DOCUMENT RESUME

ED 432 277 IR 019 647

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TITLE Extending Preservice School Experience through Telementoring.
PUB DATE 1999-03-00
NOTE 7p.; In: SITE 99: Society for Information Technology & Teacher Education International Conference (10th, San Antonio, TX, February 28-March 4, 1999); see IR 019 584.
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College School Cooperation; *Computer Mediated Communication; *Computer Uses in Education; Cooperative Programs; Elementary Secondary Education; Higher Education; Learning Activities; material Development; *Mentors; Preservice Teacher Education; Teacher Developed Materials; Teaching Methods; Teleconferencing; World Wide Web
IDENTIFIERS Web Sites

ABSTRACT

This telementoring project paired 23 preservice teachers and 13 inservice teachers in an idea exchange and in curriculum materials development. After an initial introductory e-mail exchange, pairs identified a topic for a thematic unit or a literature focus unit that the classroom teacher was currently teaching or developing for the future. Online activities continued throughout the semester related to the chosen unit; e-mail, the netWorkPlace discussion area, and a World Wide Web site were utilized. Data were collected using questionnaires, interviews, e-mail exchanges, and netWorkPlace interactions. Findings include the benefits to both teachers and preservice teachers and suggestions for developing a successful telementoring exchange. Suggestions for further research are also included. (Author/AEF)

Extending Preservice School Experience through Telementoring

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Abstract

This telementoring project paired preservice teachers and inservice teachers in an idea exchange and in curriculum materials development. E-mail, a discussion area, and a Web site were utilized. Findings include the benefits to both teachers and preservice teachers and suggestions for developing a successful telementoring exchange. Suggestions for further research are included.

NCATE/ISTE standards (ISTE, 1998) require that students have a working knowledge of telecommunications and its use in the classroom. The State of Illinois and NCATE standards recommend more field based training such as Professional Development Schools (PDS) for preservice teachers. Although Illinois State continues to increase the number of PDS sites, increased field placement is difficult given the numbers of elementary education majors (over 2,000). This research examines how telementoring can provide introductory contact with K-12 classrooms as well as improve telecommunication skills.

Telementoring is defined as mentoring a group of novices through telecommunications by practitioners (Wrighton, 1993). Telementoring in this project is defined as mentoring preservice teachers through Internet by practicing teachers.

This is a follow-up study to the pilot study conducted fall 1997. A survey of supporting literature is presented in that article (Brehm, 1998). Based on students' and teachers' suggestions from the pilot study, modifications were made in the recruitment of mentors, building community, and the types of mentoring activities planned. Community between preservice teachers and mentors was built through pairing of a teacher with two students, an introductory e-mail exchange, the development of a collaborative project, and a mentor visit to the campus classroom.

After the initial introductory e-mail exchange, pairs identified a topic for a thematic unit or a literature focus unit that the classroom teacher was currently teaching or developing for the future. On-line activities continued throughout the semester related to the chosen unit. They also participated in the netWorkPlace (nWP) discussion area.

Methodology

Participants

Twenty-three preservice teachers in a language arts methods class and 13 inservice teachers representing either school districts participated in the research. The language arts methods class is taken in a block with three other methods classes usually during the junior year. Four weeks into the semester, students go out into local schools for four weeks full time. They then return to the classroom for the second half of the semester.

All participating teachers had been enrolled or were currently enrolled in graduate classes taught by the author. Eight teachers chose a $100 stipend from a HECA grant to participate, one chose one hour university credit, and four chose mentoring as a project in a doctoral class in which they were enrolled.

All student and mentor teachers had access to e-mail. Five mentor teachers from one school had access only through a school address on one computer located in the school library. Two of these teachers obtained individual e-mail addresses during the semester. The remaining eight teachers had convenient access from their classroom or home computers.

Data

Data were collected using questionnaires, interviews, e-mail exchanges, and netWorkPlace interactions. Questionnaires with Likert ratings and open-ended questions were administered to students at

the end of the class. They also completed outside of class an anonymous summary of their thoughts on the mentoring project. All thirteen participating teachers completed questionnaires and the researcher interviewed eleven.

The mean for each Likert question was calculated. Open ended questions and interviews were read and categories determined from the content. Categories were developed independently from students and teacher data. Categories were then described and frequencies in each reported.

Procedure

Teachers were assigned two preservice teachers who were enrolled in a Language Arts methods class. They communicated through e-mail and participated in a Web discussion. The discussion software used was netWorkPlace developed by NCSA at the University of Illinois. This software was chosen because it is organized in a building metaphor, which is easy to navigate and use.

Two students were assigned to each mentor by the author who matched student grade level requests as closely as possible. Due to the number of volunteer mentors, three mentors had only one student. Two weeks into Spring Semester 1998, students send get acquainted e-mail messages and their mentors responded. This was designed to begin building community between mentor teacher and his/her students. Students also ask for a list of several units that the teachers taught. Students choose a unit for which they wanted to develop a lesson plan. The student and the mentor determined goals for the unit together. Due to the time shortage, most mentors just supplied goals. Students spent weeks five through eight full time in local schools (clinicals). After Spring Break, they returned to the campus classroom to complete the semester. Each student located Web sites that fit with the teacher's unit and e-mailed those sites to his/her mentor teacher. Each student or student pair developed a lesson plan to fit the mentor's classroom. The mentor teachers provided feedback on the lesson plans, which were then turned into the instructor for grading.

Results

The data are reported beginning with the general evaluation of the project, proceeding with individual parts of the project, and concluding with suggestions from both the students and teachers. Results from the Likert scale questions are reported on a scale of one to five with one being the best rating. Data summaries are reported in the percent of responses of the group.

At the end of the semester, students were asking to rate the components of the class on a five point Likert scale anonymous questionnaire with one as the most useful. Twenty-one students of the 23 enrolled in the class, completed the questionnaire. Some of the components including the mentoring parts are shown in Table 1. Students rated all parts of the mentoring project and instructor presentations about average. Clinical experience consisting of four weeks in a school was rated as the most valuable part of the class.

Category	Rating
Clinical Experience	1.1
Textbook	2.3
Mentor Lesson Plan Feedback	3.1
Mentor e-mail	3.2
NetWorkPlace	3.3
Instructor Presentations	3.3

Table 1: Student numeric ratings of class instruction including mentoring activities on a questionnaire.

Students were also asked to reflect on the mentoring process including what they liked and disliked and suggestions for future projects. These reflections were written outside of class and were anonymous although some students choose to include their name. The overall ratings of the project fell into four categories of responses. The four categories shown in Table 2 emerged from the data. Figure 1 explains each category and lists sample student comments for each category.

Category	Number	Percent
Enthusiastic	9	43
Good	5	24
Fair	3	14
Poor	4	19

Table 2: Student overall evaluation of Telementoring Project from self-reported reflections.

Sample responses characterized as enthusiastic are as follows:

Beneficial
Enjoyed
Good idea – I learned a lot.

Responses characterized as good were generally positive but had a few frustrations as follows:

Good idea but some [corks] to be worked out
Overall mentor experience worked pretty well

Fair responses liked the idea but didn't gain much from the mentoring as follows:

Great idea but not much feedback so not useful
Needs a lot of revision

Poor responses were totally negative about the project as follows:

Waste of time
Did not like. Did not gain anything

Figure 1: Explanation of categories of student satisfaction with the mentoring process

Teachers completed an anonymous open-ended questionnaire on the telementoring project. Most choose to include their name on the questionnaire.

Seven teachers (53.8%) reported that both students had positive attitudes and were enthusiastic, two reported (15.4%) one student was enthusiastic but the other student did not correspond as often and was less involved. One reported (7.7%) that she didn't feel that her student "put much time or effort into her project". Three (23.1%) did not report student attitudes.

Teachers were ask whether or not they would be interested in mentor another semester. Eight (65%) responded that they would, four (30.8%) responded possibly, and one (7.7%) did not respond. The ones who responded "possibly" cited time and the actual presence of a preservice teacher from another university in the classroom. One said that her "junior block student from another university brought gifts and she missed that payback and the personal contact with the students that she was mentoring". One, who responded "yes", said that she would continue if there were some kind of compensation for the time that she invested. Of the eight who answered "yes", seven continued mentored during the fall semester 1998. The four possible and the one no response answers were from mentors who had access only through the school library.

On-line Interactions

The on-line interactions discussed in this section are nWP, e-mail, lesson plan activity, and building a virtual community. Students and teachers both reported good feeling about netWorkPlace (nWP). A student described nWP as a "Place to share ideas". Seven students made good comments while no bad comments were recorded. Five students mentioned that they liked the variety of ideas and perspectives on nWP. The following two quotes summarize student comments: "nWP provided many perspectives that the instructor alone could not provide" and "It was neat to see different ways that people answered my question". Two students who reported limited e-mail feedback from mentors were included in the group that made positive comments about nWP.

	Number	Percent	Number of messages	
Participated	9	69.2	Mean	Median
Read only	2	15.5	4.4	3.5
Did not Participate	2	15.4		

Table 3: Mentor teacher participation in netWorkPlace.

Eleven teachers (84.6%) reported positive comments such as "loved reading responses". Four (30.1%) reported spending extended amounts of time reading messages such as, "Got hooked when I accessed the site [netWorkPlace discussion] and began to read several items". Two teachers (15.4%) responded that they liked being able to access parts of the discussion that interested them rather than having to read all of the comments. Six (46.2%) reported using ideas posted on nWP in their classroom. Four teachers (30.8%) reported time as a factor limiting participation. The median of 3.5 interactions per teacher is more representative than the mean of 4.4 since one teacher participated thirteen timesStudents participated only as required except for two.

All teachers and students used e-mail to communicate and complete the requirements for the project. Five students (23.8%) reported using e-mail to discuss professional topics and ask questions not pertaining to this class. The five teachers (38.5%) who had limited computer access reported using it only as required, five (38.5%) reported using it more than required, and three (23.1%) did not report frequency of use.

During the revision stage, mentors reviewed student lesson plans. Six students (28.6%) reported receiving good professional feedback, two (9.5%) reported not much feedback, and 13 (61.9%) did not comment on feedback. Four students said that it was difficult to write a lesson plan for a classroom and students that they didn't know. Most teachers were enthusiastic about the lesson plans and the fresh ideas that they presented. Six students reported that they actually wanted to teach their lesson in the mentor's classroom.

Five teachers reported using the Web sites in their classrooms. One reported that her students couldn't find Web sites on the topic so she provided them. Students had received training on searching the Web as part of their class. The author assisted two students in defining keywords and choosing search tools to find appropriate web sites.

The initial e-mail exchanges and unit collaboration were designed to build community between students and mentors. NWP provided a place for sharing for the entire virtual community. Bringing the mentors to campus to present with their students at the conclusion of the semester was designed to be the culminating activity for the semester. Six students (28.6%) wanted to meet or at least see a picture of their mentor at the beginning of the semester. Three mentors (23.1%) voiced the same desire to "put a face with a name". Two students (9.5%) suggested an alternate means of communications such as the phone. One student (4.5%) liked the mentoring idea but just wanted to work in person with her mentor.

Barriers

Seven teachers (53.8%) reported time to be the biggest barrier to successful participation in the telementoring project. "Time prevented participation as much as I might have liked." Teachers from one school, who had access only after school from the school library, five (38.5%) reported that access was a problem.

Initially in class students complained about the length of time that it took to receive a response through e-mail. They wanted an immediate response. By the time that evaluations were completed at the end of the semester, only two students (9.5%) cited response time delays as a problem.

A few technical problems did occur. Some problems such as changed e-mail addresses and typing errors occurred at the beeinning of the project. The author called two mentors to verify e-mail addresses. The library aide at the school with only one e-mail address initially failed to distribute e-mail messages to mentors. This was discovered and corrected after a call from the author. One school district had temporary problems with their e-mail system. By two weeks into the project, all e-mail addresses were corrected and all contacts had been made.

Suggestions

The largest number of suggestions from both teachers and students was a call for stricter guidelines for lesson plans. Seven students (33.3%) and eight mentors (61.5%) suggested that more structure and guidance was needed to develop, revise, and evaluate the lesson plan. An example of teacher comments: "I needed to know specific expectations. The syllabus was not enough. I didn't know my part."

A student suggested that students and mentors be given a packet with an description of the lesson plan project and a rubric by which it would be graded.

Two students suggested that they be able to choose their own mentor so that their interests and grade level would more closely match. No other student suggestions occurred more than once.

Three mentors suggested the addition of chat room to allow real time interaction and quick responses to student questions and concerns. Two suggested that students be given a choice of options for their project such as creating a web page, WebQuest, or writing a lesson plan.

Discussion and Recommendations

This discussion is meant to both reflect on the data and to provide guidelines for people planning a mentoring project. In both telementoring projects that the author has conducted, there has been a disparity in overall ratings between numeric ratings using a Likert scale and self reported benefits in a narrative. Both reporting forms are anonymous allowing the same level of input without consequences. One possible explanation is the student perception that too much time was spent on technology or that students do not see the connection with language arts. The semester following this research, a former student stopped the author on campus to tell her how beneficial the telementoring was for her and that she was still e-mailing her mentor. She said that she didn't realize at the time how much she had benefited.

On-line Interactions

The four on-line interactions discussed in this section are nWP, e-mail, lesson plan activity, and building a virtual community. During both open discussions of a group of mentors at the end of the project, they emphasized how beneficial nWP was for them. One teacher commented that she couldn't tell who were students and who were teachers. Several other teachers agreed but suggested that comments from both were beneficial. Two teachers suggested on the questionnaires that the mentoring process be more of a learning experience for both groups rather than the mentor on the high end and the student on the low end. These finding support collegial rather than teacher/student relationships.

The author has found that the closer the content from a discussion area is tied to class work, the more beneficial it is for students. The instructor needs to monitor the discussion closely and include information from it at relevant points in class and encourage discussion of differing opinions that are posted. Students were urged to use information from nWP in presentations and written assignments such as the final examination. Used in these ways, it serves as another current resource for the class and as a connection between the real world of teaching and classroom theory.

E-mail must be easily accessible for both students and mentors. The problems of just one address per school have been described in this paper. A suggested requirement for all mentors is that they have private e-mail addresses and convenient access to their accounts.

Because of the almost overwhelming number of e-mail messages received by the instructor in this type of project, it is important to organize incoming message from the beginning. Create mailboxes or folders for each activity within the project. After each message is read and a reply is send, file the message in the appropriate place so the it can be retrieved as necessary or used for research data at a future date. Create a filter so that all messages from a project or class initially go into a folder for that class. Instruct the participants to include the class number or other identifying information as part of the Subject line so each message can be filtered into the proper mailbox.

Acknowledge all assignments promptly. E-mail is not perceived to be as reliable as the Post Office and people do not feel as secure using it. Encourage students using Eudora to choose the return receipt option. An automatic receipt relieves student anxiety and removes some of the load from the instructor.

When either a mentor or a student claim to have sent information that the other did not receive, the author suggests that both people send the instructor or moderator a carbon copy of the next several exchanges. This is to make sure that the messages did arrive and to give credit to the student. In the author's experience, this excuse occurs most often when assignments are late. This simple tactic removes the instructor from the need to determine who is right and alerts students that it is not a viable excuse.

The lesson plan was the most problematic activity of the project. A description of the lesson plan assignment with due dates was in the syllabus given to the students, e-mailed to the mentors, and posted on

the class web site. Although the anatomy of a lesson plan was discussed in class, the students were not given a specific form since the preferred form varies among instructors and classroom teachers. Mentors were instructed to give feedback as to how the lesson would work in their classroom. As reported in the data section, more detailed instructions and a rubric are suggested to make on-line activities go smoothly.

The author initially suggested that the mentors participate in the evaluation of the lesson plan in addition to providing feedback for the students. They responded that they did not want to be involved in the grading of the students. In most cases, the lesson plan was a good one and the mentors gave constructive feedback. In a few cases, the lesson plan was hastily written and not well developed or inappropriate for the classroom. Some mentors reported when interviewed that they were hesitant to give negative feedback to the student even though they felt that it was deserved. This placed the instructor in the awkward position of grading down a lesson plan that the mentoring teacher had said was acceptable. Another problem was that a few mentors gave very little feedback.

This lesson plan experience exemplifies the need for extra structure in distance education projects. The ideal approach is for the students, mentors, and the instructor to develop a rubric for assessing the lesson plan perhaps using nWP or a similar discussion or chat area. A sample rubric could be posted on the class Web site as a starting point. Time presents a problem in collaborative distance projects. Regardless of how it is developed, there needs to be a rubric to evaluate the lesson plan or other on-line assignments.

Utilizing the class Web page as a location for detailed information on assignments, a link to the discussion area, and e-mail to the instructor facilitates access. Students accessing the discussion group from the campus labs must carry a disk or enter the address of the discussion area since bookmarks or favorites cannot be saved on lab computers. With class Web site access, the student then needs to remember only one address to access all parts of the project.

A feeling of belonging to a virtual community is necessary for maximum satisfaction. Several ways have been presented in this paper. Suggestions from participants indicate that the face-to-face meeting should be at the beginning rather than the end of the project. An alternative might be the posting (if the site is closed to the public) or exchanging of digital pictures at the beginning of the project.

Implications for Future Study

Several issues arose from this research that need further study. Students report that some teachers are better mentor that others. What are the characteristics of a good telementor? The experience with the lesson plans points to the following question: Should the coordinator of the project be the instructor or a moderator not responsible for the evaluation of the students?

Mentor teacher attitudes were excellent but students reported less satisfaction with the mentoring process. How can the mentoring be structured to create less stress for students and improve their perceptions of the project?

The pilot project was only a discussion on nWP. While this project involved more interactions and connections between students and their mentors it was perceived by some students as focusing too heavily on technology. The question that follows is: What is the optimum amount of interaction for a project and what technological components are the most effective?

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