# DOCUMENT RESUME

IR 017 723 ED 392 432

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Is the Medium the Message? Comparing Student TITLE

Perceptions of Teacher Responses via Written and

E-mail Forms.

PUB DATE 95

NOTE 5p.: In: "Emerging Technologies, Lifelong Learning,

NECC '95"; see IR 017 705.

Reports - Research/Technical (143) --PUB TYPE

Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

Assignments: \*Computer Mediated Communication; **DESCRIPTORS** 

> Computer Uses in Education; Critical Thinking; \*Electronic Mail; Evaluation; Feedback; Higher Etucation; Preservice Teacher Education; \*Student

Journals; Student Motivation; \*Teacher Student

Relationship; \*Teaching Methods;

Telecommunications

State University of New York Buffalo **IDENTIFIERS** 

### **ABSTRACT**

Telecommunications in the classroom helps transform familiar types of assignments into new forms, increasing students' motivation while extending opportunities for critical thinking. This goals of this study were to increase apprentice teachers' technology use and evaluation skills while determining the value of e-mail communication in facilitating those processes. Participants were secondary English Education majors at Buffalo State College (New York), enrolled in the Methods for Teaching English course. All students were required to complete regular self- and course-assessments to accompany their reading logs and were offered the choice of forms: the traditional notebook-style handwritten journal or e-mail. During the fall 1994 semester, 13 of the 27 students chose to use e-mail; students received ongoing feedback, explored teaching concerns through writing, and developed their self-assessment skills by means of a continued written "dialogue" with the instructor. The relative immediacy of e-mail communication, unlike the handwritten documents submitted weekly by non-participants, allowed the students and instructor to participate in daily discussions and offered a means to communicate as concerns arose. Data accrued from the study suggest that an e-mail journal helps students synthesize their learning and develop increased self-assessment skills beyond that of traditional journaling. The project also allowed the instructor to receive a more comprehensive understanding of the students' concerns and perceptions and to assess her work through such feedback. (AEF)

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# Is the Medium the Message? Comparing Student Perceptions of Teacher Responses via Written and E-mail Forms

by Nancy Deal

Paper presented at the NECC '95, the Annual National Educational Computing Conference (16th, Baltimore, MD, June 17-19, 1995.

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# paper

# Is the Medium the Message? Comparing Student Perceptions of Teacher Responses via Written and E-mail Forms

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# Key words: e-mail, teacher education, telecommunications

# **Abstract**

This study addresses students' application of educational technology and to encourage self-assessment and critical thinking by integrating the use of electronic mail to gauge the development of methods students in their capstone course prior to student teaching. The project aimed to increase apprentice teachers' technology use and evaluation skills while determining the value of e-mail communication in facilitating those processes.

# **Paper**

The continuing growth of educational technology use in American public schools has inspired investigation of its impact on both students and teachers. Although technology use is increasingly being integrated into K–12 classrooms, recent studies suggest that preservice teachers have little familiarity or experience with computers or educational software to prepare them for teaching in the public schools (Beaver, 1992). Other studies recommend using telecommunications as a rewarding introduction to technology infusion into teacher preparation courses. Telecommunications in the classroom helps transform familiar types of assignments into new forms, increasing students' motivation while extending opportunities for critical thinking important to successful teaching (Schrum, 1988; McLaughlin, 1991).

This study was designed to address both important issues—to expand students' practical application of educational technology and to encourage self-assessment and critical thinking—by integrating the use of electronic mail as a means to gauge, through reflective journaling, the development of Methods students in their capstone course prior to student teaching. The goals of the project aimed to increase apprentice teachers' technology use and evaluation skills while determining the value of e-mail communication in facilitating those processes.

The participants in the study were secondary English Education majors at Buffalo State College, enrolled in the Methods for Teaching English course required of all majors the semester before student teaching. Although all students enrolled in the course were required to complete regular self- and course-assessments to accompany their reading logs, they were offered the choice of forms: the more traditional notebook-style handwritten journal or e-mail communication. During the fall, 1994, semester, thirteen of the twenty-seven students enrolled in Methods chose to complete their assessments through e-mail (the e-



mail component was only part of a larger effort by the College's education faculty to increase the use of technology with our students). Students received on-going feedback, explored teaching concerns through writing, and developed their self-assessment skills by means of a continuing written "dialogue" with the instructor.

Unlike the handwritten documents submitted weekly by non-participants, the relative immediacy of e-mail communication allowed the students and instructor to participate in day-by-day discussions of their experiences and offered a means to communicate as concerns arose. Guidelines intended to chart students' sense of their individual development within the context of the course and to reflect on their experiences via the telecommunication process; the parameters aimed to discourage generalized or insubstantial messages and create ownership for each communicator (Waugh, Levin, & Smith, 1994). At the end of the semester, participants were asked to complete an anonymous questionnaire concerning the value of the experience as a course component.

The data accrued from the study strongly suggest that an e-mail "journal" helps students synthesize their learning and develop increased self-assessment skills beyond that of traditional journaling. As important, the instructor received a vastly more comprehensive understanding of the students' concerns and perceptions of their Methods experience. The correspondence not only allowed increased feedback before and after formal class meetings but, perhaps most important, helped recreate the student-teacher relationship, transforming evaluation into a mentoring process important for fostering beginning teachers (Glanz, 1993). Additionally, e-mail provided a relatively "easy" and rewarding transition into technology use—even for self-described "technophobes."

Both the qualitative and quantitative data support the use of e-mail "journals" to supplement teacher preparation courses for a variety of reasons. Attempting to provide, or even summarize, a semester's correspondence with thirteen student, however, cannot capture the richness of their insights and growth. As other research has indicated, the pseudo-anonymity offered by the e-mail medium created a much freer and expressive venue for students to reflect on their educational experiences (Rivera, et al, 1994). At the same time, students perceived the feedback they received as more personal than handwritten comments, creating more extensive and responsive messages from both sender and receiver. As one student indicated after a course review: "I like the e-mail letter format. It makes for a more personal approach, which is what this project needs" (Tom). Unlike assessments submitted in written form, e-mail messages regularly began with a salutation similar to that of a letter ("Hi!" "Hello," "Greetings," "Dear Dr. Deal," etc.), indicating students' sense of a personal correspondence and interaction provided by e-mail.

Besides the heightened sense of personal communication, the progress of the students' correspondence strongly illustrated students' concern for feedback and immediate responses to their messages, not expected from the scheduled weekly submissions of work: "Hi. I didn't get a reply from my e-mail today... I'm worried about whether you got them or not (Tom); "This is not this week's entry yet, it is just an answer to the question you asked me [on the previous response]. .." (Melissa); "Did you not get me last message, or have you just not responded yet?" (Kathy). Additionally, occasional problems with the College Vax interfered with transmission of some messages, causing students to worry about receiving replies: "I hope that this means you got my message. ..." (Kathy). Even the problems inherent with technology use seem useful for students to experience: to extend instructional facilities requires additional effort. Several messages suggest that the study participants remained undaunted about working with computers, even when the "system" failed to work as expected: "This is a little bit different from the regular program that I am used to using. I am going to try and send this now. This is neat!!!" (Eileen).

In fact, discussion of the electronic medium was often part of the students' and the instructor's dialogue. The exit survey revealed that only 25% of the study participants had ever used e-mail before; although sometimes frustrated with the "glitches" inherent in technology use, all new user were proud of learning and regularly using the new skill: "Finally! I got into the system and I'm actually accomplishing something on a computer" (Tom); "My experience with e-mail has been one of my first introductions to the world of technology... I was happy to learn that sending e-mail was so simple, though it took me several assessments to remember all the steps..." (Tanya); "This is the first time that I have ever used e-mail. I hope that it is done correctly" (Kathy); "I hope that me messages reached you... If I miss hitting the return key, the line will break up and the messages may not reach you. But from your response, I see that you did read it. I was so relieved that you had..." (Eileen).

The project also allowed the instructor to assess her own work by receiving more immediate feedback concerning the individual course sessions. The sheer length of the e-mail messages far exceeded the typical 1-2 page evaluations submitted by non-participants. e-mail communication gave increased and deeper insight into students' classroom experiences during Methods as they gave suggestions and provided feedback conversationally: "This week I want to discuss the unit plans. . .! didn't think it was going to be as hard as it" (Tony); "One thing I didn't like about last class was the knit-picking [sic] of the lesson plans. . ." (Tom). Such comments helped the instructor either re-assess the value of particular course components and techniques, or provided opportunities to offer further explanation about the importance of certain assignments and lessons.

The correspondence also created a venue for students to express their anxieties and yet "coach" themselves through fears: "I understand this commitment [to teaching] and have honestly been humbling myself with this truth. As a matter of fact, I have greatly tempered my enthusiasm and seem to have instilled a certain seriousness about the field" (Matt); "I am filled with personal doubt about whether I want to teach" (Tom); "I often question my competence. Am I too shy to be a teacher? What is my philosophy?" (Tanya); "... the thought of standing up in front of students. . .scares me" (Kathy). e-mail allowed the instructor to provide encouragement and advice more extensively and individually in response, helping students directly with long- and short-term decisions about teaching: "I thought [high school] would be a better level to teach but... you thought that I would be a great middle school teacher. It's not that middle school scares me but sometimes I feel it would be more difficult to prepare for this level" (Tony); "I did a great thing yesterday: I quit my job. What better way to be a go-getter [like

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you suggested] than to get rid of the thing that weighs you down" (Tom).

The participants were unanimously positive about their role in the project and the value the journals had for their experience. As one of the most thoughtful and analytic users noted in a self/course evaluation, "e-mail can connect students to a world of people and ideas. . . e-mail can be a wonderful educational tool if students are encouraged to become active learners" (Tanya). The affective responses gathered from the anonymous exit survey about the project also revealed students' positive understanding of e-mail as an important educational technology; "An interesting, excellent learning tool"; "It was a great experience. It not only helped with the class but also in communicating with colleagues"; "e-mail was a great experience for giving and taking feedback. It provides a more informal base for communication and when I used it I really got the sense I was talking to somebody. It really is important to maintain contact [through] a computer."

The exit survey also provided the quantitative data to encapsulate the affective responses documented throughout the semester's correspondence. Using a Likert scale, students were asked to assess their experience with e-mail and to rate the quality of the communication using the medium. Although only one-quarter had used e-mail before the course, 100% rated the overall quality of the experience as "Very Positive" (a 5 on a 1 to 5 scale). When asked to compare the effectiveness of e-mail to handwritten comments, 100% again rated e-mail as "More Effective." Perhaps most significant for the overall infusion of technology into teacher education programs, students assessed their interest in educational technology before and after completing the project. Although no student described him/herself as antipathetic toward technology before the project, half characterized themselves as "neutral" and a quarter as "somewhat interested" in educational technology use; only the remaining 25% described themselves as "enthusiastic." However, after completing the semester's correspondence, 100% were converts to educational technology; all chose to characterize their interest level as "enthusiastic" (5 on a 1 to 5 scale).

As an interesting side note, the enthusiasm of the e-mail users in the class communicated itself to other non-participants. Several times through the semester, students who were not involved in the project logged on to communicate with the instructor and, in many cases, to explore e-mail for the first time. In a typical message, one student experimented with the medium to convey her excitement over a team teaching experience: "This is the first time I've tried e-mail but I wanted you to know our field experience teaching went well" (Beth).

In its initial form, the telecommunication project provided an enriched experience for both the student teachers and the college supervisor. However, such projects need careful planning and limitations and also require new skills development, not to mention a significant amount of additional work, for instructors employing the method. Familiar techniques for responding to student work need modification. For instance, marginal comments to create a dialogue with students on individual points is not possible with e-mail; to respond to key points, jotting down by hand, or maintaining a simultaneous word processed document is necessary. Creating a manageable file system for the messages is also important as well as regular–essentially daily–logs on to check messages.

To encourage maximum technology use, the instructor allowed students to extend sending their assessments by e-mail to include assigned reading reviews as well, which proved a mistake. The length and complexity of these messages created additional logistical problems (especially with only one phone line in the house!) Although worthwhile to both students and instructors, the time commitment involved in responding even to the assessments alone proved incredibly time consuming. Offering e-mail as an option, rather than requiring its use of all students, naturally allows some students to avoid increased use of technology. At the same time, using the medium with all students can easily become an overwhelming addition to an already demanding work.

Nevertheless, through e-mail, study participants documented their growth as preservice teachers, reviewing their development through use of the electronic medium. The final conclusions about the value of the process suggest that such telecommunication would be valuable for other education courses as well: "e-mail has helped me in the transition of becoming a teacher. You know my situation, the problems I've had ... Just being able to tell someone who can accurately assess the situation has helped me tremendously" (Marj). As Patti summarized her experience, "I am very glad that I was able to participate in this e-mail project. I sort of feel sad having to leave [it]." Perhaps most important for teacher education, e-mail as a medium of communication provide useful messages to assist education faculty members enhance the quality of preservice teacher mentoring for their future success in the classroom.

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