This study examined the e-mail interactions of teachers who were graduate students in an educational leadership program at a commuter university. Participants attended a 3-hour-per-week course. The instructor inserted into the course syllabus an assessment plan that required computer use, making the students responsible for accessing the university's system as often as possible. The syllabus gave general directions regarding acquisition of an e-mail account and utilization of the e-mail system. This included making appropriate arrangements to get computer training, to obtain an e-mail account, and to access the e-mail system to start communicating with the instructor. There was a point system incentive. The instructor sent an e-mail question to all students 2 weeks after the class began and again shortly thereafter, but never mentioned it in class. The question was designed to stimulate and promote an online discussion: What is your most optimistic scenario for schools in the year 2000? All of the students went online and e-mailed responses to the question. Most believed that schools in 2000 would have technology in every classroom. Because some responses were controversial, there was great discussion. From this experience, the instructor developed an in-class activity in which students brainstormed a list of possible e-mail uses in their classrooms and the impact on instructional practice. Teachers optimistically advocated for computers to help teach literacy. (SM)
Changing a course of action: Teachers’ E-mail discussion

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Changing a Course of Action:
Teachers’ E-mail discussion

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Like the Industrial Revolution, the technical revolution is bringing dramatic shifts in the way we live, perceive the world around us, and perhaps even the way we think. We all are aware that technological advances have changed our lives drastically. But, is it a true statement? It seems that technology has had a greater impact on private organizations than public ones. Schools are a good example. The educational institutions, especially primary and secondary schools, are still falling behind the dynamic technological movement. Many reasons have been given. One of them is the lack of teacher preparedness. Teachers agree that technology, particularly computer technology, is here, is a reality, but “it is not affecting me directly,” as one of the teachers interviewed indicated. There is not space here for a lengthy, general discussion of technology, so the comments which follow will be limited to a single aspect of it: E-mail interaction. Since this work deals with school teachers, the discussion will be restricted to a brief discussion of the E-mail interactions of teachers who are graduate students in an educational leadership program at a Midwestern commuter university.

Rationale

The power of the use of modern technology to transform education has been
recognized by educators, school administrators, legislators, and general public. The use of technology in the classrooms is identified as one of the most powerful change agent in curriculum development and the role of the teacher. It is also recognized that the improvement of the information system in school districts has made strong points in contributing to school effectiveness. As more advancements came on line, technology also requires considerable costs and financial support in order to ensure equal access opportunity for every teacher and student in every school. The existing and emerging technology, in particular Internet connections, CD Roms, videodisc technology, multimedia, computer networks, and satellite technology demands substantial financial efforts as well as the human willingness to provide the proper support system. Yet, a teacher is the human component of the nomothetic-ideographic equation who would be the primary backbone supporting the technological environment of any social open system.

Teachers have been getting a great deal of attention in the public domain for a number of years. The attention has created a misconception of the teacher who is stodgy, lazy individual, who sticks to the old ways of doing things. Studies in teacher change have implied that the resistance to change is not an entirely valid argument. In fact, a teacher may resist more to external changes or that which is externally mandated. Richardson and Anders (1995) say that decisions on the learning process which is externally made by someone outside the classroom will find more resistance from teachers than those which are decided inside the classroom. In the same direction, it seems to be certain agreement that teachers are constantly changing. Some examples are adaptation of new methodologies, textbooks, basales,
incorporating new knowledge from staff development programs into their own curriculum, trying out new programs, and so on. In other words, teachers do not show fear when trying out new activities in the classroom in the hope that their students will learn more effectively. However, when teacher experiment with artifacts, or any technological means, for instance, the presence of the tool, i.e., computers, intimidate and create an immediate resistance. In fact, this resistance ought to be related to the lack of environmental dominion, feeling of disempowerment, and immediate frustrations which oblige teachers to stay away from what they perceive as uncontroliing forces.

Donna Harrington-Lueker (1997) listed five suggestions for technology planning in school settings: (a) don’t expect change overnight; (b) start small; © pay attention to equity; (d) invest in the early grades; (e) make teachers’ needs a top priority. In summary this checklist displays the barriers that prevent teachers from using technology effectively. Technology takes time to digest and it must be taken as part of the classroom in order to do something transformational. Time is an issue in technology use. Small organized steps in the infusion of technology in lesson plans are likely to be more effectively working than infliction a severe detail technological plan for the entire school. At the beginning of the process, any technological strategy adopted must pay considerable attention to teachers reactions and needs.

Since teaching is a profession that does not require muscle power but brain power, teachers make adjustments into technology much slower than any other individual profession. Teachers did not change or replace the physical labor for mental labor. They did not trade
muscle power for brain power. Therefore, “the arrival to stay” of the computer technology in the classrooms is characterized by them as one more program that the schools should implement and which may not affect their ways of traditional teaching.

**Setting the Agenda**

As conducting the inquiry into the use of technology in university classrooms, different sources of information were revised. The foundations of this experience reside in the principles established by the College of Education of Northeastern Illinois University, the goals of education set by the Illinois State Board of Education, and the National Policy Board for Educational Administration Educational Leadership Constituent Council. First at all, the College of Education lays fourteen outcomes and performance standards for every NEIU graduate, based on the knowledge of learners, schools, communities, and professional self. One of the performance standards intentionally refers to communication and technology encompassing “the use of knowledge of effective verbal communication techniques including nonverbal, media and technology to foster active inquiry, collaboration and supportive interaction in the learning environment” (NEIU, 1997). This statement and others like it is preparing graduate students to achieve a minimum of proficiency in the use of technology as a desirable outcome. On the other hand, the Illinois State Board of Education into the World-Class Education for the 21st Century set eight educational goals. One of the goals indicates that “all Illinois public school students will attend schools which effectively use technology as a resource to support student learning and improve operational efficiency.” (State of Illinois, 1996). Technology offers many opportunities to improve learning for all. In Illinois schools,
homes, work settings, technology is being increasingly recognized as a learning resource that previously were available only in very few settings. As with other factors in education, the educational leadership program housing this research project follows national guidelines coming from the National Policy Board for Educational Administration Educational Leadership Constituent Council which contemplated specific curriculum guidelines for advanced programs in Educational Leadership for principals, superintendents, curriculum directors, and supervisors in respect to technology and information system. The guidelines manifest that school leaders should be able to understand and demonstrate the ability to:

1. use technology, telecommunications and information system to enrich curriculum and instruction
2. apply and assess current technologies for school management and business procedures
3. develop and monitor long range plans for school and district technology and information systems, making informed decisions about computer hardware and software, and about staff development, keeping in mind to the impact of technologies on students’ outcomes and school operations

The legal, procedural, and functional foundations in which this experience was based provide very solid platforms to formalize the use of the technology in the university classrooms as well as in any other educational settings. What is already beginning to happen is that teachers who are enrolled in university courses are rapidly becoming more aware that the information society is invading the world outside of the school. Indeed, obtaining information through technology is beginning to be regarded as the single most important resource they can use.
Convenience Sample

The experience that will be related here deals with a group of twenty-five Chicago teachers who enrolled in a graduate course of Curriculum Development and Learning Theories in the summer 1997. The convenience sample of seventeen females and five males attended three course hours weekly. The subjects were pursuing the Type 75 certification for Illinois Principals. The group can be characterized in their early and middle adulthood (28 to 55 years old), having different conative styles, displaying different learning styles and abilities. In this group, only two teachers used personal computers. One of them was the technology coordinator of a high school.

University Technology Access

The university has made provisions for all students, graduate and undergraduate, to have access to any type of technological resource for a small fee. The students can apply for an E-mail account which is theirs until graduation. There are several computer labs on campus. The university computer system can be reached from home or any other facility across the city, and even more, across the nation. More often, the University Computer Services provides a series of trainings relative to E-mail, word processors, web pages, home pages, listserv, among others. The unpaid-trainings have been scheduled in different time in order to reach out the maximum number of students who attend the university in the various class schedules.

Although the computer resources exist, graduate students do no take advantage of the system. They ignore information on how to obtain an E-mail account, what to do with it, how
to get trained, in other words, they do not want to be bothered with this “technological stuff,” as put in their own words.

**Setting Up the Experience**

At the beginning of the summer 1997, the researcher was awarded a grant to attend the Interinstitutional Summer Faculty Institute for Learning Technology supported by an HECA grant from the Illinois Board of Higher Education. The institute involved the participation of 161 faculty members from eleven state universities. The exposure to lectures and experiences on computer use in the classroom helped to the reconstruction of the mind set in respect to the use of this device in the classroom, how to get students motivated to use it, the development of web pages, the use of different browsers to enhance course work, etc. From here, I learned, planned, and practiced some classroom strategies to involve my graduate students in a series of gratifying and meaningful experiences in which a minimum exposure to the computer technology was required. The course chosen was Curriculum Development and Learning Theory, a three-hours graduate course which has followed a traditional design in which textbooks, written references and documents, instructors’ lectures, and small group discussions are used in every session of the class. In the recent past, the instructor has attempted to introduce the students to the simple use of E-mail by providing the required training and facilitating access to the E-mail account. The students did not feel the same enthusiasm for the potential of computer use in the class as the instructor did. In trying to convert the class as a learning unit, the instructor did not diminish her enthusiasm and organized a more aggressive plan for computer user recruitment. The plan consisted of
inserting in the course syllabus an assessment plan that required the use of the computer, making the students responsible and accountable for accessing the system as often as possible. The syllabus gave general directions regarding the acquisition of an E-mail account and utilization of the E-mail system, including making the appropriate arrangements to get computer training, to obtain an E-mail account, and to access after two weeks the E-mail system to start communicating with the instructor. These strategies involved a point system incentive. A time limit to start the E-mail interaction was established. Two weeks after the academic period had begun the instructor sent an E-mail message to the distribution list that was created for the course. Only five students replied. A second message was sent indicating that a question that was part of the midterm exam would be online by the fourth week of class. Strategically, the instructor did not make any comments during the regular class meetings regarding the question. Surprisingly, all 21 students went online and e-mailed ideas in response to the question which the instructor had posted to stimulate and promote an on-line discussion.

**Posting the question**

The question was: *What is your most optimistic scenario for schools in the year 2000?*

Ninety percent of the teachers indicated in one way or another that schools in the year 2000 will be looking at technology in every classroom. Some went further and replied that “every student will have a notebook computer on their desktop by the year 2000.” “Schools in the next three years will have more technology,” an E-mail user said. “This could be very
beneficial to those students who are lucky to attend a single school that has the funding to purchase computer-based technology and train teachers on how they can be more useful than a single textbook. Online connections can keep students up to date on the newest information available. It could open them up to the world beyond their own community."

"I see schools using technology more in instruction, but I don't think the curriculum will change very much. In Chicago, we seem to be moving toward a unified curriculum, but I don't think that will happen by the year 2000. Meanwhile, there is a lot of money available to schools to improve their technology in the buildings, which I think will impact the instructional methods," another E-mail sender said.

In fact, in analyzing the question responses and the quick development of replies, some of them controversial, which were generated, it was perceived that as more and more uses were found for computers in the classroom, the demand for them soars. The students did bring their E-mail copies to the classroom and the interaction expanded tremendously. The market potential for school computer use seemed almost insatiable during the rest of the course development. From this experience, an inclass activity was designed and the participants brainstormed a long list of possible uses of E-mail in their classrooms and the impact on their instructional practices. Contrary to what John Simons stated in the February 1979 issue of Enquire, about the computer creating an illiterate society, teachers were optimistically advocating the use of E-mail and computers in general to teach students to read and to write. One issue that was raised during the E-mail interaction was that what a computer produces is information not education. One thing is certain-instructional methods
are affected in significant ways by the introduction and use of computers in students' lives. Whether computers are used to teach Howard Gardner's Multiple Intelligence Theory or for some less high-minded purpose depends, to a great extent, on the attitude of the teachers in the school toward them. Indeed, the use of E-mail interaction in the course Curriculum Development transformed the traditional mode of delivery used by the professor. This experience reinforces the notion that teachers have the capacity of changing the way technology is received and used through their teaching practices and realities.

**Challenges to Learning**

In many ways, the context in which learning occurs is crucial to motivate the learner. People learn more effectively when they are learning about something that they are interested in, that they already know something about, and that affords them the opportunity to use what they already know to figure out new things.

There are some surprises in store. On the faculty side, for example, it was found that the importance of active learning is recognized, but it is not easy to incorporate active learning exercises into the courses. In addition, some prerequisites for adoption of technology are motivation, time to learn, to develop materials, to respond messages, to maintain listserve, to grade E-mail tests. It was also found that it is not good to learn the technology and teach with it simultaneously. It seems that summers are ideal for course development. However, development is a process not a one-shot investment.

On the student side, faster interaction with faculty appears to be an advantage of using E-mail. Students like asking questions that couldn't be answered in class, having a better
understanding of different points of view, the ease in getting in touch with the professor, and talking more to the peers.

**What did we gain from this experience?**

Several important issues emerged from this experience:

1. Increased interest and awareness in technology use.
2. A classroom climate that fostered motivation.
3. Trust and confidence in the use of E-mail as a tool for immediate communication.
4. Respect for others' opinion.
5. Everybody free interaction and exchange of ideas without restrictions.
6. The provision of easy access to updated information about course/teacher/assignment.
7. Awareness and willingness of using technology in teaching and directing learning.
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North Central Regional Laboratory and Illinois State Board of Education. (1997). *Developing a plan for learning through technology*. Chicago, IL: Authors.
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