

00E027I

Project Number: IQP KAL-9902 - 51
LRN: 00E027I

THE EFFECTIVENESS OF WEB-BASED TEACHING TOOLS:

THE INSTRUCTOR'S PERSPECTIVE

An Interactive Qualifying Project Report

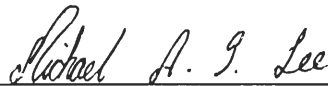
Submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the

Degree of Bachelor of Science

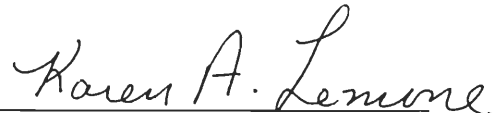
By



Michael A. I. Lee

Date: May 2, 2000

Approved:



Professor Karen Lemone, Advisor

Table Of Contents

1	ABSTRACT	5
2	EXECUTIVE SUMMARY	6
3	INTRODUCTION	8
4	BACKGROUND.....	10
4.1	EXISTING WEB-BASED TEACHING TOOLS.....	10
4.1.1	<i>WebReCourse</i>	<i>10</i>
4.1.2	<i>WebCT</i>	<i>13</i>
4.1.2.1	Student Tools	14
4.1.2.2	Instructor Tools	16
4.1.3	<i>BlackBoard CourseInfo</i>	<i>17</i>
4.1.3.1	Academic Computing Professional Tools.....	18
4.1.3.2	Shared Instructor / Student Tools.....	19
4.1.3.3	Unique Instructor Tools	22
4.1.3.4	Student Tools	23
5	METHODOLOGY	25
5.1	SURVEYING.....	25
5.1.1	<i>Public Opinion Poll Survey</i>	<i>25</i>
5.1.2	<i>Market Research Survey.....</i>	<i>25</i>
5.1.3	<i>Descriptive Statistical Survey.....</i>	<i>26</i>

5.1.4	<i>Survey for Social Research</i>	26
5.2	WEB SURVEY DESIGN.....	26
5.2.1	<i>Introduction</i>	27
5.2.2	<i>Identification</i>	27
5.2.3	<i>Computer Experience</i>	28
5.2.4	<i>Perception of Computers</i>	28
5.2.5	<i>Web-based Teaching Experience</i>	28
5.2.6	<i>BlackBoard CourseInfo Features</i>	29
5.2.7	<i>Additional Comments</i>	29
5.3	WEB SURVEY IMPLEMENTATION	29
6	RESULTS	31
6.1	DATA ANALYSIS	31
6.1.1	<i>Computer Experience & Perception</i>	31
6.1.2	<i>Web-based Teaching Experience</i>	34
6.1.3	<i>Use of BlackBoard CourseInfo Features</i>	36
7	CONCLUSIONS	41
7.1	SUMMARY.....	41
7.2	FUTURE WORK.....	42
8	BIBLIOGRAPHY	43
9	LIST OF APPENDICES	46
9.1	APPENDIX A – WEB SURVEY	47

9.2	APPENDIX B – RESULTS FROM WEB SURVEY	53
9.3	APPENDIX C – ADDITIONAL COMMENTS FROM WEB SURVEY	63

1 ABSTRACT

The intent of this project was to perform an in-depth, accurate study of the effectiveness of CourseInfo as a Web-based Teaching Tool. Professors use CourseInfo to communicate with and assess their students using as many of its features as possible. These professors were surveyed to ascertain how valuable and effective CourseInfo is as a teaching tool. The results of this study provide a clear understanding of the professor-tool interaction that occurs with CourseInfo.

2 EXECUTIVE SUMMARY

The purpose of this project was to perform an in-depth, accurate study of the effectiveness of CourseInfo as a Web-based Teaching Tool. In order to accomplish this, professors who use the system were surveyed. A web survey was used because it was found to be easily distributable, and allowed for guaranteed result collection. Using a web survey allowed all professors to find an updated survey in one specific and permanent location. It also allowed all results to be instantaneously stored in the same location, which made data collection much more effective.

The survey gathered information about the professors' familiarity with computing, web-based teaching experience, as well as their use of seventeen of CourseInfo's features (Announcement, Assessment Manager, Calendar, Course Statistics, Discussion Board, Email, Gradebook, Group Pages, Help, Map, Quiz, Roster, Search, Student Pages, Test, Virtual Chat, Virtual Chat WhiteBoard). Chapter Six presents an analysis of the survey results. The collected data is analyzed in various ways in an attempt to glean as much information about the professors' perception of CourseInfo's effectiveness.

The general understanding gained from this study is that although most professors are average computer and internet users, they do not fully utilize CourseInfo due to a lack of knowledge about all of its features. Results show that

the features most frequently used are those that already exist in the real world. The Announcement tool, rated as most frequently used, is simply a new way of broadcasting information to all students in any particular class. The same can be said for email, although it also allows for one-on-one communication. Surprisingly, the Virtual Chat tools, which would allow for quite enhanced professor-student interaction, were rated as the most under-used features. The roster tool is yet another real world to web transformation and was thereby rated highly. The Search tool, which allowed for very effective and simplified information searching, was tremendously under utilized. Other very promising tools such as the Quiz and Test tools were also under utilized.

Although many new and innovative features were rated as being never used or unknown, most professors rated CourseInfo as being an effective aid in their teaching. It is my opinion that because the majority of professors surveyed only recently began to use the CourseInfo system, the results received from this survey do not accurately represent or demonstrate the effectiveness of CourseInfo as a web-based teaching tool. A repeat of this study in the following years may yield more accurate results due to the expected increase of familiarity with CourseInfo and its various features.

3 INTRODUCTION

The advent of the World Wide Web (WWW) has opened the door to countless new technologies. New methods of utilizing the connectivity that the WWW provides spring up at an astounding rate. In the past few years, new methods for utilizing the web in the field of education have emerged. Among these are the most popular packages BlackBoard CourseInfo, and WebCT. There is a third package, WebReCourse, which has been developed for and is in use at Worcester Polytechnic Institute. Although the main focus of this paper is BlackBoard CourseInfo, all three of these packages are examined in later sections.

Web-based teaching tools have taken teaching to a new level. They provide instructors with a more malleable medium for teaching. With these systems instructors can quickly present various types of educational material. Perhaps the greatest benefit of web-based teaching tools is the fact that they are located in one particular location. This centralization allows information to become accessible in the same way to all users as long as everyone has access to the WWW.

Traditional teaching methods do not always allow for equal sharing of course materials between students. For example, articles put on reserve in a library can only be accessed by one student or shared by a small group at any given time.

When the article is in use no other student can access it. The use of web-based tools allows for the dissemination of electronic documents that can be viewed by as many users as a web server can handle. Using these tools eliminates the problem of neglecting one student to provide for another.

Along with the ability to provide information equally to all users, web-based tools allow instructors to communicate with their students on a group or individual basis. Although this is currently limited to text-based and non-verbal communication, it provides the ability to support students without having to be in the same location.

This study aims to identify the effectiveness of these new web-based teaching tools for teaching. The specific package targeted is BlackBoard CourseInfo. Instructors at Worcester Polytechnic Institute in various fields of education participated in a survey aimed at identifying CourseInfo's strengths and weaknesses.

4 BACKGROUND

Web-based learning is a relatively new approach to education. Prior to the advent of the World Wide Web this technology was not available. The World Wide Web has become a tool that allows any user to connect to and browse information on remote sites. This ability to communicate with remote sites via the web is the core upon which web-based teaching tools are built. This chapter provides information on distance learning and existing web-based teaching tools.

4.1 Existing Web-Based Teaching Tools

The number of web-based teaching tools is continually increasing as the number of users on The World Wide Web increases. In this study three such tools are examined. WebReCourse is local to and was developed here at WPI; WebCT is a commercial product; BlackBoard CourseInfo is also a commercial product, but unlike WebCT, it is being used here at WPI.

4.1.1 WebReCourse

WebReCourse or Retargetable Course Generator was created with the instructor in mind. It is a secure software system made for web course creation, reuse and online course management.

Karen A. Lemone conceived the idea of WebReCourse and presented it at the ITS conference in Montreal, Canada in 1996. Sean White did the initial implementation as part of his MQP at Worcester Polytechnic Institute in 1998 [15]. Other project groups have since performed enhancements.

The World Wide Web allows for information sharing like never before and ReCourse takes full advantage of that. Though ReCourse can be used as a communication tool when there is a physical separation between the instructor and students, it is its ability to be used even when there is daily physical interaction between professor and student that will be examined.

ReCourse can and has been used on campus as a tool to aid instructors in providing course materials to all of their students in an easy manner. It accomplishes this by allowing instructors to centralize where students obtain class materials. It has allowed instructors to better prepare their students.

Another common thread between Distance Learning and ReCourse is their dependency upon the support of administration and faculty. It is this support that makes or breaks these technologies.

ReCourse enables instructors to better communicate with their students as well as assess their progress. It increases the amount of course work that can be made available to the students thus decreasing the number of

misunderstandings between instructor and student. This is accomplished through the use of the various tools that ReCourse provides.

The Site Map tool allows instructors to change the site layout at any time. This allows instructors to generate a new site map whenever sufficient changes have been made. The Global Replace tool allows instructors to change entries common to many of the pages from one point. It is especially useful for changing the date and semester information that occurs whenever courses are re-taught. The Toolbars and User Info tools allow instructors to control what tools should or should not be made available to students and to modify student information respectively.

Two of the more useful tools are the Grades and Quiz Generation tools. The Grade sheet is created automatically from the Users list. Instructors enter the name, number and weight of assignments all of which can be later modified when the instructor enters the grades. Using Quiz Generation, instructors can create quizzes for their students. These quizzes can be used as homework assignments. The final tool available to instructors is the Group Mail tool. This tool increases instructors' ability to communicate with numerous groups when doing collaborative learning.

All of these features are intended to make the use of this system more appealing for instructors. By allowing this level of customization and control it aims to encourage its utilization.

4.1.2 WebCT

WebCT is a prominent learning tool that allows for the creation of educational environments via the World-Wide-Web. It was developed by a group led by Murray W. Goldberg in the Department of Computer Science at the University of British Columbia [15]. Its purpose is to aid instructors to quickly create sophisticated web-based educational systems independent of the subject matter.

WebCT accomplishes teaching via the web in three ways. First it allows the user to design the layout and color schemes. Secondly, it provides *educational tools* to aide with learning, communication and collaboration. Finally, it provides administrative *tools* to assist the instructor with course management. These three features are at the core of WebCT and define the product.

The system separates users into two groups, the student and the instructor. Both groups are provided with a set of tools, but the instructor can do site customizations. When logged on as the instructor the user sees the student view of the site along with a customization toolbar at the bottom of the site. As the instructor peruses different pages he or she may edit that page to either display more or less information, change its appearance (color, and images), or any of

many other page specific options. The instructor has near total control of the course site. The instructor can edit everything about a page from its content to its background and font style. Students on the other hand are not provided with as much control over the environment.

4.1.2.1 Student Tools

The student is greeted with a single frame layout for the site. The student view is that of the upper frame of the web page shown in Figure 4-1. Students are presented with eight hyperlinks and pictures (icons) linked respectively to the following areas.

Course Content: This presents a listing of all pages associated with the course that are currently available for viewing.

Bulletins: This links to the public article posting area commonly referred to as the bulletin board. Here the student may view articles sent either by the instructor, other students or the grader. He or she may also post an article of their own in response to another or start their own discussion. In addition the student may also search for content, sender, date of sending, and other article related information.

Mail: Here messages sent to or received from specific individuals are displayed. Messages that are in response to others are indented to show their association.

There are options that can be set to customize this area and folders can be created or deleted as the student sees fit.

Information: This is a listing of frequently asked questions and answers to those questions.

Calendar: Here students can view important course events (exam dates, etc.) or personal events in a monthly fashion. They may select a specific date to edit their own events or view a more detailed instructor posted event.

Quiz: This is a listing of all quizzes whether already taken by the student or not. If not taken the student may select a quiz to take; otherwise, they may review their answers compared to the correct ones and see the point break down per question.

Tools: This hyperlink presents another listing of tools. They include *Compile*, which generates custom study guides; *Resume session*, which resumes reading notes; *Glossary*, which searches the course glossary; *Search*, which searches the course content; *Chat*, which allows online chatting.

Link: This presents a listing of general tools as well as other links. They include *My record*, which displays scores and performance history; *My Progress*, which allows tracking information for articles read, pages visited etc.; *Homepages* – listing of, and links to student pages; *Presentations*, which provides a listing of,

and links to student presentations; *Password*, which provides an area for changing current student password; *WebCT*, which links to the WebCT homepage.

4.1.2.2 Instructor Tools

Instructors can use the system to create complete courses or supplement existing ones. They are given the ability to customize the main page, organize the layout of icons on the main page, adjust course settings, perform course management, update the student view, as well as interacting with the file manager. The instructor tools are shown in the lower frame of the web page shown in Figure 4-1.



Figure 4-1 WebCT Main Page

4.1.3 BlackBoard CourseInfo

BlackBoard CourseInfo uses a “point-and-click” system. This eliminates the need for users to be familiar with HTML (Hypertext Markup Language) or any other language necessary for using the web as a tool.

It allows the incorporation of word processing, audio, video and even presentation files. The ability to easily convert these multimedia files to

streaming¹ formats (both audio and video) without the need for external technology is another plus.

A subtle but very important part of CourseInfo is its use of color schemes. They have found the middle ground between attractive and non-disruptive presentation. The consistency in the color scheme is reassuring and allows the user to remain focused on the task.

CourseInfo divides its users into three categories, the student, the instructor and the academic computing professional. Each group has a unique tool set which allows for customizing the content and for online student management (instructor and academic computer professional). Students do not have a unique tool set of their own. Instead they share tools with the instructor. The instructor however, has a tool set completely independent of what they share with the students.

4.1.3.1 Academic Computing Professional Tools

Users at the Academic Computing Professional (ACP) level have access to the most powerful tools BlackBoard CourseInfo has to offer. ACP users have full control over courses. They can copy, move, import and even export entire courses using the Course Copy, Move, Import and Export Tools respectively.

¹ Streaming is the real-time transmission of some presentation over a network

Course backup and restoration tools as well as student account creation and deletion tools are yet another collection of tools made available to users at the ACP level. This arsenal of tools allows ACP users to administer the entire learning system with great flexibility and in-depth customization from a central point.

4.1.3.2 Shared Instructor / Student Tools

Instructors and Students share certain tools that aid in their ability to communicate with each other. These tools allow instructors and students to communicate with each other using e-mail, chatting, forming discussions or by working in groups. Figure 4-2 shows the web page that students encounter on login. It also shows the tools shared between student and instructor.

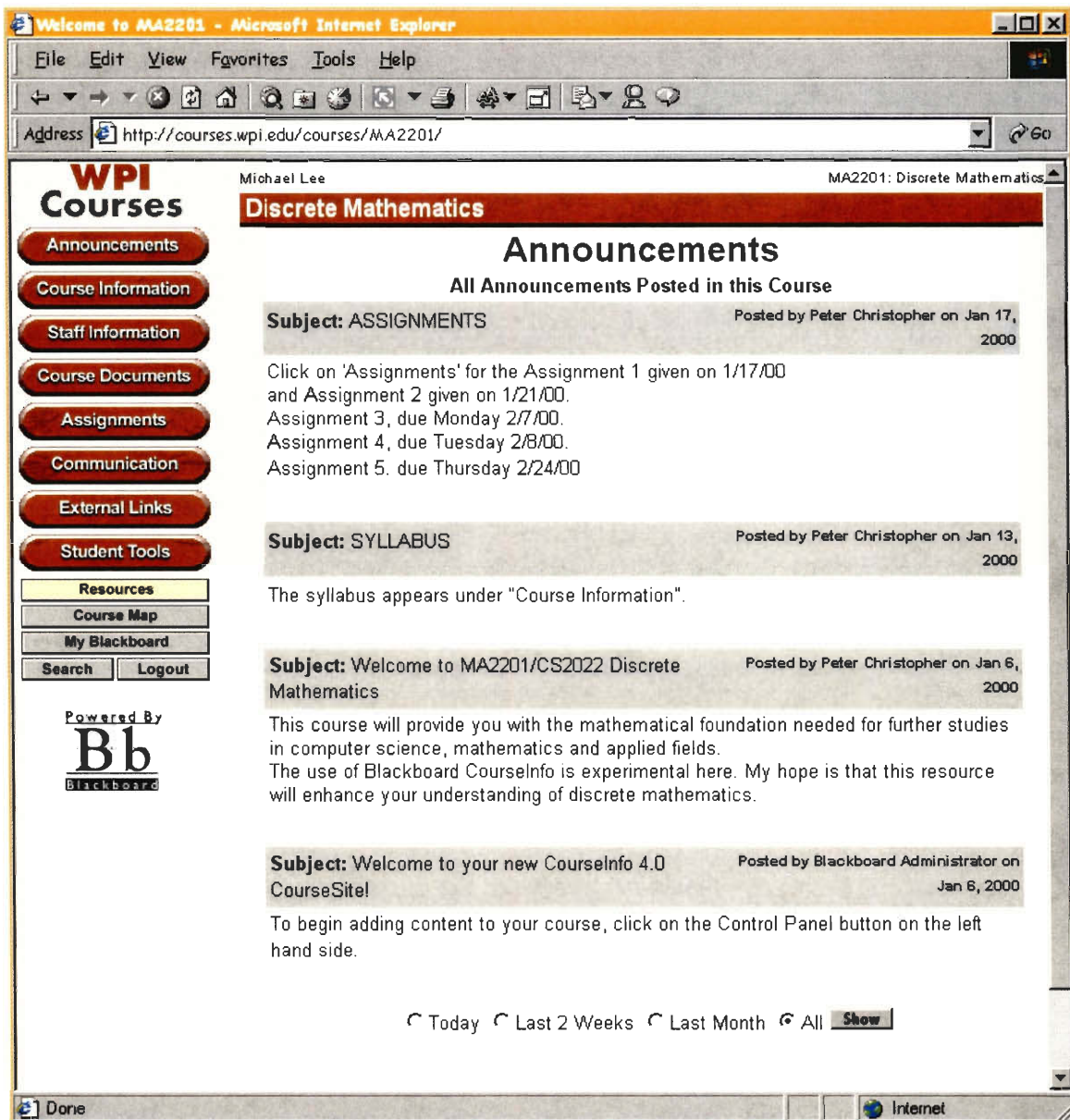


Figure 4-2 BlackBoard CourseInfo [Student Main Page]

The Course Calendar and Announcement tools provide users with a means of planning events for specific dates and publishing a message about the events in the form of an announcement for all to see. Students can add events for specific

dates and times to a calendar. The calendar's Month view allows them to see with a glance if there is a Personal, Institution or Course event scheduled.

The Calendar and Announcement system is most similar to the real-world use of a bulletin board. In the event that users wish to directly send information to each other, a Send E-mail tool is provided. It allows e-mail to be sent to specific people or groups. To send a file, perhaps an assignment as a word document, students can upload it to the instructor using the DropBox tool. Instructors can likewise upload files to students using the DropBox tool.

The Student Roster tool provides a listing of all the students currently enrolled in the course. The list that it produces can be sorted by first or last name or by email. Instructors and students can also obtain a listing of student-specific information pages as well as group pages by using the Student Pages and Group Pages respectively. The instructor creates groups; the group page content is the student's responsibility.

The Discussion Board tool gives users the ability to post questions or replies to the entire class. This is useful when there are questions that someone other than the instructor or teaching assistants (TAs) may be able to answer. This tool does not require the presence of a recipient at the time of posting. When a situation where real-time communication with an instructor and or TA is needed, there is the Virtual Chat tool. The Virtual Chat tool allows Instructors as well as Teaching

Assistants to chat with students in real-time. In addition to chatting there is a whiteboard that allows collaborative browsing as well as drawing; both browsing and drawing can be done at the same time. The Virtual Chat tool is very useful when students require immediate feedback and it allows both instructors and students to use drawing as an aid in communicating their ideas.

A Search tool is provided to allow instructors and students to search for information in Course Information, Assignments, Staff Information, Course Documents, Course Documents or all of those areas.

Finally, there is a Course Map that outlines the various areas for the course. In the event that users still cannot find the information they need, or are curious about unexplored features, online manuals are provided for both instructors as well as students. The manuals are robust help tools that provide instructions and help in achieving many tasks using the CourseInfo system. Instructors' manuals contain information specific to their tool as does the student's manual.

4.1.3.3 Unique Instructor Tools

In addition to the tools shared with students mentioned in Section 4.1.3.2, instructors have a unique set of tools. Most of these are assessment and management tools, which aid instructors in gauging class progress. The User Management area allows for the modification of student accounts as well as that of groups.

The Assessment Manager tool allows the instructor to create quizzes or exams to test students. The tool can also be used to view the results of all exams and quizzes issued. Another tool in the assessment group is the Pool Manager. The Pool Manager tool shows a grouping of questions posted to the instructor.

Two remaining tools are the Online Gradebook tool and the Course Statistics tool. The Online Gradebook allows for assessment grading. Instructors can decide on the point break down for a particular assignment. The Course Statistics tool allows instructors to generate reports regarding the usage of the course's various areas individually or a general usage report.

4.1.3.4 Student Tools

Although students share the majority of their tools with the instructor, there are a few that they can claim for themselves. These tools are Change Information, Check Your Grade and Edit Your Homepage.

Change Your Information: Students can change their identification information using this tool. The changes are rippled through every course they are enrolled for.

Check Your Grade: A listing of grades for specific assignments is produced when this tool is used.

Edit Your Homepage: Students can add or remove links to or from their personal page that is created by default for their course. There is also a place for students to post a picture of themselves.

5 METHODOLOGY

5.1 Surveying

There are various methods available to perform a survey. According to the Survey Research Center [13] there are four. These four are the public opinion poll, the market research survey, the descriptive statistical survey, and the survey for social research. Each is described in the following sub-sections.

5.1.1 Public Opinion Poll Survey

Public opinion poll surveys have existed since 1824 [13]. At that time they were in use by newspapers for polling public opinion on elections, public affairs, and other topics. These surveys are still used today in elections as is witnessed when television news stations display Gallup poll results.

5.1.2 Market Research Survey

This type of survey is utilized by businesses. They use this survey to determine consumer needs as well as the effectiveness of marketing strategies. The survey is also used to identify consumers' attitudes towards current products and to sample their responses to new product ideas.

5.1.3 Descriptive Statistical Survey

The government uses descriptive Statistical surveys to gather general information about the population. This information can be used for taxation, military, and/or legislative purposes. The most common example of such a survey is that which the Census Bureau conducts.

5.1.4 Survey for Social Research

This survey is used to gather information about the social and economic conditions faced by the population or specific sections of the population. The results from such a survey can yield information such as a better understanding of human beings and how we survive in our specific social settings.

5.2 Web Survey Design

The web survey [Appendix A] was designed to be simple and effective. It is a combination of all four of the survey types mentioned in the previous section. The decision to use an electronic rather than paper survey, was made due to the many benefits of electronic surveying. The web survey allowed for fast, distributed yet centralized surveying. By creating the survey at a specific address on The World Wide Web many instructors from various locations could access the survey as long as they had access to the web. In its electronic form the survey could also be printed and completed in a traditional paper format, thus appealing to various instructors' personal preferences.

The survey is broken up into sections, each focusing on specific information. This was done to simplify the task of participating in a survey. The seven sections used are Introduction, Identification, Computer Experience, Perception of Computers, Web-based Teaching Experience, BlackBoard CourseInfo Features, and Additional Comments. The specifics of these sections are detailed in the following sub-sections.

5.2.1 Introduction

This section's purpose is to provide those participating in the survey (instructors) with information about the survey and how their individual responses will be used. Instructors are also informed about the amount of time that the survey is expected to take to complete. A screenshot of this section can be found in Appendix A Figure 9-1.

5.2.2 Identification

The identification section is provided mainly to allow distinction between instructors' responses. A response file for the identified instructor is created upon survey submission. Giving instructors the ability to select their name allowed the survey to be more personalized. A screenshot of this section can be found in Appendix A Figure 9-1.

5.2.3 Computer Experience

This section gathers information about how avid a computer user the instructor is. Instructors are asked to identify their field of teaching, the number of hours dedicated to computer use per day, and the number of tasks for which they use computers. A screenshot of this section can be found in Appendix A Figure 9-2.

5.2.4 Perception of Computers

This section works in tandem with the Computer Experience section to gather background information about each instructor. It is used to gain insight into the instructor's outlook on computers in general. This information may identify a bias on the instructor's side for or against computers in general. Such a bias would in turn show a bias for or against web-based teaching tools. A screenshot of this section can be found in Appendix A Figure 9-2.

5.2.5 Web-based Teaching Experience

This section is the first to begin focusing on web-based teaching tools. Information regarding an instructor's experience with web-based teaching is gathered in this section. Instructors are asked to identify the number of web-based teaching products they have used, the overall teaching effect of the product(s), and their (the instructor's) general feeling after using the product(s). A screenshot of this section can be found in Appendix A Figure 9-3.

5.2.6 BlackBoard CourseInfo Features

This is the largest and most in-depth section of the web survey. Instructors are asked to identify their frequency of use for various BlackBoard CourseInfo features. The majority of data analysis is done on information gathered in this section. A screenshot of this section can be found in Appendix A Figure 9-4 and Figure 9-5.

5.2.7 Additional Comments

This is the last section of the web survey. It allows instructors to add additional comments for or against the BlackBoard CourseInfo system. More personal responses can be obtained in this section. A screenshot of this section can be found in Appendix A Figure 9-6.

5.3 Web Survey Implementation

The web survey was created using standard HTML and Common Gateway Interface (CGI). CGI allows web pages to communicate data with a program or script residing on a server somewhere on the World Wide Web. The language used for creating the CGI script is PERL, or Practical Extraction and Report Language.

Instructors are presented with a simple checkbox style interface. For identification they select their name from a drop-down list. All other fields, with

the exception of the additional comments text area, are check boxes. Unknown to the instructors each text box has a unique name linked to a specific section in the survey. When the instructor completes the survey and clicks the submit button shown in Appendix A Figure 9-6, the selected identification, check boxes and any additional information entered is passed from the web page to the CGI script in strings with simple delimiters. The CGI script parses these strings in order to obtain the information contained within. The selected identification (instructor's name) information obtained is used to create a plaintext file. The plaintext file stores each of the instructor's responses including any additional comments. If an instructor submits the survey multiple times, the plaintext file is updated and the entire history of all responses is kept.

6 RESULTS

This study has attempted to identify the strengths and weaknesses of one particular web-based teaching tool, BlackBoard CourseInfo. Twenty-two professors at Worcester Polytechnic Institute participated in the study. The following section will detail the information gained from surveying these professors.

6.1 Data Analysis

6.1.1 Computer Experience & Perception

This category was created to gather background information regarding to computer use, familiarity, and perception. First professors identified their field of education; results show that 49% of professors surveyed came from the Biology, Chemistry and Physics (pure science) departments; 27% from Engineering departments; 9% from the Humanities; 5% from Computer Science; 5% from the Management department; 5% from Social Science. This data is represented graphically in Figure 6-1.

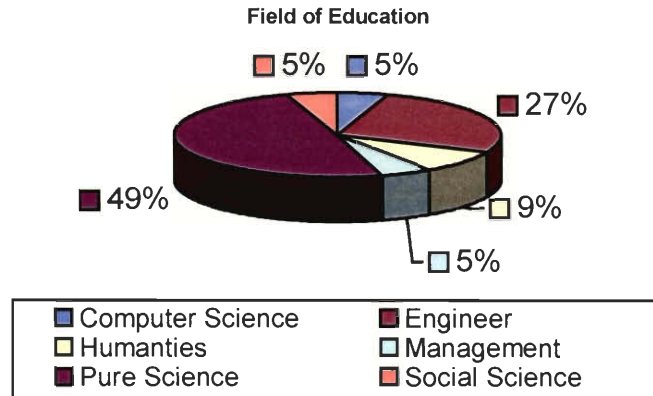


Figure 6-1 Field of Education Chart

The majority of professors, 50%, reported using computers for five or more hours per day. Another 45% of professors reported using computers between two and four hours a day; only 5% of the professors surveyed reporting using computers for less than one hour per day.

As shown in Figure 6-2, 68% of professors used computers to perform five or more tasks while 27% used computers for two to four tasks. 73% of professors reported feeling comfortable when using computers and the remaining 23% reported feeling in control.

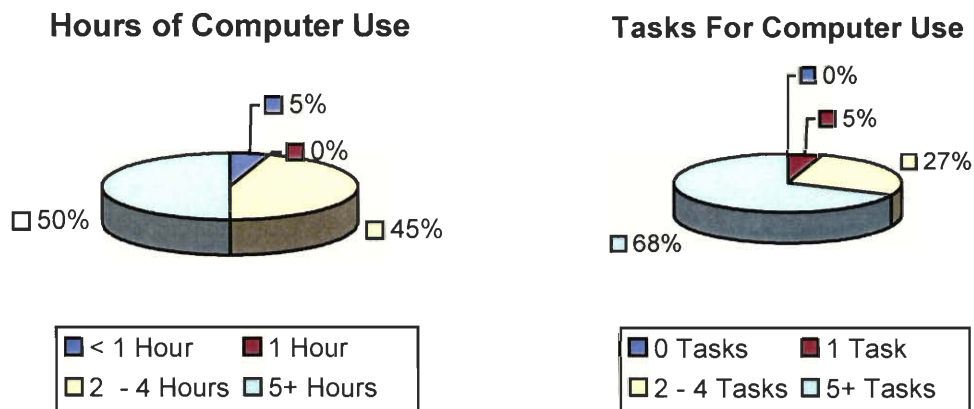


Figure 6-2 Hours & Tasks of Computer Use

Professors were questioned on their confidence level when using the Internet because web-based teaching tools require intense interaction with The Web. As show in Figure 6-3, 81% felt comfortable during daily Internet use while 19% felt in control. It is important to note that no professor reported low Internet confidence levels. In addition 68% of professors reported that they found computers to be useful tools; the remaining 32% reported that computers were indispensable. Once again no professor reported computers as being useless tools.

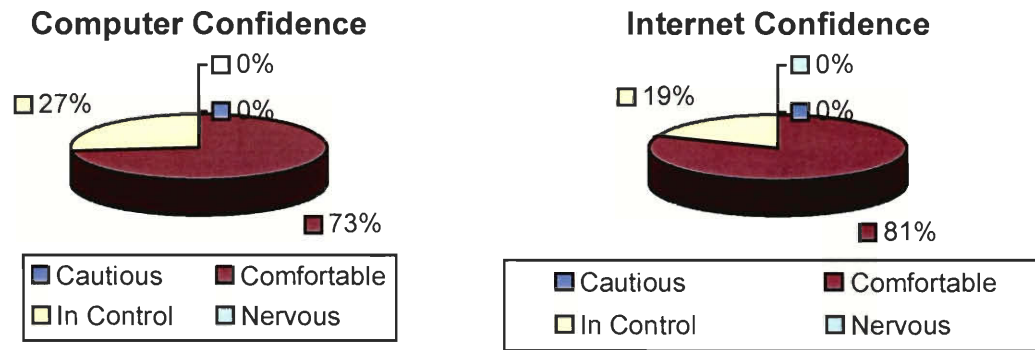


Figure 6-3 Computer & Internet Confidence

The results from this section show that in general, the professors surveyed are avid computer users, using computers for five or more hours a day to perform five or more tasks. It was also observed that all professors found general computer and Internet use to be comfortable and none reported having problems or negative biases towards computer or Internet use. All professors also reported that computers are a useful aid in daily teaching routines.

6.1.2 Web-based Teaching Experience

This section of the survey was created to gather information about professors' web-based teaching experience. Professors with such experience were asked to identify the number of systems used, the system(s) usability, as well as the effect that the system had on teaching.

Figure 6-4 shows that of the twenty-two professors surveyed, 36% did not have web-based teaching experience; of the 64% who did, 36% of those had

experience with two to four systems, 23% with one system, and 5% had experience with five or more systems.

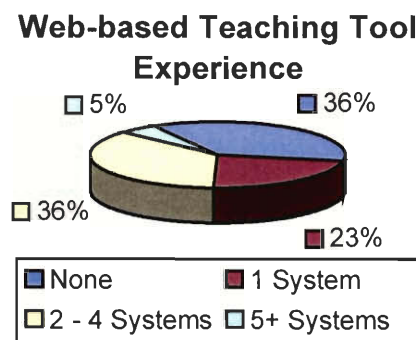


Figure 6-4 Web-based Teaching Tool Experience

As shown in Figure 6-5, the majority (79%) of professors with web-based teaching experience reported that they felt productive while using the web-based system(s). It was also observed that 21% of professors also found these systems to be frustrating. Although 21% found the system frustrating, it is important to note that all professors reported positive effects from using the web-based systems. In fact, as shown in Figure 6-5, 86% of professors reported that web-based teaching tools aided their teaching, and 14% reported that these tools actually enhanced the teaching experience.

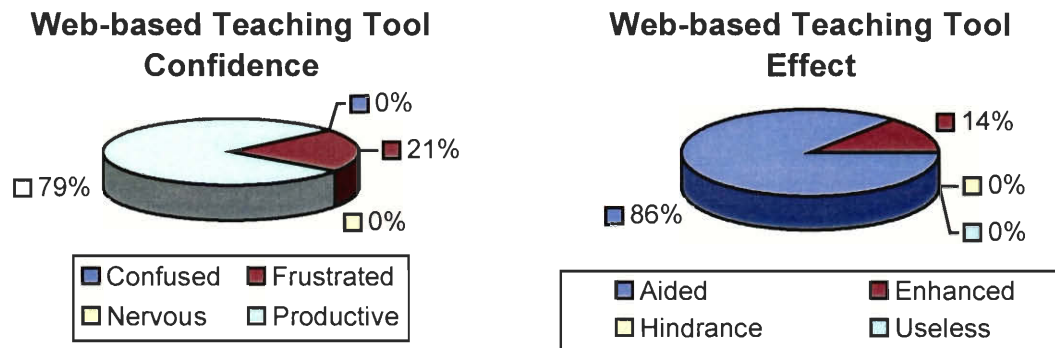


Figure 6-5 Web-based Teaching Tool Confidence & Effect

6.1.3 Use of BlackBoard CourseInfo Features

In this section, professors' responses to the frequency of use of particular BlackBoard CourseInfo features are recorded and analyzed. Professors were asked to rate their use of each feature using a rating of frequently, sometimes, rarely, never, or unaware.

The analysis of seventeen of BlackBoard CourseInfo's features (shown in Figure 6-6 through Figure 6-9) was broken up into four categories; frequently used features, moderately used features, unknown features and never used features.

The analysis of frequently used features showed that the most frequently used feature was the Announcement feature. 31% of professors reported using this tool frequently. The Email and Gradebook tools were the next most frequently used tools, with respective frequency of uses at 16% and 13%. The remaining frequency breakdown is shown in Figure 6-6.

Frequently Used BlackBoard CourseInfo Features

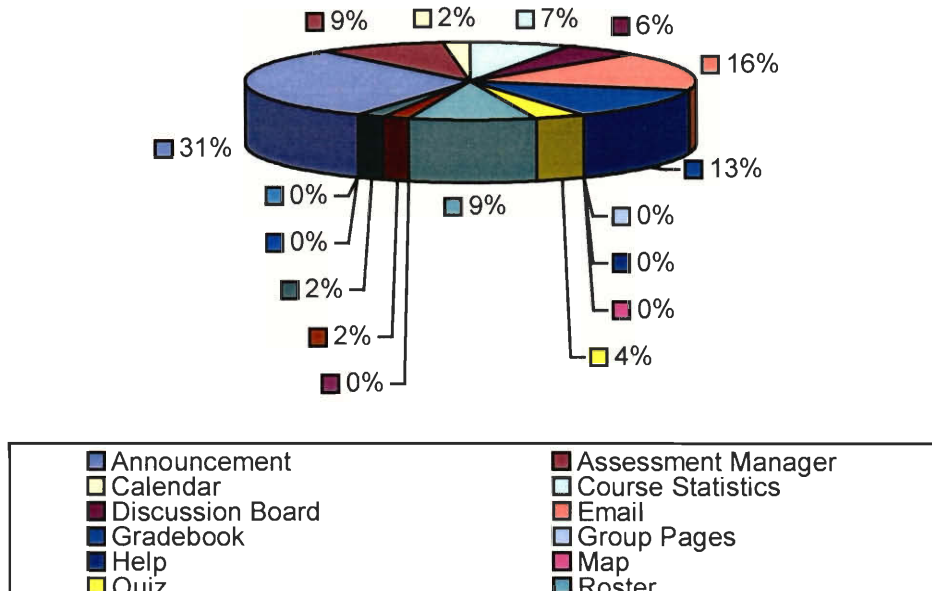


Figure 6-6 Frequently Used CourseInfo Features

The analysis of features which professors were unaware of showed that professors were most unaware of the Search feature. 28% of professors reported being unaware of the tool's existence, 20% reported being unaware of the Map feature, 12% the Email feature and 12% the Calendar tools. The remaining percentage breakdown is shown in Figure 6-7.

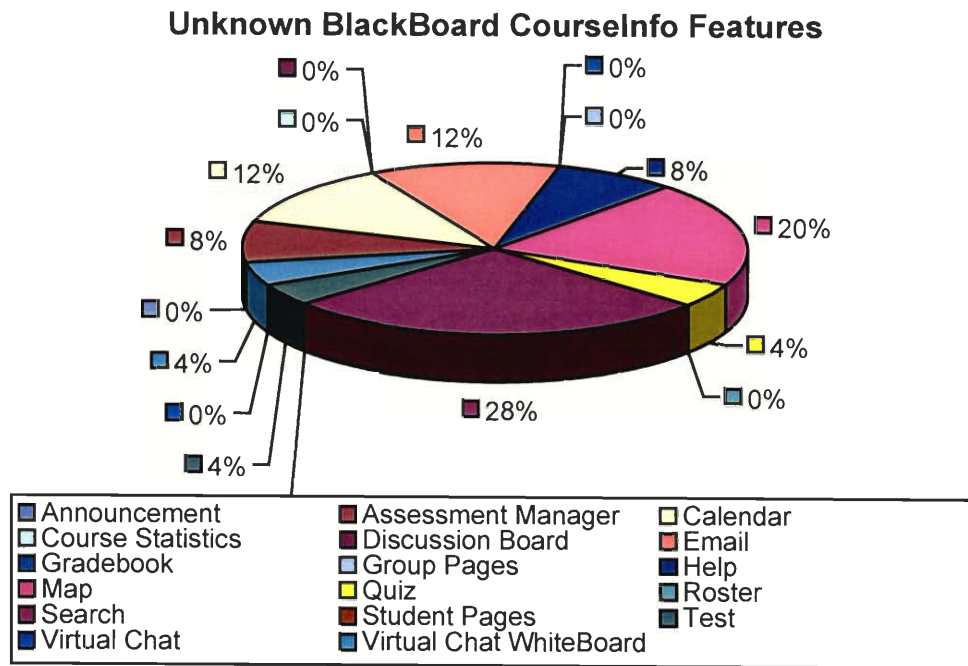


Figure 6-7 Unknown Features

The analysis of features that were never used by professors showed that the Virtual Chat Tools were most under-used. 20% of professors reported never using the Virtual Chat Tool, or it's sub tool, the WhiteBoard. The Test Quiz and Group Pages tools were the next most under-used set of tools. For each group 8% of professors reported never using those tools. The remaining percentage breakdown is shown in Figure 6-8.

BlackBoard CourseInfo Features Never Used

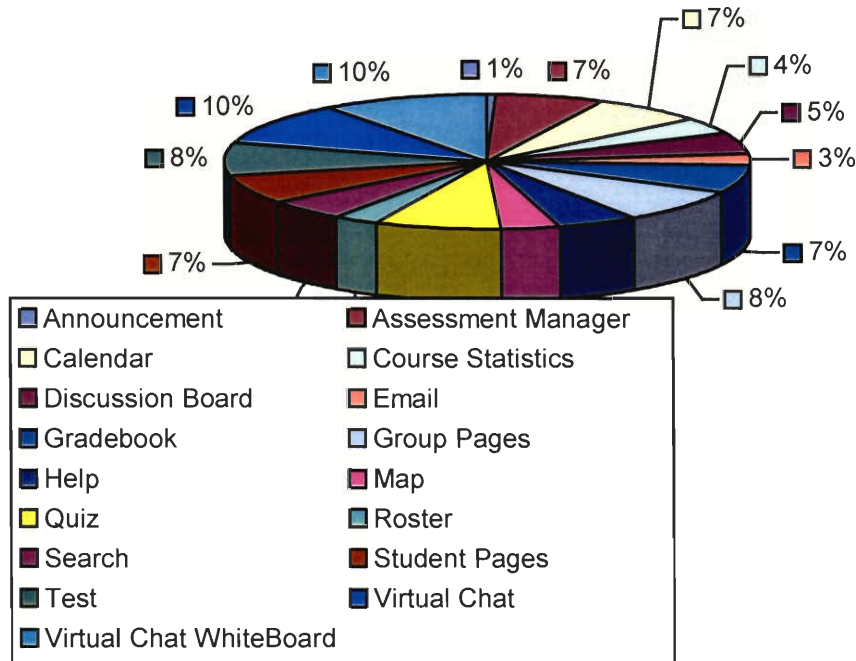


Figure 6-8 Unused CourseInfo Features

Figure 6-9 shows four response groupings in one graph. Frequently used, Moderately used, Unused and Unknown features are all displayed in this graph. Analysis shows that for most of the features professors reported being unaware of, those professors who were aware of such features generally reported never using the feature. Additional information gained from analyzing this graph shows that the features that were found most useful were the Announcement, Email, Roster, and Gradebook features.

BlackBoard CourseInfo Feature Use

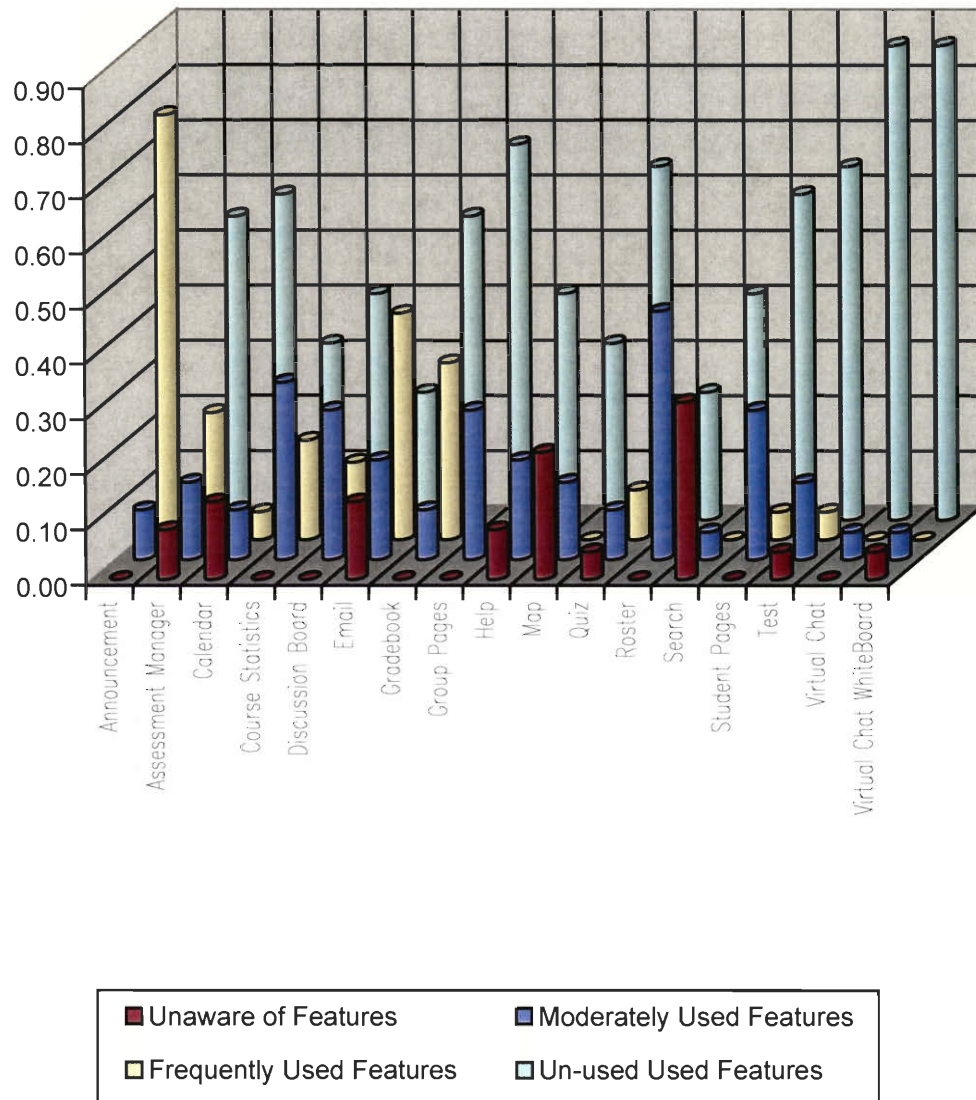


Figure 6-9 Overall CourseInfo Feature Use

7 CONCLUSIONS

7.1 Summary

This project's goal was to perform an in-depth, study of the effectiveness of CourseInfo as a Web-based Teaching Tool. Using a web survey, specific data such as ease of use, and frequency of use was obtained from the twenty-two professors participating in the study.

The results obtained from the survey show that most professors find CourseInfo to be a useful tool for teaching. As discussed in the Results [Section 6], the professors surveyed were all average computer users with ample exposure to The Web. This familiarity with computing eliminated computer illiteracy as a contributing factor to any dissatisfaction with CourseInfo. Eliminating computer illiteracy as a factor allowed the study to focus on CourseInfo's features and their ease and frequency of use.

In general CourseInfo was found to be a useful teaching aid, and the professors surveyed encouraged its use despite the fact that they were not knowledgeable of many of its features.

7.2 Future Work

This has been the first year CourseInfo has been used here at WPI and so the results may not completely demonstrate CourseInfo's true effectiveness. Performing this survey again in the future will yield better results. At the present time, most professors have not been fully educated about CourseInfo's various features. This lack of knowledge is clearly visible when analyzing the survey's results.

A more successful project might be to have two groups of professors, one group using CourseInfo and another not. Both groups should be put on a parallel schedule. They should both be surveyed first; next the group using CourseInfo should be trained to use CourseInfo. A plan for gauging the effectiveness of the non-CourseInfo group's teaching should also be established. At the end of the prescribed study period, both groups should be surveyed and/or interviewed about the effectiveness of their teaching.

This approach will more clearly demonstrate the difference that CourseInfo can make when teaching. By looking at a group not using the tool, versus a group that is, the effectiveness should be easier to identify.

8 BIBLIOGRAPHY

1. Acker, Stephen R., "Space, Collaboration, and the Credible City: Academic Work in the Virtual University",

<http://www.ascusc.org/jcmc/vol1/issue1/acker/ACKTEXT.HTM>. (1995)

The author discusses the role of physical space in collaborative virtual endeavors, and "asks collaborators to be sensitive to the role that physical space plays in creative human endeavors, and to consider the impact on work accomplished in merged electronic and physical work environments." – explanation provided on site

2. Bourne, John B., et al. "Paradigms for On-line Learning",

<http://www.aln.org/alnweb/journal/issue2/assee.htm>. (1997)

The author "examines paradigms used in on-line learning" and discusses the "prospects for on-line education and the challenges" that it faces. – explanation provided on site

3. Gellmann-Danley, Barbara, Fetzner, Marie J., "Asking the Really Tough Questions: Policy Issues for Distance Learning",

<http://www.westga.edu/~distance/danley11.html>. (1998)

The authors assert that implementing the technological dimension of a distance learning program is perhaps the easiest component, often at the expense of planning and policy development. – explanation provided on site

4. Hannum, Wallace, "Distance Education",

<http://www.soe.unc.edu/hannum/EDCI%20199/DISED/index.htm>. (1998)

A well-documented site with links to history, criteria, benefits, etc. About "Distance Learning".

5. Hyatt, Sue. "Distance Learning in the Millenium: Where is it Going?",

<http://www.westga.edu/~distance/hyatt11.html>. (1998)

A discussion of the past and possible future directions of distance learning. – explanation provided on site

6. Krauth, Barbara, "Principles of Good Practice for Distance Learning Programs", <http://www.educause.edu/ir/library/text/CEM9613.txt> . (1996)

Discusses a project of the Western Cooperative for Educational Telecommunications. The author addresses two basic questions: What does "quality" mean in distance learning, and how can quality be addressed? – explanation provided on site

7. Lemone, Karen, "Web-based Teaching Tools: Addressing the Paradigm Shift", <http://www.cs.wpi.edu/~kal/comcon99.html>. (1999)

Looks at Web based teaching tools from the teacher's perspective. Reports on what discoveries made in field, resulting methods, and improvements made to the system for students.

8. Milken Family Foundation, "MEA - Education Resources - Distance Learning", <http://www.mff.org/distancelearning.taf>. (2000)

" . . . offers a listing of Web sites that help educators implement distance education both as teachers and as students of teaching"

9. @ResearchInfo.com, ResearchInfo.com Web Survey Tutorial, <http://www.researchinfo.com/websurveys/>. (1999)

This is a simple web-surveying tutorial. It shows easy methods of creating surveys for use on the World Wide Web.

10. Rosenberg, Morris, "The Logic of Survey Analysis", Basic Books, Inc., Publishers, New York. (1968)

Provides information about surveying techniques and the history of surveying.

11. Sloan, Bernie, "General Information on Distance Learning", <http://www.lis.uiuc.edu/%7Eb-sloan/libdist.htm> - General, Graduate School of Library and Information Science University of Illinois at Urbana-Champaign. (1999)

General information on Distance Learning, links to papers and other informative sites with information about Distance Learning.

12. Sudman, Bradburn, "Response Effects in Surveys: A Review and Synthesis", National Opinion Research Center (norc), Aldine Publishing Company, Chicago. (1974)

A literature review of various studies with the treatment of results as independent respondents.

13. Survey Research Center Institute for Social Research, "Interviewer's Manual revised edition", University of Michigan Ann Arbor. (1976)

An interviewer's guide to surveying techniques and data analysis.

14. University of Maryland University College, "Models of Distance Education", <http://www.umuc.edu/ide/modlmenu.html> - overview. (1997)

Provides information about Distance Learning and the various approaches to it. This site also provides an in-depth guide to creating a distance learning system.

15. WebCT.com, <http://www.webct.com>. (2000)

Provides information about WebCT. This is WebCT's main site.

16. White, Sean, "MQP Report" Unpublished, WPI. (1998)

9 LIST OF APPENDICES

Appendix A: web survey

Appendix B: results from web survey

Appendix C: additional comments from web survey

9.1 Appendix A – Web Survey

BlackBoard CourseInfo Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wpi.edu/~mailee/IQPSurvey/> Go

Introduction

This survey is part of an IQP that involves studying the effect of web-based teaching tools. The survey begins by asking general questions regarding computing experience, perception of computers, web-based teaching experience and finally, it will ask you to indicate your frequency of use for particular BlackBoard CourseInfo features. It should take 5-10 minutes to complete. Please feel free to add comments in the additional comments section.

Thank you

Identification

Please select your name from this list.

Avram, Michal

Done Internet

Figure 9-1 Web Survey [Introduction & Identification Sections]

BlackBoard CourseInfo Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wpi.edu/~mailee/IQP/Survey/> Go

Computer Experience

What is your field of education?	How many hours/day do you use a computer?	For how many tasks do you use the computer?
<input type="checkbox"/> Computer Science	<input type="checkbox"/> less than 1	<input type="checkbox"/> none
<input type="checkbox"/> Engineering	<input type="checkbox"/> 1	<input type="checkbox"/> 1
<input type="checkbox"/> Humanities / Liberal Arts	<input type="checkbox"/> 2 - 4	<input type="checkbox"/> 2 - 4
<input type="checkbox"/> Management	<input type="checkbox"/> 5 or more	<input type="checkbox"/> 5 or more
<input type="checkbox"/> Pure Sciences (Biology, Chemistry, Physics)		
<input type="checkbox"/> Social Scientist		

Perception of Computers

How do you feel when using a computer?	How do you feel when using the Internet?	How useful do you feel computers are?
<input type="checkbox"/> nervous	<input type="checkbox"/> nervous	<input type="checkbox"/> indispensable
<input type="checkbox"/> cautious / hesitant	<input type="checkbox"/> cautious / hesitant	<input type="checkbox"/> useful
<input type="checkbox"/> comfortable	<input type="checkbox"/> comfortable	<input type="checkbox"/> limiting
<input type="checkbox"/> in control	<input type="checkbox"/> in control	<input type="checkbox"/> none at all

Done Internet

Figure 9-2 Web Survey [Computer Experience & Perception of Computers]

BlackBoard CourseInfo Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wpi.edu/~mailee/IQP/Survey/> Go

Web-based Teaching Experience

You may skip this section if BlackBoard CourseInfo is the first web-based teaching tool you've used.

<p>How many web-based teaching products have you used?</p> <p><input type="checkbox"/> none</p> <p><input type="checkbox"/> 1</p> <p><input type="checkbox"/> 2 - 4</p> <p><input type="checkbox"/> 5 or more</p>	<p>What was the general effect of the product(s) on teaching?</p> <p><input type="checkbox"/> enhanced</p> <p><input type="checkbox"/> useful aide</p> <p><input type="checkbox"/> hindered</p> <p><input type="checkbox"/> no effect</p>	<p>What was your general feeling after using the product(s)?</p> <p><input type="checkbox"/> productive</p> <p><input type="checkbox"/> confused</p> <p><input type="checkbox"/> nervous</p> <p><input type="checkbox"/> frustrated / irritated</p>
--	--	--

Done Internet

Figure 9-3 Web Survey [Web-based Teaching Experience]

BlackBoard CourseInfo Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wpi.edu/~mailee/IQPSurvey/> Go

BlackBoard CourseInfo Features

How often do you use these features?
(Please check only one box in response)

Search	Calendar	E-mail
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

How often do you use these features?
(Please check only one box in response)

Announcement	Course Map	Help Manual
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

How often do you use these features?
(Please check only one box in response)

Student Roster	Student Pages	Group Pages
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

Done Internet

Figure 9-4 Web Survey [BlackBoard CourseInfo Features]

BlackBoard CourseInfo Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wpi.edu/~mailee/IQP/Survey/> Go

How often do you use these features?
(Please check only one box in response)

Discussion Board	Virtual Chat	Virtual Chat's Whiteboard
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

How often do you use these features?
(Please check only one box in response)

Assessment Manager	Quiz Creation	Test Creation
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

Gradebook	Course Statistics
<input type="checkbox"/> unaware of feature	<input type="checkbox"/> unaware of feature
<input type="checkbox"/> never	<input type="checkbox"/> never
<input type="checkbox"/> rarely	<input type="checkbox"/> rarely
<input type="checkbox"/> sometimes	<input type="checkbox"/> sometimes
<input type="checkbox"/> frequently	<input type="checkbox"/> frequently

Done Internet

Figure 9-5 Web Survey [BlackBoard CourseInfo Features (cont.)]

The screenshot shows a Microsoft Internet Explorer window titled "BlackBoard CourseInfo Survey - Microsoft Internet Explorer". The address bar displays "http://www.wpi.edu/~mailee/IQP/Survey/". The main content area has a yellow header with the title "Additional Comments". Below the header, a text prompt reads: "Please feel free to add comments regarding web-based teaching in general or about BlackBoard CourseInfo." This is followed by a large, empty text input area with a vertical scrollbar on the right. At the bottom of the form, there is a yellow bar containing a "Reset" button on the left, the text "Please click submit when complete." in the center, and a "Submit" button on the right. The browser's status bar at the bottom shows "Done" and "Internet".

Figure 9-6 Web Survey [Additional Comments]

9.2 Appendix B – Results From Web Survey

Features		Instructors																						Percentage of Responses
		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
Computer Experience																								
Field of Education																								
Computer Science							1																0.05	
Engineer				1		1			1						1			1				1	0.27	
Humanties										1			1										0.09	
Management								1															0.05	
Pure Science		1	1		1						1	1		1		1	1		1		1	1	0.50	
Social Science																				1			0.05	
Hours of Computer Use per Day																								
< 1 Hour													1										0.05	
1 Hour																							0.00	
2 - 4 Hours		1	1			1		1				1		1	1		1				1	1	0.45	
5+ Hours					1	1		1		1	1	1				1		1	1	1		1	0.50	
Tasks Requiring Computer Use																								
0 Tasks																							0.00	
1 Task													1										0.05	
2 - 4 Tasks		1	1													1	1		1		1		0.27	
5+ Tasks					1	1	1	1	1	1	1	1		1	1			1		1		1	1	0.68

		Instructors																						Percentage of Responses	
Features		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22		
		Perception of Computers																							
Mindset During Computer Use																									
Cautious																									0.00
Comfortable		1		1	1	1	1			1	1	1	1	1	1	1	1			1	1			1	0.73
In Control			1					1	1									1	1				1		0.27
Nervous																									0.00
Mindset During Internet Use																									
Cautious																									0.00
Comfortable		1		1	1	1	1			1	1	1	1	1	1	1	1			1	1	1	1		0.77
In Control			1					1	1										1						0.18
Nervous																									0.00
Computer Usefulness																									
Indispensible		1	1	1	1	1	1	1			1	1				1		1	1	1		1	1		0.68
Limiting																									0.00
Useful									1	1			1	1	1		1				1				0.32
Useless																									0.00

Features		Instructors																						Percentage of Responses	
		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22		
Systems Used		Web-based Teaching Experience																							
None					1					1		1	1		1		1			1		1		0.36	
1 System		1		1		1	1				1													0.23	
2 - 4 Systems			1					1	1					1		1			1		1		1	0.36	
5+ Systems																		1						0.05	
Mindset After Use of System																									
Confused																								0.00	
Frustrated																								1	0.21
Nervous																								0.00	
Productive		1	1	1		1	1	1	1					1		1			1		1			0.79	
Effectiveness of System																									
Aided		1	1				1	1	1		1			1		1		1	1		1		1	0.86	
Enhanced																								0.14	
Hindrance																								0.00	
Useless																								0.00	

		Instructors																						Percentage of Responses
Features		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
BlackBoard CourseInfo Features																								
Announcement																								
Frequently		1	1		1	1		1	1	1	1	1	1	1	1	1	1	1		1		1	0.77	
Never																					1		0.05	
Rarely							1												1				0.09	
Sometimes				1																		1	0.09	
Unaware																							0.00	
Assessment Manager																								
Frequently									1	1	1					1	1						0.23	
Never		1	1		1	1	1	1					1						1	1	1	1	0.55	
Rarely																							0.00	
Sometimes												1			1			1					0.14	
Unaware				1										1									0.09	
Calendar																								
Frequently						1																	0.05	
Never		1	1	1			1			1		1	1		1		1		1	1		1	0.59	
Rarely								1			1					1							0.14	
Sometimes									1									1					0.09	
Unaware					1										1						1		0.14	

Features	Instructors																						Percentage of Responses
	Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
BlackBoard Courseinfo Features																							
Course Statistics																							
Frequently							1	1											1			1	0.18
Never	1	1			1	1							1	1						1			0.32
Rarely			1	1																	1		0.14
Sometimes									1	1	1			1	1		1	1					0.32
Unaware																							0.00
Discussion Board																							
Frequently								1	1										1				0.14
Never		1				1			1	1		1		1		1				1	1		0.41
Rarely	1		1								1		1		1			1					0.27
Sometimes		1		1	1			1									1					1	0.27
Unaware																							0.00
Email																							
Frequently			1	1				1			1				1	1	1	1			1		0.41
Never						1			1	1			1							1			0.23
Rarely					1							1		1								1	0.18
Sometimes	1	1					1												1				0.18
Unaware												1	1			1							0.14

		Instructors																						Percentage of Responses	
Features		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22		
BlackBoard CourseInfo Features																									
Gradebook																									
Frequently									1			1			1	1		1	1					1	0.32
Never		1	1	1	1	1	1	1		1				1						1	1	1			0.55
Rarely																									0.00
Sometimes											1		1												0.09
Unaware																									0.00
Group Pages																									
Frequently																									0.00
Never		1	1	1			1		1	1	1			1	1	1	1		1		1	1	1		0.68
Rarely																									0.00
Sometimes						1		1				1	1					1		1					0.27
Unaware																									0.00
Help																									
Frequently																									0.00
Never			1	1	1	1				1	1						1		1				1		0.41
Rarely		1						1	1			1			1	1		1						1	0.36
Sometimes							1						1							1	1				0.18
Unaware					1									1											0.09

		Instructors																						Percentage of Responses
Features		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
		BlackBoard CourseInfo Features																						
Map																								
Frequently								1		1	1	1			1					1		1		0.00
Never									1		1	1				1					1		1	0.32
Rarely				1			1		1										1			1	1	0.27
Sometimes			1										1					1						0.14
Unaware		1			1									1		1	1							0.23
Quiz																								
Frequently									1		1													0.09
Never		1	1	1	1	1	1			1			1		1				1	1	1	1	1	0.64
Rarely								1										1	1					0.14
Sometimes												1				1								0.09
Unaware														1										0.05
Roster																								
Frequently				1					1										1	1	1			0.23
Never			1							1	1			1								1		0.23
Rarely		1																					1	0.09
Sometimes					1	1	1	1				1	1		1	1	1					1		0.45
Unaware																								0.00

Features		Instructors																						Percentage of Responses
		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
BlackBoard CourseInfo Features																								
Search																								
Frequently																							0.00	
Never		1					1	1			1	1								1	1	1	1	0.41
Rarely				1					1															0.09
Sometimes																		1						0.05
Unaware			1		1	1				1					1	1			1					0.32
Student Pages																								
Frequently									1															0.05
Never		1	1			1	1			1	1	1		1		1			1		1	1	1	0.59
Rarely															1									0.05
Sometimes				1				1					1				1	1		1				0.27
Unaware																								0.00
Test																								
Frequently									1															0.05
Never		1	1	1	1	1	1			1			1		1				1	1	1	1	1	0.64
Rarely								1									1	1						0.14
Sometimes											1	1				1								0.14
Unaware														1										0.05

		Instructors																						Percentage of Responses
Features		Professor 1	Professor 2	Professor 3	Professor 4	Professor 5	Professor 6	Professor 7	Professor 8	Professor 9	Professor 10	Professor 11	Professor 12	Professor 13	Professor 14	Professor 15	Professor 16	Professor 17	Professor 18	Professor 19	Professor 20	Professor 21	Professor 22	
		BlackBoard CourseInfo Features																						
Virtual Chat																								
Frequently																								0.00
Never		1	1	1	1	1	1		1	1	1	1	1	1	1		1		1	1	1	1	1	0.86
Rarely								1								1								0.09
Sometimes																		1						0.05
Unaware																								0.00
Virtual Chat WhiteBoard																								
Frequently																								0.00
Never		1	1	1	1	1	1	1	1	1	1	1	1		1		1		1	1	1	1	1	0.86
Rarely																1								0.05
Sometimes																		1						0.05
Unaware														1										0.05

Page missing or incorrectly
numbered in original

IQP/MQP SCANNING PROJECT



George C. Gordon Library
WORCESTER POLYTECHNIC INSTITUTE

9.3 Appendix C – Additional Comments From Web Survey

“Blackboard allowed me to provide many “handouts” that would not be feasible if I had to zerox them. Also the announcements option is very nice since many students skip a lot of the lectures.”

- Professor 1

“As I get more familiar with the system I shall use other features. I will not go much further however if student reaction to the system is not positive in the evaluations.”

- Professor 2

“I adopted CourseInfo in order to use the digital dropbox. The dropbox needs more features to make it useful (date/time of submission, separate submission for different class sections, allow students to delete/resubmit).”

- Professor 6

“The students are “requesting” higher use of the service. For first time course development/content/scope it can be a hindrance until the syllabus, contents, documents are prepared. For case study work, unless the cases are already on e-files, it can be a great pain to scan the case and correct it to a readable state. Once a course is set up then I suppose small changes would be manageable.”

- Professor 7

"I simply haven't had time to use the various features. However, you should be aware that BlackBoard is not created with writing or the needs of writing pedagogy in mind. The software is shaped around objectivist models. I see it mainly as course management but not as true teaching."

- Professor 9

"Very frustrating, too restrictive, don't think I'll use it again."

- Professor 10

"Quite happy with it. Of course, I was on the committee that picked it!"

- Professor 11

"I had hoped to be able to "speak" assignments to the students as I teach a target language only course. I had hoped that CourseInfo could provide a venue for the students to record their dialogues and I could correct their pronunciation. In other words an on-line language lab either in real time or recorded. But I understand this is not yet feasible. Another comment is that the students did not enroll right away, but only little by little, delaying the usefulness of the web-based teaching. On the plus side, it was great to add the external links."

- Professor 12

"In general I feel CourseInfo has been an aid in my teaching; at the very worst it has not made my teaching more difficult for me or less effective for the students. In my opinion that would count as very high praise for an educational product."

- Professor 15

"I like it a lot. The fact that I don't use many features does not mean the product is not immensely helpful. The use of the links is one of the best features because I can tie it to the discussion board as part of class assignments. Also, the students can use their group areas for sending drafts back and forth of commonly written material."

- Professor 19

"I learned how to do Blackboard only recently. Basically I see it as useful if one can quickly transfer all that we use in teaching to it. However, most of what I use are pages and pages of pictures gleaned from books to use in class to illustrate a particular point or anatomical feature. I don't have the time to try and get that stuff on the WEB. I barely have enough time to stay abreast of my field enough to provide updated material that is also interesting for the student. I know you don't want to hear this! but I find most of the electronic widgets now available to us as making my job harder, not easier. I spend more time learning how to do and then using new electronic stuff and LESS time with students. I think most of the electronic media tools are detracting from a student's educational experience, not enhancing it. I will give several examples: library online journals take more time to find the information and to download it to a printed form so one can STUDY it; I can do 3-4 times more journal searching by hand using hard copies. The SEARCH FEATURES, on the other hand, are VERY useful. Second, I spend far too much time learning how to submit or retrieve documents electronically; e.g. submission of my final report to NSF for a grant has taken me at least 3 times as long using FASTLANE and now I don't DARE incorporate data figures - too hard to do. That has taken time away from my students. Third, whereas WEB based information is great to provide students a visual link, they can't discern what is valid from what is not; many never use peer reviewed literature unless FORCED to now. Fourth, by the time I have developed and gotten all of my class materials ready for a course, to then also have to put

them on the WEB is exceedingly time consuming. Even if there is someone else to do it for you. One still has to check it all out to see if it all is working right. Sorry but I just don't see that Blackboard is useful to me. I want tools that make my job easier and me a better instructor."

- Professor 20

"I have found the BlackBoard system to be an excellent way of managing a laboratory course where protocols may need to be changed at the last minute, or where data is being collected by individuals then shared with the entire class. It has also made it easier to make out of class announcements. I like it!!!"

- Professor 21

"I think that the WWW will become more influential in distance learning applications. For my application (traditional lecture format), it adds modest benefit at a high cost (time spent). BlackBoard reduces some of the time spent, but it has functional limitations. It might be more useful if I had administrative capabilities. Ideally, I would love to run it on my own Linux box, and use it as a stand-alone tool. Since that's not possible, I just grit my teeth and march forward."

- Professor 22