We encourage readers to consider submitting papers that inform us of their work and interest in intergenerational program development, research, and policy. We welcome papers that reflect how intergenerational concepts can be integrated within multiple academic disciplines and can contribute to collaborative efforts within human service and community development initiatives. We look for submissions that examine a variety of research questions that will provide insights about intergenerational relations in formal and informal settings and that explore the social and global implications of this growing area of inquiry.
Introducing an Intergenerational, Internet-Based Tutoring Program: Meeting Program Challenges

Wendy Middlemiss, PhD
Bonnie J. F. Meyer, PhD

ABSTRACT. Schools face many challenges in preparing students to meet today’s state and national academic goals. Intergenerational tutoring programs have been shown to be an excellent resource to help schools and students meet these academic challenges. However, intergenerational tutoring programs can be expensive and face obstacles that include scheduling difficulties and barriers pertaining to physical mobility and transportation needs of older adult tutors. This paper describes an intergenerational, Internet-based tutoring program established to determine whether older adults could successfully tutor middle-school students over the Internet. An asset of this program is that older adults can tutor at convenient times, providing resources that may be unavailable to remote rural areas. Following a brief description of the program, i.e., a reading strategy identified as successful in improving reading compre-
hension for both older adults and younger students, challenges met in implementing the program are outlined. A description of how those working with intergenerational programs may meet these challenges is then presented.

KEYWORDS. Intergenerational tutoring, Internet, reading

PROGRAM RATIONALE

Tutoring programs have been shown to be an effective approach to facilitating both students’ learning (Cohen, Kulik, & Kulik, 1982; Juel, 1996) and schools’ educational resources (Belcastro, 2002). Tutors have helped improve student achievement in academic areas, such as reading (Invernizzi, Rosemary, Juel, & Richards, 1997; Slavin, Madden, Karweit, Dolan, & Wasik, 1990), and social areas (Baker, Gersten, & Keating, 2000). Tutoring effectiveness has been related to program design (Invernizzi, Juel, & Rosemary, 1996; Juel, 1996), as has tutor training and the quality of the tutor-tutee relationship (Edmondson, 1998; Invernizzi et al., 1997).

Intergenerational tutoring programs represent a growing tutoring resource (Freedman & Fried, 1999; Invernizzi et al., 1996). The growing number of older adults in our society and the often diminishing school resources available to meet state and national academic standards create an excellent opportunity for older adult tutors to provide a diversity of services in both the academic and community setting (Baker et al., 2000; Belcastro, 2002; Middlemiss & Meyer, 2002; Wasik, 1998a). Older adult tutors have been reported as successful in helping students improve their academic performance (Kagan & Vogel, 1997; Meyer et al., 2002; Newman & Latimer, 1977; Wasik, 1998b), as well as intergenerational understanding by alleviating misperceptions between students and older adults and vice versa (Invernizzi et al., 1996; Meyer et al., 2002).

Similar to benefits associated with intergenerational programs, computer-based tutoring, whether through computerized instruction or use of the Internet with the aid of tutors, represents an educational resource as well (Wheeler & Regian, 1999). Similar to face-to-face tutoring, com-
puter-based tutoring has been found effective for improving students’ academic performance (Kulik & Kulik, 1991; Wheeler & Regian, 1999), social well-being (McKeon & Burkey, 1999), and self-efficacy (Meyer et al., 2002; Reauz, Ehrich, McCreary, Rowland, & Hood, 1998).

Although few programs have combined the use of the Internet with an intergenerational component (Senior Net, 2003; Southern Illinois University, 2003; WorldCom, 1999), there are several benefits to such an approach. First, intergenerational Internet programs can avoid difficulties associated with face-to-face tutoring programs by alleviating concerns such as transportation needs, older adults’ mobility, and safety issues for both older adults and students (Baker et al., 2000; Freedman & Fried, 1999). Use of Internet-based communication can allow older adults to work with students without being present in the schools and without having to set aside a certain time of day for completing their tutoring activities. This is particularly important to very active older adults. Second, participating in an Internet-based tutoring program can provide older adults with improved computer skills and maintenance of cognitive skills (Meyer et al., 2002). Finally, Internet-based tutoring programs provide the opportunity for older adults facing physical challenges, home-bound older adults, as well as older adults in nursing homes to participate as tutors despite their physical limitations. Thus, with Internet-based tutoring, older adults who have busy schedules or have difficulties that preclude easy travel can participate.

In summary, the development of tutoring programs, particularly those that incorporate an intergenerational component and the use of Internet-based programming, may play an important role in supporting educational efforts of underfunded schools or schools facing other challenges in educating students to meet state and national academic requirements. Further, these programs may represent an excellent opportunity for older adults to participate in an activity that benefits the younger generation’s academic efforts, while also enhancing their mental capabilities. To help facilitate the development of these types of programs, this paper reviews the implementation of an intergenerational Internet program offered through collaboration between a university research group and a rural middle school. Presented are a general description of the program model and the role of those involved in the program. Following this general description, challenges faced in meeting each of the program goals are presented. Challenges addressed include those associated with the (1) technological basis of the program, (2) collaboration between the school and program developers, and (3) characteristics of the tutor-
ing relationship between older adults and students. Steps taken to address these challenges are presented.

PROGRAM MODEL

Intergenerational Internet Tutoring Program to Teach Structure Strategy

The objective of this project was to implement an intergenerational, Internet tutoring program in which older adult tutors trained in the structure strategy with expository text taught fifth-grade students the structure strategy through an Internet-based tutoring program. The structure strategy is designed to help readers learn to approach reading with the knowledge that texts are organized in regard to their purpose. For example, some texts may provide a comparison between two views, while others provide a solution to a problem, an explanation, historical sequence, or a description. With this knowledge, the reader then uses this organization as a means of improving recall and comprehension (Meyer, Talbot, Poon, & Johnson, 2001). The structure strategy has been found effective in improving reading comprehension of expository texts and everyday material for readers across the life span (Meyer & Poon, 2001).

The program was implemented by a university-based research group in collaboration with a rural school district in western Pennsylvania. For older adults, the goals of the program were to help maintain use of the structure strategy and improvements in reading following initial training, build a relationship with the fifth-grade students through the tutoring process, and improve computer skills. For students, the program goals were to improve reading skills by helping students become proficient in the use of the structure strategy, help students build a relationship with the older adult tutors, improve students’ attitudes toward older adults, improve students’ computer skills, and increase self-efficacy and motivation to read. In regard to the collaboration between the school and research group implementing the program, goals were to identify how their collaboration could meet the technological and educational demands of the program in terms of developing program content and running the program. The ability to share responsibility for tasks associated with university-school or agency-school collaborations is an important component of the success of these types of support programs (Freedman & Fried, 1999).
Program Implementation

Older Adult Tutors

Older adult tutors were recruited through advertisements (3 tutors recruited; 25% of tutors), word of mouth (2 tutors; 17%), or their previous participation in research projects (7 tutors; 58%). All tutors were well educated ($M = 16.96$ years, $SD = 1.49$ years) with a mean age of 67.67 years (range: 62 to 80 years). Following recruitment, older adults received training in the structure strategy and tutoring over eight 90-minute sessions. Training topics included use of the structure strategy, basic computer skills, and cognitive and social behavior of fifth graders, with a focus on how to construct a learning environment for these students. Throughout the training, older adults were given practice in using the communication system that formed the basis for the tutoring program. Researchers remained available to tutors throughout the program and continued to provide individualized training and support. Following training, one tutor declined to continue the tutoring program due to time commitments.

In preparation for tutoring, older adults chose tutoring names, a picture to represent themselves on the Internet, and an introductory message describing their background and interest in the program. Tutor pictures ranged from a horse for “Mr. Ed” to a picture of the tutor surrounded by flowers and ivy for “Miss Ivy.”

During the tutoring program, tutors reviewed the lessons, read through their students’ responses, and then gave students helpful information and suggestions on how to understand and use the strategy. Tutors then informed students what they should do during the next instructional session. Older adults sent their messages to students using the conference software First Class, which creates mailboxes and folders that allow for three-way communication and monitoring. To encourage the building of relationships between tutors and students, tutors were encouraged to share information about daily activities or family events with students.

Fifth-Grade Students

Students were recruited through invitation letters sent home to families. Students with completed assent and parental consent forms were placed randomly in one of three groups: (1) students who would learn the structure strategy over the Internet with a tutor; (2) students who would learn the structure strategy over the Internet without a tutor, and
(3) students who would participate in regular school-based reading activities only. Students’ keyboarding skills were assessed to assure their keyboarding proficiency would allow them to complete the lessons.

During the 10-week program, both groups of students learning the structure strategy with tutors and those learning the strategy without tutors participated in three 20-minute instructional sessions per week. For students working with tutors, these sessions began by checking for their tutors’ message in the First Class program, and then completing activities on the instructional Web site based on their tutors’ messages. Following this, students would begin work on new lessons as appropriate. At the conclusion of each session, students sent a message to their tutors by the use of First Class. In the message, students were encouraged to describe any difficulties they may be having with the material. Students were encouraged also to communicate with their tutors about school activities or other events they thought the tutor would enjoy hearing, as a means of building a relationship between the older adults and students.

**Program Outcomes**

Assessment of reading skills and other outcomes were completed for tutors and students to determine program effectiveness. The results of these assessments have been summarized in Table 1. A complete report of these results has been published (Meyer et al., 2002). Overall, both tutors and students increased their reading comprehension, as well as their self-efficacy. Improvement in reading was maintained for months after training.

**CHALLENGES FACED AND LESSONS LEARNED**

**Technological Basis of Program**

*Transmitting Information Through Servers*

One benefit of an Internet-based program is that it can be delivered in locations distant from the program’s base. This allows resource-rich areas, such as university communities able to sustain program delivery and often populated with well-educated older adults, to provide one-to-one tutoring to less resource-rich areas (Belcastro, 2002). Success of this type of program implementation, however, relies on servers both at the
university and school delivery site being effective and efficient in transferring information.

**Challenges.** One challenge to successful program provision is unexpected disruptions in communication caused by servers being down or other types of technological problems, both of which were experienced in the present program. When asked to review this tutoring program, tutors noted difficulties with servers more consistently than any other concern. Some tutors mentioned that their difficulties with the servers had caused them to rearrange their schedules to meet the tutoring demands.

Another concern regarding servers is whether available computer equipment can adequately support the tutoring activity. In the present program, the most significant difficulty was that the school’s server connections could not sustain the activity of 20 students downloading program lessons simultaneously. Students’ wait time between requesting a new page and receiving that page on the screen caused significant delay and, consequently, frustration.

Finally, computer-based program disruptions also represented a challenge in assuring equivalent opportunity to work on the program across

---

**TABLE 1. Program Assessments and Outcomes**

<table>
<thead>
<tr>
<th>Assessment Times</th>
<th>Older Adults</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training, Post-Tutoring</td>
<td>Reading comprehension, self-efficacy, and attitudes regarding computer use inclusive of nervousness using computers, and feeling lost about how to start learning more about computer.</td>
<td>Reading comprehension, self-efficacy, and attitudes regarding computer-based learning.</td>
</tr>
<tr>
<td>Post-Program, Delayed Post-Program</td>
<td>Pre-Programs, Post-Program, Delayed Post-Program</td>
<td>Pre-Programs, Post-Program, Delayed Post-Program</td>
</tr>
</tbody>
</table>

---

Complete analyses of program outcomes have been reported previously (Meyer et al., 2002). Older adult tutors’ performance significantly increased from pre-training to post-training, and this increase was maintained through post-tutoring assessment (reading comprehension: $F(2, 20) = 12.83, p = .001, MSE = 158.63$).

Older adult tutors’ performance significantly increased from pre-training to post-tutoring assessment (self-efficacy: $F(2, 20) = 4.41, p = .026, MSE = .05$; computers: less nervousness, $t(10) = 2.39, p = .048$ and less feeling lost, $t(10) = 2.76, p = .02$).

Students completing structure strategy instruction with tutors had significantly greater increase in performance from pretest assessment to delayed posttest assessment in comparison to students in the control group (reading comprehension: Wilks’s Lambda = .59, $F(16, 100) = 1.92, p = .027$; self-efficacy: $F(2, 57) = 5.55, p = .006, MSE = .09$; and attitudes toward computer-based learning: $F(2, 57) = 3.89, p = .028, MSE = 1.58$).
groups (Meyer et al., 2002). In the case of this program, server-based difficulties were experienced mostly during the instruction sessions for the students working with tutors but not in the sessions of students working without tutors. This discrepancy in program delivery could explain why students working with tutors did not perform better than students without tutors, although both groups of students working on the instructional structure strategy material performed better on posttest free recall measures than students who did not receive instruction (Meyer et al., 2002).

Addressing these challenges. Two steps can help to address potential barriers to program provision associated with the use of servers. First, persons responsible for the computer connections must be available during student instruction times, as well as during older adult tutoring times. This allows easily correctable server problems to be addressed without delay.

Second, it is important to map out expected school- or university-based activities that may slow server access. Identifying times when lessons may not be accessible provides opportunity to prepare alternative instructional activities to facilitate program delivery. This allows the program to maintain momentum despite server disruptions. Benefits of maintaining momentum include avoiding students’ or tutors’ expectations that the program may not run due to computer problems and avoiding student frustration, both variables within the program that may impact students’ attitudes and thus their benefit from the program.

In the present program, the problem of server capacity to sustain the activity of 20 students simultaneously during instruction sessions was addressed by caching the lesson pages on each student’s computer, i.e., pages were opened for each student prior to the instruction session and once opened the pages were held in memory by the student’s computer. The resulting decrease in wait time experienced by students when they started their lessons helped them to maintain focus on the program and allowed them to complete lessons efficiently.

Computer Availability

Challenge. One challenge in designing and implementing Internet-based tutoring programs is identification of the computer resources necessary for program delivery. Questions to address include types of computers available for the school, university, and tutors.

Addressing this challenge. In the present program, the availability of university and school computers was sufficient to run the program. Ad-
ditionally, all tutors had their own computers and network access. When this is not the case, program developers can work with local community centers or attempt to solicit funding support to provide older adults with computers when necessary. Given the increased access to computers for community members, including resources such as public libraries, computer access should not be a barrier for most older adults.

**Collaboration Between the School and Program Developers**

**Scheduling**

*Challenge.* Given the academic demands faced by teachers and K-12 schools, most school days have very little scheduling flexibility to incorporate tutoring or other supportive programming (Butty-Manswell, LaPoint, & Thomas, 2001; Wasik, 1998b). This lack of time can represent a challenge for program developers, researchers, and school administrators interested in implementing tutoring programs. In the present program, despite strong program support from the school administration, identifying a time period for instructional sessions was difficult. Approaches to consider in the future are programs designed for students to access from home or during after-school programs.

In the present program, instruction was scheduled during the free times associated with the lunch period. During the first week of the program, however, it became clear that this schedule was not workable. The student group participating with tutors missed a substantial proportion of their recess or missed an opportunity to purchase ice cream at lunch. These initial scheduling difficulties led to some continued student complaints and a generally more negative tone throughout the semester for the students participating with tutors. The importance of students’ negative attitudes during the program was identified at posttest assessments, with students identified by their older adult tutors as exhibiting negative attitudes toward the tutoring program performing less well than students identified with more positive attitudes (Meyer et al., 2002).

*Addressing this challenge.* In the present program, scheduling difficulties were addressed in several ways. First, within the first few weeks, the schedule was changed so that preferred activities were not missed. Second, to justify the use of students’ time for program participation, the researchers, teachers, and administrators collaborated to develop a program that would address the school’s educational goals. Additionally, analyses included the school’s assessment measures, such as their in-
classroom reading program *Accelerated Reader* (STAR Reading), and state assessments.

A third way scheduling was addressed was to alleviate the concern of students who had originally missed recess period by emphasizing the fun aspects of the program, such as working with tutors and computers. Other efforts included providing snacks on instruction days and an ice cream party on the final day. Although concern may be raised that special “rewards” for program participation could compromise the program’s integrity, the link between students’ attitudes toward the program and their success with the structure strategy suggest consideration of students’ lack of motivation as a potential barrier to program success (Meyer et al., 2002).

**Program Fit/Content and Roles/Ownership**

Challenges faced in implementing tutoring programs through universities and K-12 school collaborations include questions about program design and identification of roles in and ownership of the program (Cobb, 2001; Wasik, 1998a). Challenges include determining where the program fits into the school curriculum; identifying responsibility for the program’s curricular content, goals, and assessments; determining responsibility for running the program; and providing instruction. Without addressing these challenges, barriers to program success can include a lack of program direction, lack of program support, confusion on the part of the student, or lack of student engagement (Meyer et al., 2002).

*Challenge of program fit and content.* In an effort to engage students in tutoring program materials, it is important to provide face validity for the program by connecting the program to the students’ classroom curriculum. In addition, as mentioned by the tutors in this program, lesson reading passages must be of interest to the age group being tutored. These efforts can help with the transfer of information learned in the tutoring environment to classroom work.

*Addressing this challenge.* In the present project, researchers constructed the tutoring materials to match the fifth-grade history curriculum, identifying materials that would be of interest to the students. Assessment of the impact of the program on the in-class reading program *Accelerated Reader* (STAR Reading) did not show significant differences between performance of students receiving structure strategy instruction with or without tutors and those who completed only the regular fifth-grade reading assignments in their classrooms (Meyer et al., 2002), even though students who completed only the classroom as-
signments received several extra class sessions each week using *Accelerated Reader* (STAR Reading) materials while the groups receiving the Internet program were out of the classroom. Thus, structure strategy instruction and missing several sessions a week of the regular school reading program neither helped nor hindered performance on measures associated with in the regular school program.

To further help with transfer of students’ learning of the structure strategy to their classroom material, teachers could be trained in the structure strategy and assisted in the construction of classroom activities using this reading approach.

*Challenge of program roles and ownership.* Addressing questions concerning the role of teachers, school administrators, researchers, and tutors in program delivery can be difficult. For example, active engagement of teachers can be essential in legitimizing the experience for the students. One tutor, a retired fifth-grade teacher, noted that students’ interaction with the program were characteristic of their behavior with substitute teachers.

*Addressing this challenge.* In the present program, both the computer and reading teachers had identified roles in program delivery and classroom teachers were asked for input into program design and content. Due to scheduling difficulties, time commitments, and other complications experienced by the teachers, interaction between the researchers and teachers was minimal. Shared ownership of the program, although the objective, was not the outcome.

**Characteristics of the Tutoring Relationship Between Older Adults and Students**

Tutor-tutee communication and tutor training have been identified as important to tutoring success (Juel, 1996; Wasik, 1998a, 1998b). Whether the types of communication and interactions important in face-to-face tutoring are important for Internet-based, tutor-student communication or whether Internet-based communication is sufficient to achieve positive outcomes in regard to building relationships between tutors and tutees is not known. The present project addressed these questions by considering how to track messages, how message content impacted students’ performance, and the outcome of Internet-based communications.

*Researcher Tracking of Internet-Based Messages*

*Challenge.* Tracking messages can provide opportunity for analyses of message content, and assurance of students’ and older adult tutors’
safety during Internet communication. Thus, one challenge was to design a communication system that allowed the researchers to track all messages between students and tutors and vice versa. In the present program this was completed through the use of two different software programs, *First Class* and Web-based communication. With the two types of Internet-based communication used to facilitate tracking in this program, however, this system was too time-consuming for students to manage effectively within the allotted 20-minute instruction period. Students had to transfer back and forth from one program to the other to follow tutors’ instructions and often did not have time to write to their tutors following their lessons. As was evident from the content of the tutors’ messages, many students did not follow the tutor directions, perhaps due to time constraints.

For the tutors, receiving information through the instructional Web site *First Class* from the students and e-mail from the researchers was cumbersome. Some tutors reported they needed to print out one of the received materials to be able to respond to students. Of the 11 tutors, 8 (72%) noted that having a hard copy of the instructional Web site would have been helpful.

Another indication that the complexity of the communication system was problematic was that tutors’ use of questioning about personal matters and tutors’ use of instructing about the strategy were negatively associated with students’ motivation to read (Meyer et al., 2002). This difficulty may reflect students’ inability to respond to both academic and personal questions when using both communication systems.

**Addressing this challenge.** In a second implementation of this program, all communications were completed over the Web-based instructional site. Tutors were able to submit their comments directly following students’ work. This change made the program more cohesive. With this system, no concerns were raised by tutors or students regarding sufficient time to complete required program activities.

**Message Content and Student Outcomes**

**Challenge.** Some characteristics important to the communication between students and tutors in face-to-face tutoring have been affectionate, verbally reinforcing relationships and the use of scaffolding (Cobb, 2001; Invernizzi et al., 1997; Juel, 1996; Wasik, 1998b). The challenge in the present project was to determine whether Internet-based tutoring could effectively convey such message characteristics.
Addressing this challenge. Tutors’ messages were coded for use of types of praise, comforting, criticism, and types of instruction and information, and the content of the messages was compared to students’ progress. Similar to face-to-face tutoring, both tutors’ use of verbally reinforcing and affectionate relationships, i.e., praise and comforting, as well as tutors’ use of scaffolding, i.e., instructing feedback, were associated with better student performance on reading outcomes (Meyer et al., 2002). Conversely, tutors’ use of admonishment was associated with students’ lower motivation to read; and tutors’ use of directions, instruction without guidance or scaffolding, was associated with poorer student performance on posttest recall.

Tutor Messages and Students’ Focus on the Lessons

Challenge. One challenge faced by the tutors was how to encourage students to take time with the lessons. Some students in the Web-based instruction groups would click through the lessons looking for interesting graphics without carefully reading and completing exercises in each lesson. One tutor described her student as having a game-playing attitude.

Addressing this challenge. Students whose tutors used questioning about subject matter but not directions took more time with the Web-based lessons, completing fewer lessons throughout the program. Perhaps by questioning students about subject matter, tutors encouraged students to spend more time per lesson, and work through the lessons more carefully. Given that students’ performance on free recall posttests were associated with their quality of work on the lessons (Meyer et al., 2002), questioning about subject matter may be an important tool.

Tutor Experience and Training

Challenge. Another challenge to program implementation is the identification and selection of tutors. Both tutors with a strong educational background and/or extensive training (Juel, 1996; Wasik, 1998a, 1998b) and inexperienced tutors with some training (Baker et al., 2000; Morris, Shaw, & Perney, 1990) have been shown to be effective. The question of tutor experience might best be determined by the nature of the tutoring program to be delivered (Wasik, 1998a, 1998b). For example, in the Howard Street Tutoring program designed to improve reading skills of at-risk second- and third-grade students (Morris et al., 1990), tutors received modest levels of training and were successful in helping
improve tutees’ reading skills. In programs such as the present one, more extensive training may be essential to tutors’ ability to provide students with assistance.

Addressing this challenge. To better address the question of training, tutors in this program were asked to describe their preparation as part of a concluding questionnaire. Tutors’ responses suggested areas where they would have benefited from more training. Ten of the 11 tutors (90%) would have liked more information about what would constitute correct student responses, and 3 tutors would have liked interaction with other tutors (27%) to help determine the quality of their students’ responses or best responses.

Building Personal Relationships

Challenge. One focus of intergenerational programs is intergenerational understanding (Aday, Sims, & McDuffie, 1996; Chapman & Neal, 1990). Development of intergenerational relations between tutors and tutees may be helpful for social interactions and program success. In the present project, students’ preprogram attitudes regarding older adults were positively associated with students’ posttest motivation to read. Given this relation, tutee attitudes may be an area to consider when implementing intergenerational programs. Further, it may be helpful to encourage tutor-tutee interactions prior to program initiation as a means of improving student-older adult relationships and thus possibly increasing the likelihood of program success. Additional research is needed to identify the nature of this relationship and its impact on program success.

In Internet-based programs, building tutor-tutee relationships represents an additional challenge for both program design and training. In the present program, only one significant change in students’ attitudes regarding older adults was found, with students being less likely to agree with the statement that older adults are too forgetful to be trusted, $t(19) = 2.03, p = .056$.

Addressing the challenge. Relationship development was encouraged in the present program through the sharing of personal information, beginning with the short biography inclusive of tutor caricatures, provided on the Web site by tutors. Students were encouraged to ask their tutors questions and to tell their tutors about themselves. Tutors and students shared information about pets and their families, tutors asked about school events and holidays, and students asked about tutors’ activities. Based on student and tutor comments, relationships had
developed with Internet-based communication. When asked if their best friend had a choice to learn the structure strategy with or without a tutor, one student responded, “I would tell them to get a [tutor] because they are fun and they grow to be your friend.”

When asked what they liked most about their tutor and their tutors’ messages, one student responded, “The most I like about my tutor and tutor messages I received is working on the computer and learning the plans [organizational structures taught in the structure strategy]. I also liked my tutor [name] very much, she was very nice!! I also liked sending and receiving messages!!!!!!” When asked whether the tutor cared about student progress, one student responded, “Yes, I think my tutor cared because she would always give me advice and tell me my mistakes!!!!”

In their final messages to their tutors, one student wrote, “Hi, [Name]! I guess this is the last time I write to you, it has been fun working with you!!!!!!! I didn’t want to stop! I hope you enjoyed working with me!! Have a MERRY CHRISTMAS and A HAPPY NEW YEAR!!!! BYE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!”

Analyses of relationship-building message content showed that tutors’ use of informing about personal matters was positively related to students’ posttest attitudes towards older adults. Despite the building of a relationship over their Internet communication, 7 tutors (63%) said they would like to have had face-to-face contact with their tutee at some point during the program.

Misperceptions

Challenge. One challenge in the present project was how to handle misperceptions between the students and the tutors. Students often identified technologically based problems as a reflection of their tutors’ capacity. One student believed his tutor was on drugs because the tutor kept sending the same message. In actuality the duplicate messages were the tutor’s approach to assuring the messages were received based on the complexity of the communication system and the tutor’s inexperience with Internet communication. Older adult tutors’ misperceptions of the students were also a challenge. One student who was minimally engaged in the program was advised by the tutor to seek counseling services for her personal problems.

Addressing this challenge. To address misinterpretations, tutors and students were provided alternative explanations or encouraged to ask their tutor or tutee questions. In regard to tutors, providing opportunity for Internet-based discussions concerning the program and communica-
tions might be helpful. Many tutors expressed a desire to talk with other tutors about their experiences with students’ work. For students, providing a time to discuss concerns would have been helpful, as students did not spontaneously bring concerns to the researchers running the instructional sessions. However, based on overheard comments, students had concerns about both tutors and the program. For example, the group with tutors thought they were the “dumb” group because they needed a “tutor”; a problem that was addressed only toward the end of the program.

Computer Skill Levels

Challenge. One barrier to Web-based tutoring programs is the computer skill levels of both tutor and tutee. Skills required include keyboarding and computing.

Addressing this challenge. Tutors received computer training in the initial training sessions. Continued instruction and support were provided during the tutoring sessions. One-third of the tutors had limited experience using their computers and required special assistance. One 80-year-old tutor had only used a computer for e-mail and never accessed the World Wide Web. Overall, only 3 of 11 tutors (27%) indicated that computer skills were a difficulty when tutoring.

Students’ keyboarding skills were assessed at program entry, and students were taught how to use the Web-based instruction site and the communication program. The preprogram ratings of keyboarding skills did not relate to students’ lesson success in either Web-based group (Meyer et al., 2002). No significant relations were found between students’ level of keyboarding skill and free recall measures at immediate or delayed posttests (Meyer et al., 2002). Overall, these findings suggested computer skills at the beginning of the program did not interfere with Internet instruction. Tutors noted, however, that the students often provided one-word responses and few used complete sentences. This may have reflected students’ keyboarding skill, even though keyboarding was not associated with overall program learning. As mentioned above, it may also be that the short responses reflected time limitations.

CONCLUSION

Intergenerational tutoring programs and academic progress can provide an important resource for schools as they face the challenge of
teaching students necessary skills and preparing students for standardized assessments. These programs can be provided without the expense, transportation, and scheduling difficulties often associated with face-to-face tutoring.

This paper has described the implementation of an intergenerational Internet tutoring program designed to help students improve their reading comprehension. The program was found to be successful in improving older adults’ and students’ reading abilities and students’ attitudes toward older adults, and both age groups’ self-efficacy (Meyer et al., 2002). Older adults’ benefits from training were maintained through their tutoring experience. Similar to face-to-face tutoring, tutors’ use of praise and scaffolding contributed to the programs’ success. Finally, positive relationships did develop between tutors and students.

Challenges faced in implementing the program included difficulties with server capacity, monitoring tutor-student communication, scheduling difficulties incorporating the program into the school curriculum and schedule. These issues were addressed with a second implementation of the Internet program where the instructional sessions were held during regularly scheduled class sessions; however, even in this setting, demands on the teacher’s time made attention to the program difficult. Challenges were also faced in regard to tutor-student interaction. Although relationships developed between tutors and students over the Internet, most tutors and students indicated they would like to have contact with each other.

As Internet-based programs develop, these challenges can be addressed and the use of the Internet will continue to be a promising tool for program provision, particularly for intergenerational programs.

REFERENCES


Middlemiss, W., & Meyer, B. J. (2002, November). *Intergenerational connections: One generation’s needs may be another generation’s resources*. Poster presented at the annual meeting of the National Council on Family Relations.


Received: 08/06/03
Reviewed: 10/19/03
Revised: 11/01/03
Accepted: 11/20/03