

Using the Internet to Conduct College Credit Courses Developed From Extension Materials

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Abstract

A study was conducted at the University of Florida to determine whether an Internet writing course would be useful for teaching as a distance learning option. In this study, students located at off-campus, agricultural research centers enrolled in a Web-based composition course instead of a correspondence course to meet the writing requirements necessary for their graduation. The course used 22 modules on an Internet Web site that students visited instead of attending traditional classroom lectures. Students were required to have an Internet-accessing computer, and they were allowed to complete scheduled assignments at their own speed. Each student read the modules, answered questions included at the end of the text, and then sent the answers to the instructor to show that they had read the module and understood it. There were fifteen writing assignments, and each student was subsequently graded on how he or she used the techniques demonstrated in the modules to complete each assignment. After completing each assignment, the student sent it to the instructor via Internet mail where it was graded, marked in the text, and returned by the instructor. All communication between the instructor and the students was conducted via Internet mail. The study found that students who participated via the Internet submitted papers that were not as complete or as well-organized as those students participating in the classroom situation.

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There is a story about a Frenchman who ate his lunch each day at the top of the Eiffel tower. It was not that he thought that the tower was so distinctive. In fact, he thought it was an utter monstrosity. But the top of the tower was the only place in Paris where he could eat his lunch without having to look at the tower. So, despite his feelings about the tower, he was doomed to eat there every day. If you think about it, many of us who work in the communication business are like the Frenchman. Because technology is so frustrating, we try ignore it, and in doing so, we miss many of the benefits that it offers.

Perhaps we ought to consider another anecdote. A tourist once stopped and asked a Scottish farmer for directions to someplace he wanted to visit. After he thought about it, the farmer remarked, "If that's where you want to go, I would not have started from HERE!" Perhaps as we consider the changes that go with technology, we ought not to think about how well things work now, but rather, how poorly they would work if we had to do them some other way.

Perhaps, as we view the debate around distance learning, we ought to see it not how it is or how we want it to be, but rather as how it could be. At this point in the debate, those who oppose distance learning point out that research indicates that those who are lucky enough to attend class at our fine universities receive a superior education. On the other hand, those who favor distance learning point out that many people would be unable to obtain that education because of time, distance, or the university's physical inability to accommodate some students. Which side is correct? The only way we can find out is if enough people do it both ways so that we can see without confusion how it is and how it can be.

The University of Florida is located in the sparsely populated, northern portion of the state while the majority of the population is located far to the south in the densely urban areas. As a result, the university is increasingly interested in adding distance learning classes to its curriculum of available courses. In addition, the explosion of interest in communication via the Internet, and the continued growth of the ownership of personal computers has the university especially interested in adding to its curriculum those classes that match this popular technology. The Agricultural Education and Communication Department in the College of Agriculture, which teaches a writing course for over 600 students each

year, conducted a pilot test of these technologies by offering a writing course on the Internet in the spring of 1997.

Literature Review

The literature is replete with studies of empirical investigations demonstrating the effectiveness of distance education, but most of these studies concern the effectiveness of television as a medium for distance education (Biner, Dean, & Mellinger, 1995). Very few empirical studies have looked at the use of the Internet as a distance education medium. There are many articles about the uses of the computer or Internet in distance education, but few used experimental methodology. In the educational periodicals, articles describe how researchers used the Internet or the computer to free-up their students emotionally and make intellectual connections through writing (Curtiss & Curtiss, 1995; Noden, 1995; McGlenn, 1995)

Other researchers, however, stress the students' need to learn the new media to improve as communicators. Ryder and Graves (1996) state that unprepared students are a major expense and problem for current day teachers. Citing an article by Cartwright (1995), they state that 80% of the enrolling freshmen in California failed the English proficiency test and could thereby be considered less literate. According to the author, regular writing on the Internet would improve students' communication skills.

However, Owen (1995) reported that a new program in Canada known as WEIR (Writers in Electronic Residence) has raised the question of who has control of the new Internet curriculum. The problem, according to Owen, is that these links are not controlled by the teacher.

Empirical Research

A 1990 study conducted at the University of Pennsylvania assigned 29 students to two random groups to compare the scores assigned to papers they wrote for communication courses (Carey, Bowen, & Dell). Results showed no significant improvements in either the scores or the students' attitudes about news writing.

On the other hand, Newman, Raven, and Day (1996) found that Technical Writing in Agricomcommunication students who were taught using the Web with a laboratory classroom scored higher than students who were in a traditional class.

There have been many studies which examined the creativity-blocking effects of apprehension on communication and writing (Nehiley, 1995; Nehiley, 1992). However, Scott (1997) studied student reactions to all types of new technology (VCRs to computers) and found that apprehension of technology not only blocked creativity but also prevented learning as it was related to other new media and equipment.

It was the objective of this research to conduct a subjective review of in-class students and students on the Internet to determine if this medium resulted in comparable material from both groups.

Developing a Writing Program That Utilizes the Internet

In 1996, the Agricultural Education Department at the University of Florida tested the use of the Internet to deliver teaching modules and writing assignments about agricultural and scientific topics. The three-tiered program which was called ICE (Interesting, Clear and Effective Writing) is designed to provide instruction about writing to students who are unable to attend classes on campus. The ICE program consists of 22 stand-alone modules. Each module is designed to be downloaded one-at-a-time to a directory and completed when time allows. After students have accessed the material, they can read each lecture, complete all the assignments in an ASCII file, and submit their papers through the online program for review by the Instructor. They also receive weekly grammar assignments and weekly writing assignments. Because the program is accessible through the Internet, students can access the program from any location where they have Internet access. The ICE writing program was located at <http://hammock.ifas.ufl.edu/~aee3033/> and had a button hyperlink for registering in the College of Agriculture and sending all assignments to the professor. The curriculum for this course paralleled the in-class course taught at the university and was designed to emphasize that the role of writing is to gain the utmost attention of the reader (interesting), use whatever language or layout was necessary to convey exact meaning (clear), and design each document so that the reader could gain maximum benefit from the information presented (effective).

This program was conducted at the same time as a class taught by the same professor at the university. Any information that was presented in class, or any questions that the students in the class asked, were sent as supplemental messages to the students in the program to offset the fact that the Internet students were unable to discuss the assignments.

The Modules

The modules were created from fact sheets and training materials that were used to teach The Cooperative Extension agents about writing. The facts sheets, each of which was four to seven pages long, covered one aspect of the writing problem or process. For example, one fact sheet described the process for making and using outlines; another described how to analyze audiences; still another detailed the procedures for using numbers in scientific and technical writing. A total of 30 fact sheets were converted to modules about writing for general audiences. The fact sheets were edited to ensure consistency of style and instructional design.

Structure of the Course

Students were expected to complete four modules each week and transmit answers to the questions at the end of each module. The questions were designed to test the most important information associated with each subject, and to demonstrate to the instructor that the student had read and understood the material. The answers to these questions were scored and the scores took the place of tests for each of the three sections.

After each student had read each module, he or she received an update from the instructor that included any information that had been presented in class that was not in the modules. Students submitted their work in E-mail format to the professor's Internet address. All the students' addresses were kept in a single directory in "In-box" (an Internet message program) to make sure that all students received the assignments and updates at the same. In addition, the instructor's address was in the list that received each message, so the professor could be certain that the messages were reaching the students. The Internet students and the in-class students received exactly the same written instructions for each assignment. Because the heading of each message contained the

other students' addresses, the students were able to correspond with each other electronically to share their analysis of the assignments.

At the beginning of the course, the students received, in advance, a general overview of each assignment, so that they could access the Internet and gain information to use in their assignments. However, students were warned not to attempt to write until they had received the specific directions. They were told that the assignment list was too general to be used in preparing the assignments. At the beginning of each week, the students received detailed, very specific instructions for that week's assignment. In addition, the students corresponded with the professor as well as each other to make sure that they understood each week's instructions. Each assignment also referred to information contained in specific modules that would enable them to do a better job. For example, one assignment contained 40 facts about water (10 about usage, 10 about access, 10 about availability, 10 about pollution). The students were then instructed to read the module about paragraph construction and construct four paragraphs using the facts. The four paragraphs were to be question-to-answer and problem-to solution (topic sentence at the end); most-important-to-least-important and chronological (topic sentence up front).

Results

By comparing the progress and efforts of both the in-class group and the Internet group it was possible to compare subjectively the work of both groups. Although there is a preference for quantitative measures versus qualitative methods in research, subjective analysis was deemed acceptable for this test because all writing evaluation has a subjective element. Even though the Internet students were required to communicate with the professor each week, and even though the students corresponded with each other frequently, the in-class students submitted work that indicated they understood the information better and that they were able to do their assignments more expertly and effectively. In-class students were able to ask questions and hear the questions of other students. They also benefitted from having an experienced professor listen to their questions to determine through their tone and their nonverbal behavior what their problems were. After listening to the in-class students during office hours and

corresponding with the Internet students, the professor's impression was that the Internet students were aggressively playful and much more eager to do each assignment. Perhaps this is why their assignments were always somewhat rough. Whatever the cause, the professor decided after reviewing 25 assignments from both groups that the in-class students generated assignments that were much more complete and effective.

What could account for the superiority of the in-class students' work? Perhaps it was the nature of the medium. According to Curtiss and Curtiss; McGlinn; and Ryder and Graves, students on the Internet are more confident in their approach and more outgoing. For this class, that situation certainly seemed to be the case. Unfortunately, because they were more confident, the Internet students asked fewer questions. They assumed they understood, and, as a result, their papers were less effective. Compared to the students in the classroom, the papers received from the Internet students were less complete and more disorganized. In addition, they followed the assigned format less carefully and were judged as being less successful by the professor. Perhaps a chat room which would allow the students to ask more questions and then share their opinions would reduce their reticence and result in papers more like those of the individuals in the classroom situation.

Two things that turned out to be much harder to control with the Internet course were the timeliness of the papers and the quality of the grading available to the Internet students. For papers, the professor could easily carry a briefcase to class and announce that all the papers that were not put in it would be logged as late. With the Internet, papers came in at all times. A greater problem was grading the papers. For those students who turned in hard copies, it was easy to circle misspelled words, write comments like "not part of this subject", or to comment "passive voice... subject/verb disagreement!" With the Internet papers, the cursor had to be inserted with comments that the students could find and understand. The average hard copy could be graded in five minutes. The electronic text version required about twice as much time and the Internet students complained that they could not find the comments. When papers are transmitted as text over the Internet, bold-faced type, italics and most symbols disappear, so it was very hard to mark the text electronically. Because

students had different kinds of equipment, the professor's task was to find a style of attachment with which everyone was comfortable, which was difficult, and the attempts to transmit boxes with comments were not successful. About the only approach that worked was to send to the students a numbered list of errors and then put a number in the text, allowing the students to determine that error number 8 (an 8 in the text) indicated a comma splice or some other error.

Summary

In general, this experiment proved that students can learn and participate in an Internet writing class, but that this approach has its limitations. When the in-class group was asked if they thought modules like those they had utilized could replace lectures at the university, 47% said "yes" and 43% said "no."

The professor who conducted the experiment believes that off-campus students need access to instruction, but he does not plan to conduct a similar program again. Because they lacked experience, both the professor and the students lacked background and knowhow that this type of education and communication requires to make it effective. For example, the instructor asked for the assignments to be listed by name and number (*water.a1*) when they were transmitted. However, because they were received by a Windows program, the computer could not handle anything with a letter and number to the right of a decimal point. If the students or the professor were to attempt this type program again, they would have to redesign the format and assignments to solve or prevent all the problems. Since the general agreement was that the resulting assignments were less successful, it is doubtful that this type of program would be attempted without serious modification.

References

Biner, P., Dean, S., & Mellinger, A. (1995) Factors underlying distance learner satisfaction with televised-education courses. *The American Journal of Distance Education*, 8 (1), 60-71.

Cary, H., Bowen, B., & Dell, L. (1990). *Effects of editing by word processor on student writing skills*. Presentation at the Agricultural Communicators in Education Conference, Minneapolis, MN.

Cartwright, G. Phillip. (1996). Technology & underprepared students: *Part One Change*, 28(1), 45-48.

Curtiss, P., & Curtiss, K. (1995). What 2nd graders taught college students and vice versa (How technology is transforming teaching). *Educational Leadership*, 53(2), 60-63.

Graves, D. (1995). Using telecomputing technology to make world connections in the writing class. *English Journal*, 84(6), 41-44.

McGlinn, M. M. (1995). Moving and grooving on the information highway: One teacher's experience with the Internet. *English Journal*, 84(6), 45-47.

Nehiley, J. & Sutherland, J. (1995). The effects of perceptions of gender and personality type on writer's block. *NACTA Journal*, XXXIX(2), 13-17.

Nehiley, J. & Sutherland, J. (1992). Affective problems in writing. *Journal of Applied Communications*, 76(2), 19-24.

Newman, Michael E., Raven, Matt R., & Day, Tina. (1996). A comparison of world wide web instruction on achievement in a technical writing in agricomcommunication course. In *Proceedings of the Forty-Fifth Annual Southern Agricultural Education Research Meeting* (289-298). Wilmington, NC.

Noden, H. (1995). A journey through cyberspace: Reading and writing in a virtual school. *English Journal*, 84(6), 19-27.

Owen, Trevor (1995). Poems that change the world: Canada's wired writers (Writers in Electronic Residence Program). *English Journal*, 84(6), 48-52.

Ryder, R & Graves, M. (1996). Using the Internet to enhance students' reading, writing, and information-gathering skills. *Journal of Adolescent & Adult Literacy*, 40(4), 244-254.

Scott, C.R. & Rockwell, S.C. (1997). The effect of communication, writing, and technology apprehension on likelihood to use new communication technologies. *Communication Education*, 46(1), 44-62.