for principals and school boards
- classroom guidance PowerPoint presentations and lessons
- banners, bulletin board letters, and posters for guidance activities
- student photos for bulletin boards
- behavior plan cards for individual students
- welcome packets for new students

So, elementary counselors are using technology in a variety of ways.

Counselor awareness of technology was also assessed by the survey instruments. Of the 72 counselors surveyed, 60 indicated they were aware of counseling related software. Although 60 counselors were aware of counseling software, only 21 were currently utilizing counseling software. However, 54% of the elementary counselors surveyed indicated they were interested in using counseling related software. In addition, 68 of the elementary counselors were either somewhat aware or very aware of technology benefits to school counselors. Sixty-four of the counselors surveyed indicated that they were willing to participate in staff development technology training.

Another variable examined was administrative support for technology use. Sixty-nine of the counselors surveyed indicated that their administrators supported counselor use of technology. Sixty-one percent of the elementary counselors surveyed indicated that funding for technology was available.

Middle School Level

A total of 28 middle school counselors participated in this study. The majority, 50%, were from rural school districts. Twenty-nine percent were from suburban settings and 21% were from urban districts. All of the middle school counselors surveyed were either comfortable or very comfortable using technology. None reported being uncomfortable using technology. The majority of middle school counselors in this study attended universities that did not offer any technology training. Only two of the middle school counselors surveyed had any technology training in their counseling graduate programs. Of the two who received training, one indicated taking a

course on the Georgia Career Information System (GCIS). In addition, only four of the middle school counselors surveyed have participated in some sort of state sponsored technology such as Georgia's InTech.

Computer access was a very important variable in this action research at the middle school level as well as the elementary level. All of the middle school counselors surveyed had a computer with Internet access in their offices. In addition, 27 of the middle school counselors have home computers.

The middle school counselors surveyed use technology for many of the same tasks as elementary counselors. They use technology for clerical tasks, parent training, group counseling, teacher training, individual counseling, classroom guidance, communication, and counseling related Internet searches. Table 3 below depicts the percentages of middle school counselors who use or do not use technology for the indicated tasks.

	Yes	No
Clerical	100%	0%
Parent training	43%	57%
Group counseling	41%	59%
Teacher training	36%	64%
Individual counseling	54%	46%
Classroom guidance	61%	39%
Communication	96%	4%
Counseling related Internet searches	93%	7%

Table 3: Tasks completed using technology

Middle school counselors' use of technology varies in frequency. See Table 4 below for the frequencies of technology use.

	Don't use	Daily	Weekly	Monthly or less
Clerical	0%	89%	7%	4%
Teacher training	54%	0%	14%	32%
Parent training	60%	4%	4%	32%
Individual counseling	43%	21%	7%	29%
Group counseling	61%	4%	21%	14%
Classroom Guidance	40%	0%	21%	39%
Communication	4%	88%	4%	4%
Internet searches	7%	14%	61%	18%

Table 4: Frequency of technology use

In addition to the general tasks above, the middle school counselors surveyed used technology for additional specific tasks as well. Counselors indicated that they used technology to track student counseling information such as referral data, session notes and contact information. Statistical information about counseling contacts was produced using counselor created databases and spreadsheets. Middle school counselors also indicated that they use technology for scheduling, grades, and attendance. Technology was also used to track student performance on tests. Software such as Microsoft Excel was used to maintain and disaggregate test data. Additional uses of technology by school counselors included counselors using technology for career guidance, student support team (SST) coordination, PowerPoint presentations, and creating puzzles, worksheets, and transparencies. One survey participant indicated using technology to create cards for students.

Several counselors surveyed also used technology to create and maintain a school counseling website. Most of the websites mentioned by the respondents were informational in nature. One respondent developed a website that provided specific career information and information on mental health issues. In addition to using technology for website creation and management, counselors surveyed indicated that they use technology to specifically communicate with students and parents via email.

Counselor awareness of technology was also assessed by the survey instruments. Of the 28 counselors surveyed, 16 indicated they were aware of counseling related software. Although 16 counselors were aware of counseling software, only 8 were currently utilizing counseling software. However, 43% of the middle school counselors not using technology indicated they were interested in using counseling related software. In addition, 25 of the middle school counselors were either somewhat aware or very aware of technology benefits to school counselors. Twenty-four of the counselors surveyed indicated that they were willing to participate in staff development technology training.

Another variable examined was administrative support for technology use. Twenty-seven of the counselors surveyed indicated that their administrators supported counselor use of technology. Eighty-two percent of the middle school counselors surveyed indicated that funding for technology was available.

High School Level

A total of 44 high school counselors participated in this study. The majority, 48%, was from rural school districts. Thirty-six percent were from suburban settings and 16% were from urban districts. All of the high school counselors surveyed were either comfortable or very comfortable using technology. None reported being uncomfortable using technology. The majority of high school counselors in this study attended universities that did not offer any technology training. Only six of the high school counselors surveyed had any technology training in their counseling graduate programs. Of the six who received training, one indicated taking a course in the computer in guidance. In addition, only nine of the high school counselors surveyed have participated in some sort of state sponsored technology training such as Georgia's InTech.

Computer access was a very important variable in this action research at the high school level as well as the elementary and middle school levels. All of the high school counselors surveyed had a computer in their offices. All but one had Internet access in the office. In addition 40 of the high school counselors have home computers.

The high school counselors surveyed use technology for many of the same tasks as elementary and middle school counselors. They use technology for clerical tasks, parent training, group counseling, teacher training, individual counseling, classroom guidance, communication, and counseling related Internet searches. Table 5 below depicts the number of high school counselors from the total of 44 who use technology for the indicated tasks.

	Yes	No
Clerical	98%	2%
Parent training	30%	70%
Group counseling	35%	65%
Teacher training	33%	67%
Individual counseling	55%	45%
Classroom guidance	70%	30%
Communication	100%	0%
Counseling related Internet searches	98%	2%

Table 5: Tasks completed using technology

High school counselors use technology varies in frequency. See Table 6 below for the frequencies of technology use.

	Don't use	Daily	Weekly	Monthly or less
Clerical	2%	91%	7%	0%
Teacher training	61%	4%	7%	28%
Parent training	65%	2%	9%	23%
Individual counseling	41%	32%	7%	20%
Group counseling	60%	2%	12%	26%
Classroom Guidance	30%	4%	18%	48%
Communication	0%	95%	5%	0%
Internet searches	0%	48%	39%	13%

Table 6: Frequency of technology use

In addition to the general tasks above, the high school counselors surveyed used technology for additional specific tasks as well. Counselors indicated that they used Microsoft Access to track student achievement data and information. High school counselors also indicated that they use technology for scheduling, grade reporting, transcripts, and managing student files. Additional uses of technology by school counselors included counselors using technology for career and college counseling, interest/career assessments, college/major searches, and presentations for financial aid workshops.

Three of the high school counselors surveyed used guidance websites to provide guidance information to the students, parents, and staff. Most of the websites mentioned by the respondents reported information concerning scholarship information, senior information, and other general information. In addition to using technology for website creation and management, counselors surveyed indicated that they use technology specifically to communicate with students and parents via email sending email newsletters to the students and parents.

The survey instruments also assessed counselor awareness of technology. Of the 44 counselors surveyed, 36 indicated they were aware of counseling related software and 18 of those 36 were currently utilizing counseling software. However, 45% of the high school counselors surveyed indicated they were interested in using counseling related software. In addition, 43 of the high school counselors were either somewhat aware or very aware of technology benefits to school counselors. Thirty-six of the counselors surveyed indicated that they were willing to participate in staff development technology training.

Another variable examined was administrative support for technology use. All of the counselors surveyed indicated that their administrators supported counselor use of technology. Eighty-nine percent of the high school counselors surveyed indicated that funding for technology was available.

Discussion

Counselor Adoption of Technology

The purpose of this action research study was to analyze how school counselors from the elementary level to the high school level use technology in their counseling and guidance programs and to generate methods of encouraging such use. One of the research questions asked what factors are related to counselor adoption of technology. There are many factors that contribute to counselor use of technology. One of those factors is administrative support. Ninety-six percent of the elementary counselors surveyed indicated that their administrators supported counselor use of technology. However, 100% of the middle and high school counselors surveyed indicated that their administrators support counselor use of technology. These results suggest that administrators do see counselor use of technology as important. However, there are still a minority of administrators at the elementary level who do not support counselor use of technology. This discrepancy may be due to the historical fact that, on the whole, counselors at the elementary level have not used technology as much as middle and high school counselors.

A second factor related to counselor adoption of technology is the availability of funding. Elementary counselors are funded for technology less frequently than middle or high school counselors. Of the elementary counselors surveyed, only 61% indicated that there was funding available to secure technology. Eighty-five percent of middle school counselors receive technology funding. Eighty-seven percent of high school counselors receive technology funding. This funding ratio suggests that technology use is more important at the middle and high

school levels. Recall that Owen (1999) reported that elementary school counselors seem to use their computers less and feel less confident in their computer skills than middle and high school counselors. The inconsistency in funding could be due to the fact that technology has not been used to a great extent in the past at the elementary level.

As one might think, counselor access to technology is also an important factor to consider in counselor adoption of technology. Again, all of the middle and high school counselors have a working computer in their offices. The majority of the elementary counselors surveyed have computers in their office as well, but three must use someone else's computer. Although most of the elementary counselors also have access to the Internet, the middle and high school levels retain a greater percentage of Internet connections.

Another factor to consider related to counselor adoption of technology is counselor awareness of technology's usability. Ninety-four percent of the elementary counselors surveyed indicated that they were very aware or somewhat aware of technology's benefits. Ninety-three percent of the middle school counselors were very aware or somewhat aware of technology's benefits. Ninety-eight percent of high school counselors surveyed indicated they were very aware or somewhat aware of technology's benefits to the counselor. This high awareness of technology's benefits is likely due the marketing techniques of companies that offer technology to counselors and counselors' quests to make the administrative tasks of their jobs easier and leave more time for actual counseling.

Counselor motivation and comfort level using technology are also important considerations in counselor adoption of technology. Ninety-nine percent of the elementary counselors surveyed reported that they were either very comfortable or comfortable using technology. In addition, 64 of the 72 stated that they were willing to participate in staff development on the topic of technology, suggesting that they are motivated to use technology. Recall that 65 of the elementary counselors have participated in a program such as Georgia's Intech program. This fact further suggests that elementary counselors are motivated. Sixty-eight percent of middle school counselors reported that they were very comfortable using technology. Thirty-two percent indicated that they were comfortable using technology. Twenty-four of the 28 reported that they were willing to participate in technology staff development, again suggesting being motivated to learn about and use technology. The high school counselors were comfortable using technology as well, with 70% reporting being very comfortable using technology and 30% being comfortable. Thirty-six of the 44 high school counselors stated that they were willing to participate in technology staff development, further indicating the motivation of counselors to use technology. So the results indicate that counselors at all levels are willing to participate in technology staff development.

Although one might hypothesize that the lack of formal technology training in graduate school may mean that school counselors will not adopt technology, it does not appear that that has been the case. Only six elementary counselors out of the 72 surveyed had any technology training in graduate school. Two of the 28 middle school counselors surveyed received graduate level technology training. Of the 44 high school counselors surveyed, six had received technology training at the graduate level. Even though only a small percentage of these counselors received any graduate technology training, it did not seem to determine their subsequent adoption and use of technology. Counselors at all levels were using technology in various ways regardless of the existence of technology training in school counselor graduate training.

An additional factor that I thought would determine counselor adoption of technology was counselor job location. Counselors surveyed were asked to indicate which demographic location most closely represented their job location, rural, urban, or suburban. Of the elementary school counselors surveyed, 54% work in rural locations, 16% in urban areas, and 30% in suburban locations. At the middle school level, 50% work in rural settings, 21% in urban settings, and 29% in suburban settings. Of the high school counselors surveyed, 48% work in rural settings, 16% in urban settings, and 36% in suburban settings. Before I began the research, I suspected that counselors in rural locations would use technology less because there would likely be less funding. That hypothesis was not true except in the elementary worksetting. Forty-six percent of those elementary counselors not receiving funding for technology were from rural settings. Thirty-two percent of those elementary counselors not receiving funding were from urban areas. Twenty-one percent not receiving funding were from suburban areas.

One might first think that rural elementary counselors are not receiving technology funding due to lack of financial resources in those rural areas. However, I suspect that there are other reasons rural elementary school counselors are not technology funded. One reason could be that historically elementary counselors have not needed technology. Boards of education may not realize that the elementary counseling programs have not been around as long as high school counseling programs. They may not realize the needs of elementary counselors. Elementary counselors need to educate these boards and advocate the use of technology in their fields before there will likely be an increase in technology funding.

Counselor Utilization of Technology

The second main research question that was examined inquired about how school counselors are using technology. Many of the counselors from all levels use technology in a variety of ways. From the elementary to the high school level counselors reported using technology most frequently for clerical tasks, communication, and counselor related Internet searches (See Tables 2,4, and 6 for a detailed list of frequencies of technology use). Of the three previously mentioned tasks, all three levels used technology for daily communication more than any other task. Technology is likely used most often for communication due to the simplicity and increasing availability of email. Counselors have the ability to communicate quickly with teachers, administrators, and peer counselors. Counselors at all levels have the opportunity to join counseling listservs and many of the counselors surveyed were members of various listserv. Several of the counselors surveyed also indicated that they use websites and email to communicate with parents on important topics such as classroom guidance topics, career guidance, scholarships, and financial aid information. Although using technology to communicate is an excellent resource, we must not forget that all do not have access to such technology in their homes. To combat this digital divide, some school systems are setting up computers in local grocery stores that are connected to a network providing school information.

Clerical tasks are the next most frequent tasks for which counselors use technology. There are several technological student information systems available for counselors to use for clerical tasks. School counselors at all levels are required to keep detailed information on their counseling activities. Technology can help make this job more efficient. Some school counselors are using programs such as Microsoft Excel to track counseling data. One reason counselors are using technology for clerical tasks may be that counselors are seeking ways to use their time more efficiently. Technology such as Excel allows the counselor to spend more time on tasks other than clerical work. Increased accountability is also appearing on the counseling scene and counselors are scrambling to find efficient ways to document the use of their time. Counselors are also using programs such as the Microsoft Outlook calendar feature to schedule appointments for individual counseling, classroom guidance, parent meetings, and other important times. Although no study participants indicated using personal data assistants (PDA's) such as PalmPilots, I have spoken with a small number of counselors who utilize PDA's for schedule and contact information. However, at this point, there is little evidence of widespread use of these devices.

Counseling related Internet searches were the next most frequently used technology tasks. Elementary and high school counselors used the Internet more for counseling related searches than middle school counselors surveyed. One reason counselors may be utilizing the Internet is because counseling related resources on the Internet are great in number. Numerous websites are available that support school counseling. The American School Counselors Association has a comprehensive website that supports school counselors at all levels. In addition, many state counseling organizations, including Georgia, have their own websites.

Counselors at all levels are also using technology to disaggregate and track test data. One of the main reasons counselors are likely doing this is because of the increasing emphasis on accountability. Technology allows counselors to manipulate test data with relative ease. Counselors are often test coordinators as well and are required to make sense of the test data. Technology is a useful tool for this task. Counselors at all levels also use technology such as PowerPoint for presentations and interactive lessons. They likely use technology such as this to reach all learning modalities, as Casey (1992) suggested. Students who attend school today have a variety of counseling needs, and technology is one tool that can generate student interest and enthusiasm. The varying uses of technology depend on the needs of the students.

Professional Development

A final question that was examined concerned how the results of this study can be utilized to design professional development for counselors. This study illuminated how counselors are currently using technology. The results suggest that innovative school counselors are utilizing technology in a variety of ways. Professional development could be designed that trains counselors how to capitalize on the benefits of technology and use technology to benefit their programs. This study has revealed a variety of innovative uses of technology.

Professional development could be designed that focuses on the previously mentioned innovative uses of technology. For example, counselors at all levels could trained to use programs such as Microsoft Excel to track their daily counseling activities and easily produce the required annual reports that are sent to the Georgia Department of Education. Counselors could also be trained to use Microsoft PowerPoint to develop interactive lessons for the students they serve. These interactive lessons could be valuable to counselors at all levels. In addition, counselors need training on the uses of technology to communicate with other professionals

Limitations, Dissemination, and Future Research

One limitation of this study may be that the results of this study were gathered primarily in a technological way. Other than about 15 LCS's that were completed in the Counselors Coalition meeting, the remaining data was gathered electronically. Therefore, the high percentage of school counselors surveyed indicating they were using

technology may not be representative of the entire school counseling profession. Another problem that arose when I was analyzing data was that some of the respondents did not answer all questions. Therefore, it is unclear how they may have answered the survey. The number who left questions blank was very small, however.

This action research was communicated initially on a small scale to members of the Georgia School Counselors Association at the Fall Conference in Athens, Georgia on November 14, 2001, during a presentation entitled, "How Technology can Benefit the Professional School Counselor." The results of this study will also be submitted to the GSCA editor for review for publication in the GSCA professional publication called the *Journal*. The *Journal* is received by the entire GSCA membership and would be an excellent venue for communicating the results of this study. GSCA could use these results in lobbying efforts to increase the technology funding for elementary school counselors. They could also use the results of this study to make decisions regarding what additional types of technological staff development need to be offered. More time may need to be devoted to technology training for GSCA members.

More studies need to be conducted that assess the effectiveness of using technology such as interactive CD-ROM while working with individuals, groups, and in classroom guidance. Although on the surface the children seem to enjoy the technology, further studies need to be conducted to determine its effectiveness in helping children cope. Additional research also needs to be conducted to determine the need for technology training as a part of counselor education training. Few universities currently offer such training. Technology training would likely be more costly, so research should be conducted to determine if it is cost-effective.

This study is one of the few studies that has examined counselor use of technology from the elementary level to the high school level across several states. It will assist GSCA in increasing technology utilization within the organization because it highlights innovative ways in which counselors are currently using technology. It can also serve as a beacon in establishing future technology goals for the organization. In addition, the study can serve as a stimulus to encourage counselors to use technology in the innovative ways discussed here.

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