STUDENT COMPUTER LITERACY AND ONLINE EDUCATION

AT THE UNIVERSITY OF CENTRAL OKLAHOMA

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Presented to

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English 4023 and 5023 Students

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BACKGROUND

The advent of online education brings with it an assortment of advantages and concerns. At the University of Central Oklahoma, one of these concerns is the enrollment of computer illiterate students in online courses. In the absence of a University policy on the issue, a number of faculty members have taken matters into their own hands, independently creating and implementing student computer competency tests and tutorials. Surely a more efficient solution exists – one that negates frequent replication of professorial time and effort.

FINDINGS

UCO professors who teach online courses estimate the percentages of their online students who are computer illiterate range from zero to 50 percent, or an average of 14.25 percent. These professors also estimate the extra time they spend with computer illiterate students ranges from two and a half to 37.5 hours per semester, or an average 15.5 hours per semester. Furthermore, students find themselves taking up precious course time learning common computer practices such as saving files, finding saved files, attaching files to e-mails, and so forth (for the moderately to severely computer illiterate) and mastering the ins and outs of WebCT (for the minimally computer illiterate).

We found four potential solutions to address this problem:

1. **Computer competency testing:** Require students to pass a computer competency test before enrolling in online courses.
2. **Online orientation/tutorial:** Offer an online orientation and tutorial that guide students step by step through the basic knowledge they need and functions they must be able to perform for successful participation in and completion of an online course.
3. **Computer workshops:** Offer computer training to students through brief, periodic workshops for various software and WebCT.
4. **Computer tutoring:** Offer on-campus computer tutoring to students for assistance with platforms, software, and WebCT.

CONCLUSION

Faculty members face increasing workloads and mounting frustration as online course offerings grow and students continue to enroll in online courses without the proper preparation. Many students manage to acquire such readiness on their own; but those who do not face increasing workloads and mounting frustration perhaps far greater than that of their online professors, for the challenges they encounter impede their participation in online courses and often their grades.

The first solution (computer competency testing) would prevent students who lack the necessary computer skills from enrolling in online courses, thus eliminating the problem. The other three solutions (online orientation/tutorial, computer workshops, and computer tutoring) would:

1. ease the workload of faculty members by minimizing the time they spend helping struggling online students, and
2. foster success in these students by aiding them in acquiring the necessary computer skills.

RECOMMENDATIONS

Primary Recommendation

Ideally, we recommend implementation of a computer competency requirement coupled with either an online orientation/tutorial or student computer workshops. Either combination would eliminate the problem by (1) preventing students who lack necessary skills from enrolling in online courses through the use of a competency test and (2) offering assistance either individually online or in group training sessions for students who wish to acquire the necessary skills and obtain eligibility to enroll in online courses.

Secondary Recommendation

Alternatively, we recommend implementing a computer competency requirement alone. This option successfully eliminates the problem by requiring students to pass a competency test before allowing them to enroll in online courses.

Tertiary Recommendation

At the very least, we recommend implementation of an online orientation/tutorial, which is less complex than computer competency testing and the least expensive of the three student resources presented (the other two being computer workshops and computer tutors). This alternative would (1) decrease the workload of faculty members by reducing the amount of time they spend teaching basic computer skills to struggling online students and (2) help these students greatly by enabling them to acquire the necessary technical skills independently.

INTRODUCTION

On the rise across the nation and abroad, online education poses some interesting challenges for faculty at traditional universities. At the University of Central Oklahoma, one of these challenges is the enrollment of computer illiterate students in online courses. With no formal policies or procedures in place regarding such enrollment, students who, for whatever reason, overlook the importance of basic computer skills for successful online course participation present faculty members with the added challenge of coaching them in the computer skills they lack. Thus, faculty members face increasing workloads and mounting frustration as online course offerings grow.

This report offers an in-depth analysis of the scope of the problem described above, bringing to light an issue that also affects the quality of education for UCO students who enroll in online courses without the proper preparation. Many students manage to acquire such readiness on their own; but those who do not face increasing workloads and mounting frustration perhaps far greater than that of their online professors, for the challenges they encounter impede their participation in online courses and often their grades.

On the pages that follow you will find careful examination of the problem, thoughtful suggestions for resolution, exploration of the effectiveness and feasibility of each suggestion, and recommendations on the best course or courses of action to take. Detailed outlines in the appendices expound upon some of these suggestions, providing further guidelines for their application.

Our team conducted original research and compiled the report in fulfillment of a collaborative project assigned in Candie McKee's Advanced Technical Writing course. In addition to many years as students, our three-member team boasts a combined total of more than 22 years professional experience in various fields, including numerous years working for different institutions of higher education in areas such as advisement, housing, and institutional advancement. Team members include Amy Fitzgerald, a graduate student majoring in general education with an emphasis in English; Jeff Horning, a post-graduate student pursuing a second bachelor's degree in biomedical engineering; and L. Alicia Monroe, a graduate student majoring in English with an emphasis in composition skills.

BACKGROUND

While not expected to replace traditional classroom instruction, online education is expected to grow steadily as an alternative and supplement. Boston-based research firm Eduventures, Inc. recently announced that it expects students enrolled in online courses to reach a total of one million by 2005. Furthermore, it estimates online education will enjoy yearly growth rate increases of 30 percent for "a number of years to come" ("Eduventures").

The advent of online education brings with it an assortment of advantages and concerns. One of these concerns is computer illiterate students who enroll in online courses. Here, *illiterate* is used to mean "ignorant of the fundamentals of a given art or branch of knowledge" ("Illiterate"). Thus, *computer illiterate students* are students who are not skilled in computer use. In other words, they do not have familiar knowledge united with readiness and dexterity in its application. For the purposes of this report, the most severely computer illiterate students would be unfamiliar with the hardware (e.g. CPU, modem) and the typical platforms or operational systems of average users (e.g. Windows, Macintosh). Moderately computer illiterate students would be unfamiliar with the software (e.g. word processors, internet browsers, e-mail applications) and possibly the hierarchal nature of the system. Minimally computer illiterate students would be unfamiliar with Web-based solutions such as WebCT.

Naturally, the more computer illiterate a student, the greater the problem. But all computer illiterate students present inopportune challenges. The difficulties they experience from accessing course information to meeting course requirements present a problem that will continue to grow with online education until the University establishes policies regarding the enrollment of students in online courses.

Professors know all too well the plight of technologically challenged students and the obstacles they present for both parties. Students deficient in the necessary technical skill sets present themselves and their professors with challenges involving a mad rush to teach and learn common computer practices – at least common for those who have practiced them – such as saving files, finding saved files, attaching files to e-mails, and so forth. Even students familiar with these tasks frequently find themselves taking up precious course time learning, and their professors teaching, the ins and outs of WebCT from its simplest mechanics to its most advanced features. The more familiar students are with computers and WebCT, the more successfully they are able to capitalize on the wonderful capabilities the e-learning solution offers.

In the absence of a University policy on the issue, a number of faculty members have taken matters into their own hands. Some simply require students to sign a permission slip stating the need for computer literacy and the policy of the professor to provide no technical assistance. Others enforce a screening process, creating a competency test themselves that students must pass prior to enrollment. And others independently implement tutorials for their students, including practical applications that facilitate familiarity with computers and WebCT. Surely a more efficient solution exists – one that negates frequent replication of professorial time and effort.

METHODOLOGY

Our team derived data from comprehensive research which we divided into two phases: preliminary and principal. Preliminary research established the magnitude of the problem and the importance of addressing it. Principal research led to arrival at various solutions and determined the desirability of each solution in terms of feasibility, effectivity, and economics.

PRELIMINARY RESEARCH

Primary Preliminary Research

We designed and sent two simple surveys via e-mail to professors who teach online courses. The first survey consisted of two questions designed to gather preliminary data as to the depth of the problem. As we had hoped, this survey elicited insightful responses regarding professors' perceptions of the difficulties presented by the enrollment of technologically challenged students in online courses. Of 13 professors polled, 10 responded to the first survey, yielding a response rate of 77 percent. The second survey included seven components of student computer illiteracy that we asked professors to rank according to the percentage of their online students they estimate experience such difficulties. Seven of the 10 professors polled responded to the second survey, rendering a response rate of 70 percent. We compiled the data and determined estimations and percentages of the extent of the problem and its impact on these professors based on their responses.

In addition, we contacted the Distance Learning Departments of various colleges and universities to inquire as to what they are doing, if anything, to address this problem. We also visited the Websites of these and other institutions to research their policies and procedures regarding enrollment in online courses.

Secondary Preliminary Research

In order to determine the number of students enrolled in online courses at UCO per semester and the number of online courses offered per semester at UCO, we consulted UCO's "Spring 2003 Enrollment Statistics & Demographics Book" and "Spring 2004 Enrollment Statistics & Demographics Book" as well as an informal report acquired from the UCO Office of Institutional Research. With this information, we compiled statistics and established the trend in online course offerings and enrollment at the University. We also conducted online research to establish trends in online education across the nation.

PRINCIPAL RESEARCH

We contacted various UCO staff members as well as employees of other institutions in exploration of the following questions:

1. Who would develop and implement a computer competency test?
2. How much would development and implementation of such a test cost?
3. How long would it take?
4. How seamlessly could it be incorporated into current enrollment procedures?
5. Who would benefit from the implementation of such a test and how?
6. Would it be cost effective?
7. Who would develop and implement an online orientation/tutorial?
8. How much would development and implementation of an online orientation/tutorial cost?
9. How long would it take?
10. Who would benefit from the implementation of an online orientation/tutorial and how?
11. Would it be cost effective?
12. What would be involved in extending computer software and WebCT training (currently offered only to faculty and staff) to students?
13. Who would benefit from such an extension and how?
14. Would such an extension be cost effective?
15. What would be involved in adding a computer tutor to the staff of the Academic Support Center in terms of salary, work space, and so forth?
16. Who would benefit from such an addition and how?
17. Would such an addition be cost effective?

Furthermore, we examined online course preparedness tests and orientations of local colleges and universities and explored the Websites of various institutions throughout the United States, investigating their practices and procedures for student assistance and instruction regarding computer platform and software training and WebCT help.

RESULTS

Before delving into the intricacies of the problems as reported by UCO professors themselves, a look at the number of students enrolling in online courses and the number of online courses offered at the University will provide helpful background information. Coinciding, albeit modestly, with national trends in online education overall as well as at traditional universities, online course offerings at UCO are growing. In Spring 2003, UCO offered 21 sections online in which 313 students enrolled. In Spring 2004, UCO offered 27 sections online in which 422 students enrolled. (See Figures 1 and 2 below.) While these numbers are vastly overshadowed by the 2,677 total sections offered in Spring 2003 (in which 14,241 students enrolled) and the 2,773 total sections offered in Spring 2004 (in which 14,174 students enrolled), they represent growth in online course enrollment while total enrollment declined minimally. Moreover, the statistics and the nature of the beast speak for themselves. More than likely, online education will continue to rise at UCO, no matter how slowly, to keep up with competing institutions and meet the needs of a predominantly nontraditional student body in which nearly 70 percent of students are over the age of 25 ("Enrollment Statistics" 10), placing them in the category of adult learners among whom online education is most popular.
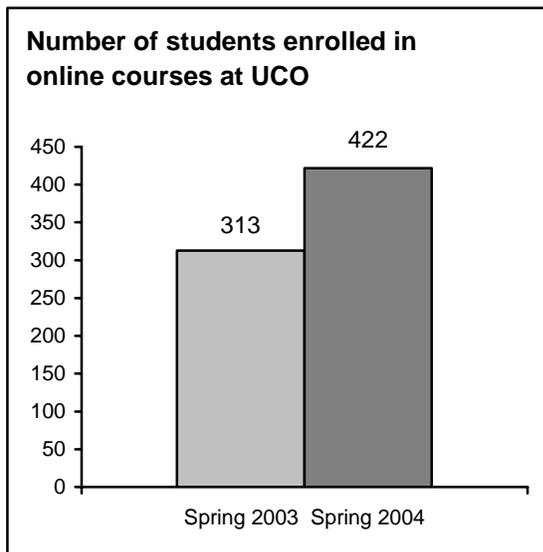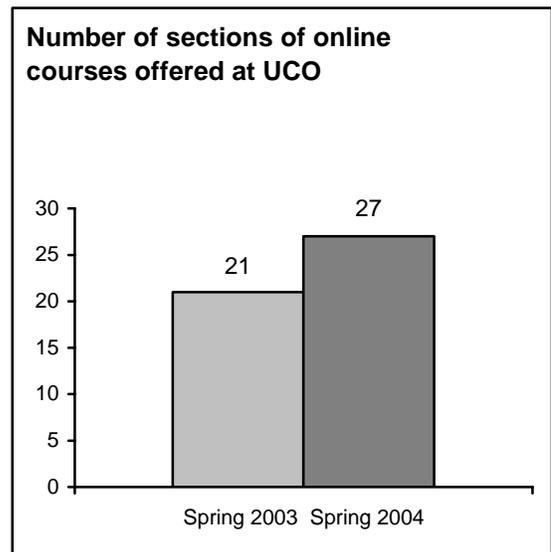

FIGURE 1

FIGURE 2

SURVEY FINDINGS

First Survey

Of the 10 respondents to the first computer illiteracy survey, two professors require students to obtain instructor permission before allowing them to enroll. Both require students to sign a permission slip stating the need for computer

literacy and the policy of the professor to provide no technical assistance, and one created a screening process in the form of a WebCT test. Another of the 10 respondents independently implemented tutorials online.

Compilation of the data from this survey yields the following:

- respondents estimate the percentages of their online students who are computer illiterate range from zero to 50 percent, or an average of 14.25 percent (as illustrated in Figure 3 below), and
- respondents estimate the extra time they spend with computer illiterate students ranges from two and a half to 37.5 hours per semester, or an average of 15.5 hours per semester.

Respondents report an average of 14.25% of their online students are computer illiterate to some degree
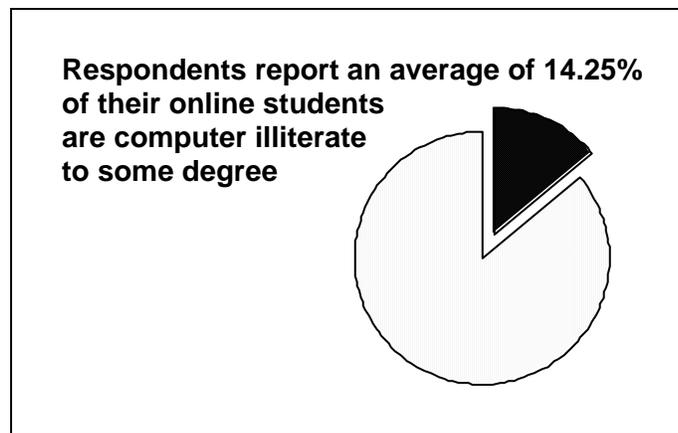
FIGURE 3

One professor replied:

> […] about 50 percent of the students are WebCT illiterate. I spend the first 4-6 weeks of the semester getting everyone going. Most of the students I can walk through on the telephone, but I usually have three or four that have to meet me at my office so that I can show them on the computer how to use WebCT.

Another respondent noted that time spent assisting students struggling with computer issues in online courses:

> more than doubles the time usually necessary, and we have come to the conclusion that we will have to put some sort of 'pre-test' into the admission process before we allow students to enroll in online courses.

Second Survey

Responses to our second computer competency survey revealed some interesting statistics based on estimations by professors as to what percentages of their online students (past and present) are deficient in which computer skills. (See Figure 4 below for a side-by-side comparison of how respondents ranked each category and Table 1 on the next page for more information on the data gathered.) WebCT ranked highest on the student computer illiteracy spectrum; overall, respondents estimate an average of 50 percent of their online students possess inadequate knowledge of WebCT to successfully participate in and complete an online course. Furthermore, respondents estimate an average of 28 percent of their online students lack sufficient Microsoft Office skills and an average of 25 percent do not know how to attach and send files.
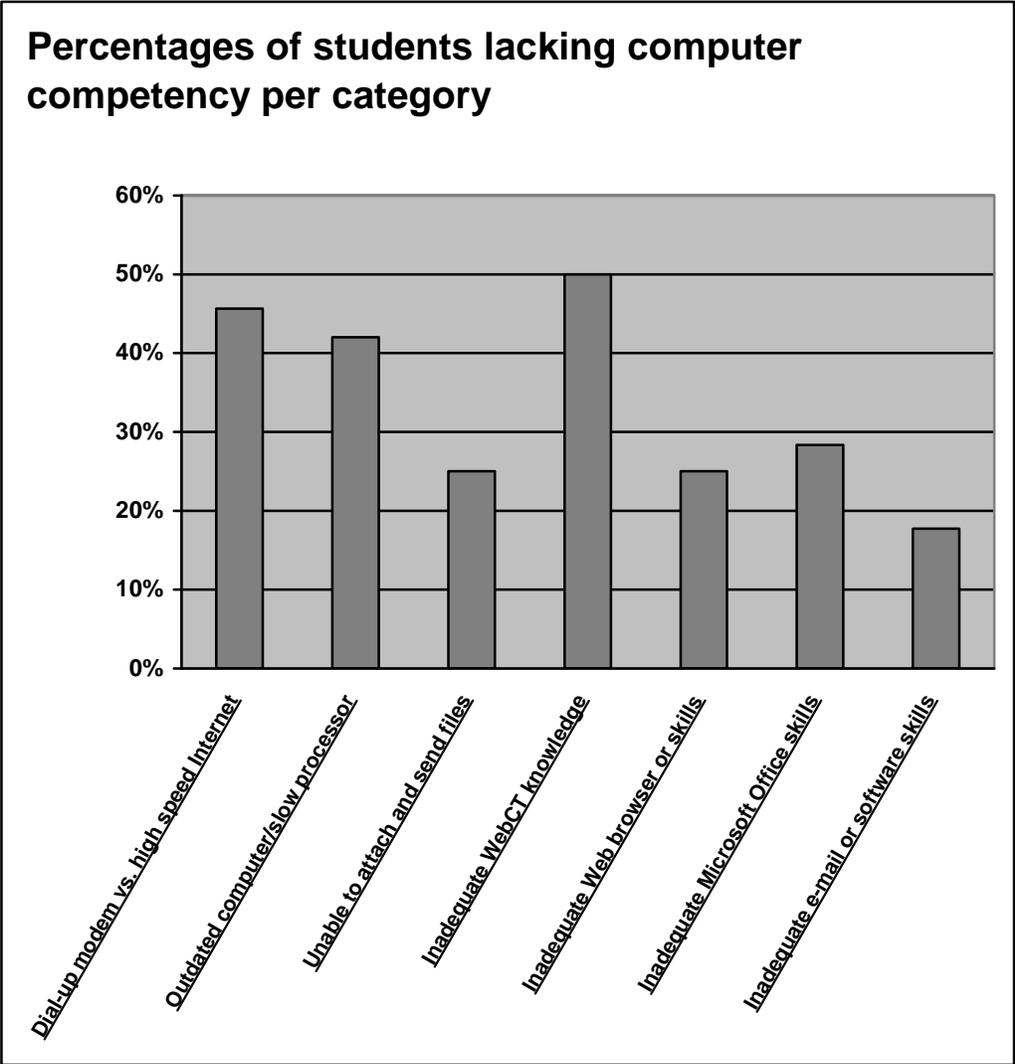

FIGURE 4

Hardware and connectivity issues also ranked high on the list of concerns. Respondents estimate 45 percent of their online students suffer from slow connections and 42 percent use outdated, slow computers. One respondent noted:

> I suspect MANY students become frustrated with online classes because they are attempting to take them using home modems that are dial up. Either that, or their systems are old and run slowly. I HIGHLY recommend students like that come to the computer labs on campus to do their work, because it is heart-wrenching to get bumped off in the middle of a test or to sit and sit waiting for a download that never gets up.

Data for second survey: individual results per professor regarding categorized computer competency issues

	Dial up modem vs. high speed internet	Outdated computer/ slow processor	Unable to attach and send files	Inadequate WebCT knowledge	Inadequate Web browser or skills	Inadequate Microsoft Office skills	Inadequate e-mail software or skills
Professor 1	4	4	2	5	2	3	2
Professor 2	2	2	2	2	2	2	1
Professor 3	1	2	0	0	0	0	0
Professor 4	4	4	2	5	2	3	2
Professor 5	3	3	3	3	3	2	2
Professor 6	2	2	2	2	2	2	2
Professor 7	4	2	3	4	3	3	3
Average	**2.86**	**2.71**	**2.00**	**3.00**	**2.00**	**2.14**	**1.71**
Average % of students who lack necessary skills in each category	**45.64%**	**42.04%**	**25%**	**50%**	**25%**	**28.36%**	**17.75%**

L E G E N D	1 = 0% of students lack necessary proficiency in this area
	2 = 2-25% of students lack necessary proficiency in this area
	3 = 26-50% of students lack necessary proficiency in this area
	4 = 51-75% of students lack necessary proficiency in this area
	5 = 76-100% of students lack necessary proficiency in this area

TABLE 1

DISCUSSION

The data we gathered and statistics we compiled offer compelling evidence as to the need for some form of student computer competency test, student computer training (a need which currently falls into the laps of professors who already have an abundant workload and for most of whom computer training is far from their specialties), or both. Based upon careful analysis of the findings from our computer illiteracy surveys – namely what the professors perceive as the biggest problems along with findings on the policies of other institutions in handling enrollment in online courses and student assistance and training – we arrived at four potential solutions as outlined in Table 2 below:

Proposed solutions at a glance

Solution 1: **Computer competency testing**	Require students to pass a computer competency test before enrolling in online courses
Solution 2: **Online orientation/tutorial**	Offer an online orientation/tutorial that guides students step by step through the basic knowledge they need and functions they must be able to perform for successful participation in and completion of an online course
Solution 3: **Computer workshops**	Offer computer training to students through brief, periodic workshops for various software and WebCT
Solution 4: **Computer tutoring**	Offer on-campus computer tutoring to students for assistance with platforms, software, and WebCT

TABLE 2

ANALYSIS OF SOLUTION 1: COMPUTER COMPETENCY TESTING

A computer competency requirement would prevent students who lack the necessary computer skills from enrolling in online courses, thus eliminating the problem.

Specifications

Design a computer competency test in WebCT to assess skills such as:

- sending, receiving, forwarding, and replying to e-mail;
- opening, saving, editing, and sending e-mail attachments;
- composing and posting messages in discussion forums;
- participating in threaded discussions;
- searching the World Wide Web;
- downloading, saving, opening, and reviewing a file;
- submitting an assignment through a dropbox; and
- taking an online quiz.

Require students to pass this test prior to enrollment in online courses. Indicate this requirement alongside each online section listed in the class schedule and refer students to another page for further explanation. On this page, include a link (or URL for hardcopy) to the test.

Make this test accessible to all UCO students by login with their UCONNECT user names and passwords, and make it available for students to take it as many times as necessary for successful completion. Configure student login to prompt automatic administration and grading of the test in WebCT.

Attribute successful completion of the test at a specified competency level to each student's record in Banner. Designate the requirement to all online sections and set up the enrollment process to allow students to enroll in these sections only if their records contain the attribute indicating they have successfully completed the requirement.

Cost Analysis

We estimate costs associated with a computer competency requirement from $3,000 to $6,000 (an average of $4,500), primarily attributed to labor. Length of time for implementing this requirement would vary depending upon how much time employees were able to devote to the project. Though more complex than the others, this solution seems highly cost effective considering it would render the problem extinct and incur, for the most part, one-time expenses (aside from any updates or monitoring, for which costs should be minimal).

ANALYSIS OF SOLUTION 2: ONLINE ORIENTATION/TUTORIAL

Offer an online orientation that relays pertinent information such as minimum recommended computer hardware and software requirements and necessary computer skills along with a WebCT "mini-course" or tutorial which guides students step by step through tasks they must be able to complete and affords them an opportunity to practice various functions. This powerful combination would (1) ease the workload of faculty members by drastically reducing the need for them to teach basic computer skills to struggling online students and (2) help these students tremendously by enabling them to acquire the necessary technical skills independently.

Specifications

In the orientation, address the logistics of setting up WebCT, the technical skills students must possess, a list of the software and minimum hardware requirements to which students must have access, and perhaps a vocabulary of potentially unfamiliar terms. Include a highly visible link to a WebCT tutorial.

Design a tutorial in WebCT that elaborately explains how to perform the following tasks (identical to those in Solution 1) and provides opportunities for unlimited practice:

- sending, receiving, forwarding, and replying to e-mail;
- opening, saving, editing, and sending e-mail attachments;
- composing and posting messages in discussion forums;
- participating in threaded discussions;
- searching the World Wide Web;
- downloading, saving, opening, and reviewing a file;
- submitting an assignment through a dropbox; and
- taking an online quiz.

Cost Analysis

We figure expenses for development and implementation of an online orientation/tutorial at approximately $2,500 to $5,000 (an average of $4,000), largely associated with labor. The timeline for this solution would vary according to the amount of time employees were able to dedicate to it. This solution appears highly cost effective as it would greatly alleviate the problem for both students and professors, and it involves a one-time fee with the possibility for minimal updates.

ANALYSIS OF SOLUTION 3: COMPUTER WORKSHOPS

Make workshops similar to those currently offered to UCO faculty and staff members available to students, which would benefit any and all students who might be struggling with computer use, an ever important skill for students throughout their academic careers and graduates as they enter the workforce. This solution also would decrease the amount of time faculty members spend helping technically challenged students.

Specifications

Offer free student workshops like the training sessions the University currently conducts for faculty and staff on WebCT and popular software. Schedule student workshops in the same facilities where the faculty/staff training sessions meet: the designated rooms of the library and administration building. Offer student workshops year-round, with WebCT workshops scheduled predominantly before and well into the first third of each semester. While they should be offered fairly regularly, workshops need not be more than one to two hours in duration.

Cost Analysis

Figuring two to six workshops per month at $50 to $100 per workshop, we estimate costs associated with conducting student workshops between $1,200 and $7,200 (an average of $4,200). We also predict planning expenses of $1,000 to $3,000 (an average of $2,000). Thus, student workshop expenditures amount to an average of $2,000 upfront and $4,200 annually, rendering this solution moderately to highly cost effective despite ongoing expenses as it would alleviate the problem by benefiting students and ultimately professors as well.

ANALYSIS OF SOLUTION 4: COMPUTER TUTORING

Provide on-campus peer tutoring specifically for struggling online students as well as for all students who wish to overcome computer skill deficits. Computer tutors would be a

valuable student resource for virtually any computer-related issue within the realm of each tutor's expertise and the technology available in the Academic Support Center. Furthermore, this student resource would indirectly relieve the frequent necessity for faculty members to serve in the computer tutor capacity.

Specifications

Create positions for and hire one or more UCO computer science majors to serve as tutors in the Academic Support Center. Like math and writing tutors, make computer tutors available to UCO students for free and by appointment only for a maximum of two 30-minute sessions per student per week.

Cost Analysis

Estimating 10 to 40 hours per week at $6 to $10 per hour yields approximate computer tutor expenditures ranging from $3,120 to $20,800 per year with an average of $11,960 annually. While students could benefit greatly from one-on-one instruction and, in turn, professors of online courses would benefit as well, this solution is fiscally less appealing than the others.

COST COMPARISON

In terms of benefits, the first solution (computer competency testing) would eliminate the problem and the other three solutions (online orientation/tutoring, computer workshops, and computer tutoring) would greatly alleviate it. Keeping benefits in mind, comparing the effectiveness of each solution in terms of cost yields the following: the first and second solutions (computer competency testing and online orientation/tutorial) are highly cost effective, the third solution (computer workshops) is moderately to highly cost effective, and the fourth solution (computer tutoring) is minimally cost effective. For a side-by-side comparison of solution effectiveness and cost effectiveness, see Figure 5 on the next page.

Effectiveness and cost ratings of proposed solutions

Testing — Effectiveness: 5, Cost: 4
Online tutorial — Effectiveness: 4, Cost: 4
Workshops — Effectiveness: 4, Cost: 3
Tutoring — Effectiveness: 4, Cost: 1

■ Effectiveness ratings on a 5-point scale, 1 being the least effective and 5 the most effective
□ Cost ratings on a 5-point scale, 1 being the least feasible and 5 the most feasible

FIGURE 5

RECOMMENDATIONS

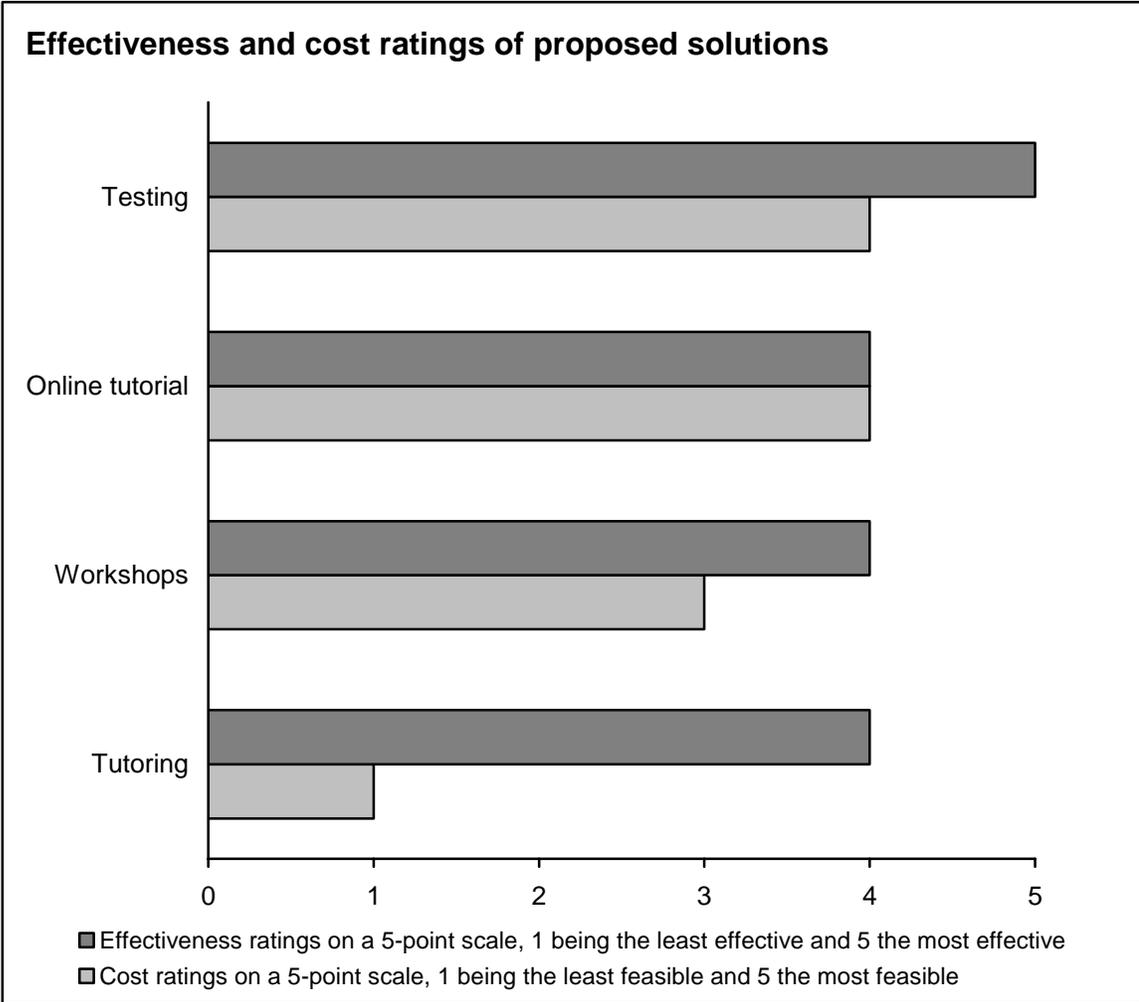### PRIMARY RECOMMENDATION

Ideally, we recommend implementation of a computer competency requirement coupled with an online orientation/tutorial or student computer workshops. Either combination would eliminate the problem by (1) preventing students who lack necessary skills from enrolling in online courses through the use of a competency test and (2) offering assistance either individually online or in group training sessions for students who wish to acquire the necessary skills and obtain eligibility to enroll in online courses.

SECONDARY RECOMMENDATION

Alternatively, we recommend implementing a computer competency requirement alone. This option successfully eliminates the problem by requiring students to pass a competency test before allowing them to enroll in online courses.

TERTIARY RECOMMENDATION

At the very least, we recommend implementation of an online orientation/tutorial, which is less complex than computer competency testing and the least expensive of the three student resources presented (the other two being computer workshops and computer tutors). This alternative would (1) decrease the workload of faculty members by reducing the amount of time they spend teaching basic computer skills to struggling online students and (2) help these students greatly by enabling them to acquire the necessary technical skills independently.

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FIRST SURVEY

> You were recommended to me as one of UCO's online course professors. Please forgive me if you are not teaching an online course. If you are, I would like to ask for a small amount of your time to answer a question or two. My name is Jeff Horning and I am currently involved in a group project for Candie McKee's Technical Writing Course. We have chosen to explore the possibility of computer illiterate students enrolling in online courses. Your answer and/or opinion to the following questions would be very helpful and greatly appreciated.
>
> 1. Do you believe computer illiterate students have enrolled in your online course? If so, what percentage of your students are computer illiterate?
> 2. How much additional time would you estimate you spend assisting computer illiterate students with basic computer struggles?
>
> Thank you in advance for your time! If at all possible, could you please reply before you leave for Spring Break.
>
> Thank you!
>
> Jeff Horning

Strengths

- The survey elicited insightful responses regarding professors' perceptions of the difficulties presented by the enrollment of computer illiterate students in online courses and the impact of these difficulties on both professor and student.
- We received detailed feedback chronicling related scenarios and discussing some of the strategies professors have implemented in response to the problem.
- The survey was brief enough that it yielded a tremendous response rate (77 percent).

Weaknesses

- We failed to define *computer illiterate*.
- Perhaps the survey was too brief.

SECOND SURVEY

Dear _____,

Thank you for your response to our preliminary research questions. Through your response and others, we have discovered a better definition for computer competency/illiteracy is needed. Please rate the issues below on a scale of 1-5 based on the following scale.

SCALE
1 = Zero students lack necessary competency in this area
2 = 2-25% of students lack necessary competency in this area
3 = 26-50% of students lack necessary competency in this area
4 = 51-75% of students lack necessary competency in this area
5 = 76-100% of students lack necessary competency in this area

Please base your answers on current or past students you have had in online courses. Thank you again for your time and concern!

1) Dial up modem vs. high speed internet
2) Outdated computer/slow processor
3) Unable to attach and send files
4) Inadequate WebCT knowledge
5) Inadequate Web browser or skills
6) Inadequate Microsoft Office skills
7) Inadequate e-mail software or skills

Thank you again!

Jeff Horning

Strengths

- The survey enabled us to ascertain the biggest issues under the umbrella of computer illiteracy.
- The survey offered a simple, effective scale with which professors could easily estimate the severity of various aspects of the problem.

Weaknesses

- The fifth and seventh items on the list combine the issues of software quality and skill level, which should have been evaluated separately. We developed no data based upon these issues since they are too broad in scope.
- Perhaps we should have delved farther into specific WebCT issues since that seems to be an area of major concern.

APPENDIX B: TEST OUTLINE

1. **E-mail**
   a. **Read E-mail** Automatically send an e-mail with an attachment (a Microsoft Word document) to the University e-mail address of any student who logs in to take the computer competency test.
   b. **Reply to E-mail** Within the body of the abovementioned e-mail, instruct students to reply to the e-mail. Log receipt of replies automatically.
   c. **Open and Save E-mail Attachments** In the file attached to the abovementioned e-mail, include instructions to save the file under another specified name and forward it to a designated address.
   d. **Forward E-mail** Automatically log receipt of forwarded e-mails discussed in entry 1c: Open and Save E-mail Attachments.
   e. **Attach File to E-mail** Automatically log receipt of attachments with forwarded e-mails discussed in entry 1c: Open and Save E-mail Attachments.
2. **Search the World Wide Web**
   a. **Locate Webpage via Internet Search** Instruct students to locate a specific Webpage hosted by the University. Divulge the title and content of the Webpage, but not the URL.
   b. **Download File From Webpage** Instruct students to download a file (a Microsoft Word document that contains information over which they will be quizzed) on the Webpage they located. (See entry 2a: Locate Webpage via Internet Search.)
3. **Discussion Board**
   a. **Read Discussion Board Message** Within a posting, instruct students to compose and post a response.
   b. **Compose and Post Discussion Board Message** Automatically log postings.
4. **Assignment Dropbox**
   a. **Download Assignment** Provide directions within assignment file for students to create a new Microsoft Word document, save it as a specified filename, and submit it through the assignment dropbox.
   b. **Upload Assignment** Automatically log receipt of the specified filename in dropbox. (See entry 4a: Download Assignment.)
5. **Quizzes**
   a. **Take Online Quiz** Include simple questions in the quiz that students will be able to answer easily if they have read the Microsoft Word document they were instructed to download. (See entry 2b: Download File From Webpage.)

ONLINE ORIENTATION

1. Computer Requirements
   a. Hardware
   b. Software
2. Internet Browsers
   a. Internet Service Provider
   b. Internet Browser
   c. Browser Settings
3. Student E-mail
   a. Setting up an E-mail Account
   b. Using E-mail
      i. Reading E-mail
      ii. Opening Attachments
      iii. Replying to E-mail
      iv. Forwarding E-mail
      v. Composing E-mail
      vi. Attaching Files
4. File Management
   a. Understanding Your Computer's Filing System
   b. Saving Files
   c. Finding Lost Files
5. Getting the Most out of WebCT
   a. What is WebCT?
   b. Link to WebCT Tutorial
6. Successful Online Learning
   a. Self-Evaluation Quiz*
7. Glossary
   a. Common Technical Terms and Their Meanings
8. Searching the World Wide Web

*See the following Websites for various online learning self-evaluation quizzes:

Kansas State University's "Are You a Good Potential Distance Education Student?"
http://www.dce.ksu.edu/dce/distance/questionnaire.html

University of Nebraska-Omaha's "Self Evaluation for Potential Online Students"
http://distance.unomaha.edu/starthere/self_assessment_test_starthere.php

Illinois Online Network's "Self Evaluation for Potential Online Students"
http://www.ion.illinois.edu/IONresources/onlineLearning/selfEval.asp

WEBCT TUTORIAL

1. E-mail
   a. E-mail Overview
   b. Reading E-mail
   c. Replying to E-mail
   d. Composing E-mail
   e. Forwarding E-mail
   f. Attaching File to E-mail
2. Discussion Board
   a. Discussion Board Overview
   b. Reading Discussion Board Message
   c. Composing Discussion Board Message
   d. Posting Discussion Board Message
   e. Posting Attachment to Discussion Board Message
   f. What is a Threaded Message?
3. Assignment Dropbox
   a. Assignment Dropbox Overview
   b. Downloading Assignments
   c. Uploading Assignments
4. Quizzes
   a. Taking Online Quizzes

APPENDIX D: WORKSHOP SUGGESTIONS

Workshops are an excellent way to assist students with computer skills. In addition, some universities' Websites make links and printable information available to students for specific computer applications. Examples are listed below:

CALIFORNIA STATE UNIVERSITY-LOS ANGELES

California State University-Los Angeles offers the following workshops:

- "Exploring the Internet," which shows students how to access the World Wide Web
- "Searching the Web," which deals more specifically with Internet searches and research techniques
- "E-mail," which teaches students how to use e-mail
- "Using WebCT," which teaches students how to use WebCT (from accessing their accounts to the intricate workings of WebCT courses)

For more information, visit CSULA's "Student Scholars Training Program" Website at http://www.calstatela.edu/its/training/sstp/.

WEBCT

WebCT offers an excellent Website that assists students with its e-learning solution at http://www.webct.com/ask_drc/viewpage?name=ask_drc_faq_student. Though not a workshop, this is an excellent student resource that illustrates many questions and answers asked by students. Many universities provide a link to this page from their Websites.

UNIVERSITY OF HAWAII

The University of Hawaii also has a FAQ page (http://www.hawaii.edu/dlit/webctresource/htmpages/studentgettingstarted.html) to show questions and answers for students on how to use WebCT; these are more specific to this university's students than the official WebCT site.

On this site, the WebCT courses have "HELP" links that show students specific information relating to the professor of those courses. This enables students to know what professors expect from them.

MISSISSIPPI STATE UNIVERSITY

The Mississippi State University Website contains an excellent resource for students regarding WebCT (http://www.its.msstate.edu/Information/Documentation/webct_workshop.php). Not only can students enroll in specific workshops pertaining to WebCT usage, they also can download workshop handouts. Therefore, enrollment in the

workshops is not required to receive information, which is helpful for ambitious students who simply need some basic guidance rather than formal training.