Utilizing the World Wide Web

Enhancing Classroom Interaction in Distance Education

Abstract

This study utilized the World Wide Web and a "Class Page" to evaluate interaction strategies in an educational environment.

Introduction

The purpose of the study was to collect data regarding the impact of utilizing an instructional "Class Page" on student learning.

The sample for this study was a pre-service teacher education class in curriculum development. A specific Internet-based course in curriculum development for pre-service teachers was selected for study. The course was designed to be delivered over the Web, utilizing a "Class Page" for communication and interaction. The study was conducted to determine the impact of the "Class Page" on student learning and interaction.

The learning environment was designed to provide an interactive and collaborative learning experience. The "Class Page" was used to facilitate communication and interaction among students and instructors. The study aimed to evaluate the effectiveness of the "Class Page" in enhancing classroom interaction and student learning.

The study utilized the World Wide Web and a "Class Page" to evaluate interaction strategies in an educational environment.

Utilizing the World Wide Web

Enhancing Classroom Interaction in Distance Education
hance: (1) interaction between the instructor and students, (2) interaction between students and peers at different sites, and (3) student utilization of Web resources provided through the “Class Page”.

The participants were primarily elementary school teachers (47 graduate students) enrolled in a television course entitled “Elementary School Curriculum” (EdCur 610) during the Spring Semester, 1997. Data were collected through the use of survey instruments developed to determine participants’ perceptions and actions regarding the “Class Page” and their interactions with both the instructor and other students enrolled in the class. An electronic Web compatible survey software, “inQsit”, developed by the University Computing Services at Ball State University, was utilized to collect data through the “Class Page” itself. This resource provided a wide array of survey and questionnaire options: Instruments using Likert type scales, semantic differential formats, single word responses, short answer responses, and essay responses were used to collect the data.

A series of time dated surveys (eight totally) were administered during the semester. Data collected from these surveys were compiled and reported in raw numbers and percentages rounded to the nearest whole number. The resulting frequency and interaction patterns were used to interpret the responses and activities attributed to the “Class Page”.

Why Create a “Class Page”? 

The “Class Page” was designed and developed to increase student interaction in a typical distance learning environment. The development process was a team effort which involved multiple campus units: the University Computing Services, the Teleplex, the University Library, and the Department of Educational Leadership. The individuals from these units who worked on this team possessed varied and unique skills that were essential to the creation and utilization of an interactive “Class Page”.

As consumers of television most adults have learned to be passive in response to this medium, i.e. we view and do not expect to be engaged in dialogue with either the presenter or the topic. To combat this existing learned behavior, the “Page” was designed to promote active student involvement in the learning process both prior to coming to the class and during the live broadcast itself.

Students taking classes at off-campus sites do not have the resource advantages of those on campus. To minimize this problem, a multitude of instructional resources was provided on the “Class Page”. For example, the University Library was on the Web and electronically linked to every college and university library in the state. Adding this link made access feasible for each distance site student to any higher education library in the state. Several other library links such as the Library of Congress, a virtual reference library, and several Internet libraries were established to promote accessibility and minimize travel time for securing resources. Numerous Web links were added to promote additional resource opportunities for students, e.g. sites of on-line journals and magazines, specific content areas, state and federal government education agencies, museums, professional organizations, children’s resources, teacher resources, and multiple search engines were linked for students to explore and to utilize in preparing for class.

A specific goal of the “Class Page” was to establish a forum for students to exchange ideas, experiences, and successes. This was accomplished through the creation of user friendly pages that enabled the students to post ideas directly on the Web by providing information on a brief form, typing messages, and clicking the “post” button. Three pages utilized this process: (1) “Motivation Ideas,” a page where students posted ideas found to be valuable learning activities for elementary students, i.e. classroom successes; (2) “Projects,” a page where students posted their work on a project where peers could develop knowledge, provide assistance, and share experiences as the individual or group worked on the activity; and (3) “Discussion Area,” a modified newsgroup format where students could discuss class topics and respond to the views of their classmates prior to the class meeting when the topic was discussed. Students could post questions or follow-up discussion items following the class. Each of these public areas was put on the Web for consumption by the instructor, graduate assistants, and class members.

A private forum was needed for student exchanges with the instructor, graduate assistants, and class peers as well as with working class groups. A post office was established with e-mail addresses which linked class members to each other privately. To personalize the post office, a small individual photo icon was added to individual e-mail links. This aspect of the “Class Page” was not monitored by the instructor; however, feedback from many students indicated that this was a valuable aspect of the communication process and one that was used extensively in dialogue with peers, instructor and graduate assistants. The instructor typically received e-mail from two-thirds of the class members weekly. During the semester all distant site students communicated with the instructor through this process.

The instructor prepared a “Class Questions” page as a way of stimulating student thought about specific topics prior to class. This also encouraged and assisted the students in their class preparation. Students were encouraged to dialogue with other students in the “Discussion Area” before the class regarding their experiences and thoughts on the topic. The instructor also provided a “Class Handouts” page. This page included links to Web sites and resources that pertained to the topic and handouts which were scanned and put on the Web site for student use. These were designed to assist the student in locating resources on the topic. They could also be used for the weekly written critiques regarding the topic or area being discussed. Both the “questions” and the “handouts” were designed to enhance class preparation and to make time spent in class more interesting and valuable.
Newspaper's foreign news or foreign earnings. Only 5% of the
newspaper's foreign news or foreign earnings were available for
reprint abroad, yet the newspaper's foreign news or foreign
earnings were significant because they provided the newspaper's
with an international presence, which was important to the
newspaper's overall success. The newspaper's foreign news or
foreign earnings were also important because they provided the
newspaper's foreign news or foreign earnings with an international
presence, which was important to the newspaper's overall
success. The newspaper's foreign news or foreign earnings were
also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success. The newspaper's foreign news or foreign earnings
were also important because they provided the newspaper's foreign
news or foreign earnings with an international presence, which
was important to the newspaper's overall success. The newspaper's
foreign news or foreign earnings were also important because they
provided the newspaper's foreign news or foreign earnings with
an international presence, which was important to the newspaper's
overall success.
make what had been proposed work, new solutions were created; early technical failures were rapidly discontinued. The University Computing Services personnel contributed many hours of work to make needed changes and to create user-friendly applications. Ultimately Web based e-mail was developed to correct the first problem, the second problem was changed by developing a Web based newsreader. These early frustrations were intimidating for some students and probably slowed their willingness to engage in interaction through the "Page".

As the semester progressed, more students engaged in utilizing the "Class Page" as a learning resource. At six weeks, 58% of the students indicated they were secure in their use of the "Page"; 62% acknowledged it encouraged out-of-class participation; and two of three students reported they enjoyed exploring the Internet through the "Page". Half of the students reported they found additional class resources through the web sites posted on the "Page", and 77% reported they were using e-mail to correspond with fellow students. By the 10th and 11th week the feedback on the utilization of the "Page" was becoming increasingly positive. Three of every five students reported the distance learning setting encouraged class involvement. Over three of four students (76%) indicated the "Discussion Area" on the "Page" was encouraging the examination of important topics; 83% of the respondents stated they were gaining important computer competencies; 86% reported the "Page" was user friendly. Regarding the earlier reported fear of personal technical problems, 91% reported they thought the University support provided was very good or excellent. Other aspects of the "Page" were designed to encourage interactivity, and respondents reported course "handouts" as very good or excellent (72%); "class questions" were stimulating for thought and discussion (78%); the notice board was keeping them informed (84%); the linked Web sites were providing valuable educational resources (81%); and the usefulness of the "Page" was judged as valuable (80%). More than four of every five students (83%) gave examples of actions they had taken to make the "Page" valuable to them in out-of-class activities.

A survey administered during the 13th week of the semester found that 66% of the students were regularly using the "Page" to interact with classmates. Only 6% reported they "strongly agreed" with the statement "I am frustrated when using the 'Class Page'." When asked about concerns, two students expressed continuing frustrations with established class expectations, and five described concerns that would be analyzed as positive; e.g., "I have enjoyed this class. Sorry for the delay in the submission of . . .", and "I am always concerned with keeping up with class assignments, but so far it hasn't been a big problem." Seventy-two per cent (72%) of the respondents provided specific examples of concepts or ideas they found helpful from using the "Page" and attending class during the previous week.

The final class survey, a required Faculty / Course Assessment Form, was administered during the 15th week of the semester. Several questions were repeated on this Form to determine if changes had occurred in student perceptions regarding the "Class Page" and the way it was used. The respondents (62%) reported that interactions on the "Page" stimulated critical thinking. Eighty-five per cent (85%) deemed the resources on the "Class Page" to be relevant to course objectives and their learning; and 77% judged the "Page" helped achieve course purposes. When judging the expectations of students using the "Page" 82% reported this was appropriate to their current level of development. Over nine of every ten students (91%) indicated they felt free to express "ideas, judgments, and questions".

The fundamental purpose behind the development of this technology was to increase interaction. Eighty-eight per cent (88%) of the students reported interactions with other students as very helpful in mastering course concepts and competencies. One hundred per cent (100%) indicated peer interaction was very helpful. However, when asked what role the "Page" played in the process of increasing interaction only 50% judged it to be very helpful. One third of the respondents were undecided or had no opinion on this. One can only speculate how individuals at varied sites would interact with individuals at other sites without the technologies provided through the "Page". One additional item asked if "Page" participation encouraged the student to apply concepts and competencies beyond the context of the distance education classroom; 86% reported this indeed was the case. Analysis of written responses to open ended questions found that only one respondent failed to give examples regarding the value of using the "Page" during the semester.

Summary

In the distance education environment it is critical for the instructor to focus upon pre-planned interaction strategy components to enhance involvement and learning. The absence of such planned learner engagement will potentially result in the one way delivery of instructor lecture information with little student interaction with either the instructor or other students. One of the persistent criticisms of distance education has been that the instructional approach used too often has involved what has been called the "talking head" syndrome approach, i.e. information is provided with very little exchange between students and instructor. An alternative to address this concern must consider ways to increase learner efficacy through greater student involvement (Bates, 1995; Sayers, 1996).

This study involved the use of current Web technologies combined with the creation of a user-friendly set of tools to enable the distance education classroom to become more interactive. The course was designed and delivered with the goal of enhancing interaction through the utilization of a "Class Page" accessed on the World Wide Web. This "Page" was developed to promote numerous opportunities for stu-
Higher Education: A Mirror of the Community

Higher education is a mirror of the community. The quality of higher education reflects the quality of the community. A healthy community produces high-quality higher education. Conversely, if a community is struggling, its higher education system may also be struggling. This interdependence underscores the importance of investing in higher education to support community development.

References


Acknowledgements

Opportunities to assess instructional delivery.

Successful strategies focus on effective teaching tools and techniques. Effective teaching tools include active engagement, real-world applications, and collaborative learning. These strategies are supported by evidence that active learning methods enhance student engagement and comprehension.

Conclusion

Communication Services personnel support the college by providing the best possible service to faculty, staff, and students. The department is dedicated to ensuring effective communication and collaboration across the campus.

The class page was developed and used to create a comprehensive guide for the students. The guide includes resources such as notes, assignments, and study materials. The class page is updated regularly to ensure that students have access to the latest information. The guide is designed to provide a seamless learning experience for the students.