

“I learned that there’s a state called Victoria and he has six blue-tongued lizards!”

Pen pal programs encourage students to write and give them the opportunity to communicate with others from around the world.

“I learned that there’s a state called Victoria and he has six blue-tongued lizards!” Patrick, a fourth-grade student in New England, excitedly reported that he learned there is a state in Australia called Victoria and that his Australian pen pal has six blue-tongued lizards. Jenny learned about time zone differences: “And like when we’re on Saturday, they have Sunday.” Sue, a second-language learner, stated that writing to her pen pal was her favorite writing activity in school “because it’s fun, and sometimes you get to learn more about them, and you get to...not really meet people but get to know different people that are there and how they’re different from us.” Andrew enthusiastically wrote with a laminated picture of his pen pal’s class on his desk: “Hi anything new? Cause I have new things I’d like to tell you. In science, we are doing electricity we worked with batteries. We had a bmx biker come to our school. He did All kinds of tricks....”

The Internet pen pal program

The use of technology in classrooms is increasingly important. A U.S. Department of Commerce online publication (2002) entitled *A Nation Online: How Americans Are Expanding Their Use of the Internet* reported that 90% of all school-aged children use computers. Internet usage

doubles every 100 days (Samovar & Porter, 2001). Internet access in schools grew from 35% in 1994 to 95% in 1999, according to the National Center for Education Statistics (2000). School districts need to know specifically how computer usage affects student achievement. Such information provides rationale for computer-related purchases. Knowing how computer usage affects student achievement determines development and usage of effective districtwide, schoolwide, and classroom curriculum and instructional practices. One way classroom teachers can effectively use technology is to set up an Internet pen pal program.

Pen pal programs give students the opportunity to communicate with students around the world. The Internet pen pal program entails the classroom teacher setting up individual pen pals with another class using e-mail to facilitate communication. There are numerous websites available to aid teachers in finding another class interested in conducting an Internet pen pal program: Intercultural E-mail Classroom Connections (www.iecc.org), the ePALS website (www.epals.com), and the Gaggle website (www.gaggle.net) can be used to set up this type of program. On the ePals website, a paragraph is posted by the teacher explaining program needs, such as grade level, geographical location, and class size. The teacher waits to hear from other classes that are interested in participating in the Internet pen pal program. The teacher may also examine other postings and contact the teacher at that posting in order to find a suitable pen pal class. It is extremely important that the teacher ensure that the class is committed to consistent correspondence and that the participating teacher has both adequate computer access and computer

knowledge. Specific writing times need to be agreed upon prior to program implementation. The following questions need to be addressed by participating teachers:

- Should the correspondence be every week, every other week, or once a month?
- When are school vacations scheduled?
- What time of the year would be best to communicate with students from this country?

Some teachers have their students type their letters on the computer. Other teachers might prefer that students write the letters by hand first so that they or other students can edit them before students type them. Some teachers find it easier to have students use a teacher account or folder rather than individual student accounts on the pen pal websites. This way, all letters are placed in a teacher account and can be monitored for content before being sent to the other participating pen pal teacher's account as attachments. Return e-mails are printed and given to the students for their response. Teachers then e-mail the responses to the participating teachers' accounts. In some school districts, student identification is a confidentiality issue. In these cases, students may only use their first name or may use a pseudonym when communicating with their pen pal. Students learn and practice necessary skills required to use technology effectively in communication.

Projected technology and literacy needs

Projected workplace needs encompass using electronic discourse communities to solve problems, work collaboratively, and communicate effectively (Bruce, 1997; Smith, Mikulecky, Kibby, Dreher, & Dole, 2000). These issues must be addressed in our educational institutions in order to prepare students for entering the workforce. Leu (2000a) noted future literacy needs in our society and the subsequent relationship to technology. "Success will often be defined by one's ability to quickly locate useful information to solve important problems and then communicate the solution to others" (p. 760). When discussing future literacy needs, Smith predicted that technology will be a mainstay used in a vast majori-

ty of occupations. Problem solving with technology in a team setting will be required of most workers in the 21st century (Smith, Mikulecky, Kibby, Dreher, & Dole, 2000; Leu, 2000b). Effective communication skills will also be required. Mikulecky (Smith, Mikulecky, Kibby, Dreher, & Dole, 2000) wrote, "technology-supported individuals are expected to work and communicate across several different work communities" (p. 379). Present-day students need to learn computer usage and communication skills encompassing effective written-language practices. Electronic communication offers many lifelong and educational benefits.

What do we know about electronic communication?

Numerous authors and researchers have noted the advantages of electronic communication. Electronic discourse communities increase student motivation in written language tasks and expand students' audiences (Leu, 2002; Morrow & Gambrell, 2001). Karchmer (2001) conducted a qualitative study examining how the Internet influenced literacy. Data collection encompassed semistructured interviews and participants' reflective journals. In her study, elementary teachers reported improved motivation and written-language production by students when sharing their written work on class and Internet sites. Seven of the eight elementary teachers in this study noted increased motivation in student writing activities. Karchmer noted, "Although teachers did not explicitly state that writing was being redefined by technology, clearly there was a change as students' motivation to write increased when they published their work on the Internet" (p. 461). Expanding students' written-language audiences fostered written-language production.

Communicative intent is a motivator for student written work (Burniske & Monke, 2001; Valmont, 2003). Neilsen (1998) commented on the motivational impact of incorporating real-life experiences in the curriculum. She described a student high school pen pal program:

As they composed questions for their keypals and wrote introductions of themselves, their literacy enabled them to extend their reach beyond the school and the curriculum as they knew it. Soon worksheets on vocabulary were abandoned for a chance to write to a

real person they did not know and might never know, but who would write them back. (p. 136)

Problem solving is another important aspect of electronic communication. There is evidence of problem solving subsequently aiding higher-level thought processes (Daiute, 2000; Leu & Kinzer, 2000). Problem solving in the Internet pen pal program constitutes students making decisions on whether to comment, what to comment, and how to comment. These encompass the thought processes of writers before and during writing and play an integral part in producing authentic text and subsequent written-language acquisition (Charron, 2005).

Students problem solve in written-language activities when they choose a topic and decide specifically how to revise their text when writing (Hansen, 1998; Routman, 2000). While participating in the Internet pen pal program, students determine what their pen pal's intended meaning is in the pen pal letter. When lack of comprehension occurs, they write back asking questions for clarification. They evaluate what they are doing well in their writing and what they are not doing well based on their pen pal's comprehension of their writing (Charron, 2005). They also problem solve computer functions and determine what font or font color to use in their letter, as well as whether to include a border or picture insert. Problem solving occurs as students determine how to successfully use a variety of computer functions (Charron). Students also learn from one another through their pen pal correspondences.

Collaborative learning offers evidence of the social nature of learning (Faigley, 1999; Jonassen, 2000). Lankshear, Snyder, and Green (2000) noted the importance of the social nature of learning in connection with written-language acquisition. "The more transparently we embed specific learning tasks in meaningful social practices, the more likely it is that learners will grasp not only the operational aspects but the important cultural and critical dimensions as well" (p. 138). Communication is an authentic task, with written communication encompassing authentic text. Electronic communication positively affects students' motivation while expanding students' audiences. It also fosters written-language problem solving and collaborative learning. How teachers and students viewed

this Internet communication was examined in this study.

The Internet pen pal program study

The purpose of the study featured in this article was to examine, through the use of teacher and student interviews, how fourth-grade students and teachers perceived the Internet pen pal program. This study was conducted by the author in a New England school district and was part of a doctoral degree dissertation process partially supported by an International Reading Association Helen M. Robinson grant, as well as a New England Reading Association Durrell, Cooper, and Crossley research scholarship. The author contacted the district language arts curriculum coordinator who subsequently asked principals to determine schools with fourth-grade teachers who would be willing to participate in the Internet pen pal program. Two schools were selected, with two fourth-grade classrooms from each school participating. Class size was approximately 22 students per class.

Teachers reported to the researcher the students in their classrooms who had individual education plans and the students who were identified as second-language learners. Classroom teachers, 5 general-education students from each classroom, 8 second-language learners, and 14 students with individual education plans were interviewed before, during, and after participating in the Internet pen pal program. Interviews were recorded to ensure accuracy and were coded and analyzed using the NVivo program, a qualitative research program used for analyzing qualitative data. Teachers and students were asked

- to explain their perceptions of the Internet pen pal program,
- if they learned anything from their pen pals,
- if they thought their pen pals were polite when writing and if they thought about being polite when writing,
- if they needed to solve any problems while participating in the program, and
- if they would be interested in participating in the program in the future.

The following themes emerged from the teacher and student interviews: program strengths, program weaknesses, program learnings, program “netiquette,” program problem solving, program computer skills, and future program participation.

Specific study procedures

The Internet pen pal program was conducted for four months. The school system where the study took place consisted of approximately 13,000 students in 12 elementary schools, 3 middle schools, and 2 high schools. Approximately 5% of the students were classified as Limited English Proficient. Twenty-five percent of the students received free or reduced-cost lunch, and 15% of the students received Title I services. Approximately 4% of the population was Asian, 11% Hispanic, 3% black, and 82% white. Approximately 50% of the teachers had their bachelor’s degree, and the other 50% had a master’s degree. The following procedures were used in setting up and running the Internet pen pal program:

- The researcher (author) posted a message at the ePALS website three months before the study looking for fourth-grade classrooms in Australia in order to establish contact with teachers committed to following program guidelines. Four classrooms in the Melbourne, Australia, area were chosen for the project.
- The researcher explained to the teachers how the Internet pen pal program would be conducted.
- Study guidelines required that no personal information be transmitted that could directly identify the students.
- An informed consent form to be signed was sent home to all parents of the New England fourth-grade students explaining the program. This form stated that the researcher would be aware if a child was a second-language learner and if a child had an individualized education plan.
- The students wrote introductory letters that included information such as age, grade, and interests. The letters were written in the classroom. Each student wrote a letter every week. Students were instructed to use their best

writing practices when responding to their pen pals. Two special-needs students dictated their letters to their aide, which was deemed appropriate by the classroom teacher. Teachers filled out time sheets indicating the hour each week that was spent on writing. Teachers were allowed to have students write in any time period that best fit into their classroom schedule as long as the total time per week added up to one hour. Letter length varied—the only criterion was that students spend one hour weekly composing their letter. Even if students did not receive a reply from their pen pal on any given week, they still wrote for one hour that week to their pen pal. They might choose a topic of their own to write about or receive possible topics from the teacher as suggestions.

- Students in one project school took their letters to the computer lab, typed them on the computer, and saved them to a teacher folder. Students had access to their own computer in the computer lab. Teachers edited them for content and then sent the letters as attachments to the overseas teacher.
- Students in the other project school gave the letters to their teachers. The teachers gave the letters to the researcher on Friday. The researcher typed the letters as accurately as possible and sent the letters as attachments to the Australian teachers over the weekend. This procedure was conducted to see if there were any mediating factors connected with student computer usage. The researcher edited the letters for content. All student correspondences went into a teacher account rather than individual student accounts. No student had access to the e-mail address for the program at school or at home.
- E-mail replies were printed by the teachers in one school and given to each student for their written response. Students composed their responses in the classroom and then took finished responses to the computer lab and typed their letters on the computer, saving them to a teacher account. The teacher then checked the letters for appropriate content and e-mailed them to the Australian teacher as attachments.

- E-mail replies were printed by the researcher for the other project school and given to the teachers to pass out to their students for their written response. Written responses were collected on Friday, typed as accurately as possible on the computer by the researcher, edited for appropriate content, and e-mailed as attachments to the Australian teachers' accounts.

Teacher and student interview comments revealed Internet pen pal program perceptions. The following categories, in relation to the program, were developed from the interviews: communication, cultural learning, authentic audience, and motivation and engagement.

Communication

The Internet pen pal program facilitated communication through authentic tasks (communication) and texts (written discourse). Fourth-grade special-needs students, second-language learners, and general-education students all reported communication as a strength of the Internet pen pal program. Teachers reported that this communicative function motivated students to write by setting a purpose for their writing. Continued motivation was noted as students received and responded to their pen pals' letters. Steve (all names are pseudonyms) commented, "The kids are from Australia, and it's kind of cool like they write us back because they're like from far away from the United States." Patrick noted, "I liked everything about it [the pen pal program]. It was so fun. I liked how we get to talk back and forth with each other, and we get to tell things that happened to us like do we got pets and stuff."

Burniske and Monke (2001) wrote, "Chief among the classroom practitioner's responsibilities while creating global, telcollaborative projects is the establishment of a forum for student expression, a forum that nurtures exploratory discourse rather than the recitation of homogenized thought" (p. 57). The Internet pen pal program provides a forum for this kind of expression. Students benefit when districtwide and school curriculums integrate this type of authentic writing with other written-language curriculums. Too often, students are unmotivated to write because of decontextualized and isolated, meaningless writing tasks being the core of written-language curriculums and in-

structional practices. The opportunity to learn about another culture gave students a compelling reason to write.

Cultural learning

The Internet pen pal program facilitated learning about different cultures. Teachers and students reported learning about the Australian culture, language, and animals while participating in the program.

Kerry discussed language differences. "They write like, 'Do you play sport?' And they call...math 'maths.'" Anne learned what party pies were: "It's a little pie, and it has a bunch of meat in it." Russ stated that his pen pal talked about getting a pen license: "It's like a license to write with a pen." Peter, a special-needs student, said, "I didn't know they had great white sharks in Australia." Students learned about the differences in the seasons of the year as well as time zone differences in Australia as compared to the United States. Students also learned about Australian students' activities and traditions. Maureen, a special-needs student, stated, "I asked if they celebrated Mother's Day and yes, they do." John, an Australian student, wrote to his American pen pal,

Dear Dylan,

On Friday we went to the wild action incursion. There were Australian animals and we all got to hold them. There were snakes, frogs, crocodiles, turtles, lizards, possums and a bird called a lorikeet. I can't remember the other ones. I got to have a snake around my neck it was cool. My teacher held a snake. She was scared. Would your teach be scared? Do you like snakes? I know I do. Me and my family are going to see Harry Potter 3. I am a big fan of Harry Potter are you?

From your pen pal,
John

Au (2002) noted, "People may see the world differently, in part, because of their interactions within one cultural group rather than another" (p. 393). Social constructivism theory (von Glaserfeld, 1995), as well as Vygotsky's Theory of Language Development (Vygotsky, 1934/1986), states that knowledge is actively obtained through social interaction and is constructed by thinking individuals as they interact with others. Social studies curriculums used throughout the United States attempt to increase students' worldwide cultural understandings.

The Internet pen pal program is a way to increase these cultural understandings while using an authentic writing activity. The program supplements the social studies curriculum by increasing cultural awareness while simultaneously promoting interdisciplinary instruction. Reading, writing, and cultural learning occur simultaneously. Teachers and students also reported writing to an authentic audience as a positive aspect of the Internet pen pal program.

Authentic audience

The Internet pen pal program positively affected students' written-language production. Communicating with a real person was motivating. The students reported that they liked "meeting" new people and "talking" with them.

Teachers and students noted audience awareness in pen pal letters. Students noticed whether their pen pals were polite when they wrote their letters, and most students stated that they thought about being polite when writing. Students discussed pen pal etiquette issues when interviewed. One student explained that she detected the quality of "voice" in her pen pal's writing. She also pretended she was the audience of her own letters when writing to her pen pal. Marilyn explained, "It's like when you're reading it [pen pal's letter], it's like she's having fun talking.... Sometimes I act like I am her and read it" (referring to her own writing of a pen pal letter). Audience awareness is often discussed with students as part of the writing process used in numerous school districts nationwide. Harp and Brewer (2005) noted,

It is important for young writers to see their writing reach its intended audience and to get feedback from that audience.... Children need frequent constructive feedback on their writing from a variety of audiences if their writing is to improve. (p. 317)

Students received feedback from their pen pals concerning any difficulty comprehending the written language. Students answered their pen pal's questions to clarify written-language meaning in subsequent letters. For example, Danyelle wrote,

Dear Cade,

You think I was bit by a Chinese fighting fish? No, I just had a lot of fish. Yes, I did get the photo. No, I did not keep my fish in separate bowls...when I just got the fish, we kept the fish in the bag and then put the fish in a dif-

ferent bowl to see if they are sick. If not, we put them in the same bowl. Are you good at math? If so, then answer this. If it is 1:30 here, then what time is it where you live? Hint: Add 16 hours.

Sincerely,
Danyelle

Students problem solve language issues related to their pen pal's culture by asking and responding to questions in the letters. Ms. Witter explained, "My kids...had something to write back and ask them about, because even their terminology, their phrasing, is so different than ours.... That always raised questions."

Dear Bianca,

What are net ball and party pies? I have brown hair and eyes. I wanna be a gym teacher. I love the beach. I wish we could meet each other we like some of the same things. Do you have a computer? If you do, then do you have Internet? I do. g2g

Bye,
From your new best friend,
Caitlin

P.S. g2g means got to go

The Internet pen pal program focuses on meaningful writing and enables students to receive feedback on their writing. Not being able to understand something in a pen pal letter prompted students to write to one another and ask what was meant in the written correspondence. Donna, a second-language learner, asked for clarification from her pen pal: "Because the last time she said, 'I have a favorite book and my sister the supermodel likes it too.' And I said, 'What? Is your sister a supermodel or is the book called Supermodel.' She said the book was called, *The Supermodel*. It's about Mary-Kate and Ashley [Olsen]." Kay said, "I didn't know what a budgie is and she told me what it was: It's a bird." Jenny reported that sometimes her pen pal asked her what she meant by things. "Like I told her the Statue of Liberty...like they don't have a Statue of Liberty there." She explained to her pen pal what the Statue of Liberty was. This type of activity prompts students to reread their writing to ensure that their pen pal will understand them. A student usually notes unclear writing by responding with confusion in a response letter. This may draw attention to language differences or general written-language patterns. The bottom line, however, is that

it increases student attention to meaningful, clear writing and audience awareness. Both reading and writing involve the construction of meaning. These should be important aspects of districtwide and classroom written-language curriculum and instructional practices. The desire to communicate clearly with pen pals was a source of motivation.

Motivation and engagement

The Internet pen pal program motivated students to write by being a fun activity. All of the teachers and almost all of the students reported they would like to participate in an Internet pen pal program again because it was fun. Ms. Anderson commented about a second-language learner in her classroom:

M came not speaking any English.... I used to sit down with her, and we'd write it [pen pal letter] together.... Some days I just wouldn't get to her because someone else asked me a question or someone asked me to do something.... She writes and writes. She writes sometimes more than the other kids.

Teachers reported the Internet pen pal program promoted writing practice. Ms. Anderson said that she liked the fact the students were writing every day, or at the least three out of five days of the week. "I like to see them having that time to get their thoughts on paper... I think that's important. I liked that they had that extra time to write."

Ms. Talbot discussed student engagement in relationship to the Internet pen pal program. "Nobody ever went, 'Oh, we have to write another letter?' Nobody ever did that." She commented that the program motivated even the students who struggled with written-language activities. Ms. Snyder noted that students were more motivated to write immediately after receiving their letters. When students had a choice between writing to their pen pal or writing in response to a prompt, she said they were much more likely to want to write to their pen pal. "They're giving and receiving, not just giving and getting a grade."

The computer was a motivating factor for some special-needs students and some second-language learners in the program. The spell and grammar check feature aided them with their writing. Kamil, Intrator, and Kim (2000) noted that increased motivation is the mainstay of research on computer usage

in classrooms. Students used numerous computer functions while writing their letters, such as changing font, changing print color, inserting borders, and inserting pictures from the computer. Teachers and students reported improved typing skills as the program progressed. Final interview analyses indicated no mediating factors connected with the computer when examining how teachers and students perceived the Internet pen pal program. Writing letters by hand versus typing letters on the computer remained an issue of personal preference.

Becoming "computer literate" should be a part of districtwide curriculums and school instructional practices. Although the world of electronic resources is rapidly changing, being able to type thoughts on the computer and use other computer functions are important skills for students.

Final thoughts

Teacher and student comments indicate that the Internet pen pal program facilitates communication through the use of authentic tasks and teaches students about different cultures. Enthusiasm generated by the program translated into student written-language production. Special-needs students, second-language learners, and general-education students reported enjoying writing to an authentic audience. The program facilitates problem solving and supports critical thinking in written-language acquisition and the social nature of learning is evident in the correspondence between pen pals.

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