

Virtual Exam I

On Tuesday, October 29, 2002, my class used the resources of the Virtual Computer Lab in the College of Business to take an exam. To my knowledge, this was the first time an exam was given in this specific format. In prior semesters, we used one of the College's traditional computer labs for this purpose. However, due to heavy utilization, none of the traditional labs were available this semester. My first experience with using the Virtual Computer Lab was a success and I intend to use this exam format in the future. My experiences and recommendations for others are recorded below.

Course Background Information

The course involved is Accounting 6210 – Tax and Accounting Research (syllabus online at <http://www.accounting.utoledo.edu/facfolder/laverty/laverty.htm>). The primary objectives of the course are to teach applied research methodology and to prepare students for careers involving applied research in the tax and accounting areas. The course teaches students to be effective, efficient, and ethical researchers. The links to over one hundred web sites and databases available through the WWW, OhioLink, and subscription services are listed at *Brian's Tax and Accounting Stops on the WWW* at the following URL <http://www.accounting.utoledo.edu/facfolder/laverty/acctgstops.html>.

In the mid-1990's, I reoriented our existing tax research class from print materials to databases available online (Lexis/Nexis) or on CD-ROM. As the Accounting Department adjusted its curriculum to accommodate a move to semesters in 1997, we wisely chose to expand the course to include applied accounting as well as tax research. Late in the 1990's, information and databases migrated to the Internet and so did the class. Today all class research is conducted online with the exception of one CD-ROM database known as FARS (financial accounting research system).

Experience With the Exam

We spent the first half of the class learning terminology, which database to access for what information, and how to search the Internet and each of the databases. The midterm exam for each of the last four years has consisted of an in-class test of the student's ability to obtain the requested data in an effective and efficient manner. As noted above, this year we utilized the resources of the College of Business Virtual Computer Lab for this purpose. I offer the following observations regarding the experience:

The professor perspective-

- The professor needs to have a reasonable amount of experience with a laptop computer and wireless technology and have an intermediate knowledge of the computer software. The College of Business Computing Staff provided me with

backup support, otherwise, I would suggest a higher level of experience on the part of the professor.

- The professor should check out a laptop and use it to prepare at least part of the solution to the exam. This assists in understanding what the students will experience.
- The professor should have a graduate assistant check out a laptop and simulate the exam experience. This is a simulation of what the student experience will be.

What to request from the virtual lab-

- Extra laptop computers – technology isn't perfect yet
- Power cords - don't rely on the laptop's battery
- Power strips with surge protectors – provides more electrical outlets in the classroom
- Mouse for each computer – many students are uncomfortable with the touchpads on the laptops
- Request a floppy drive - if students intend or are intended to save their work on the computer
- Backup assistance from college computing staff - for more difficult and technical problems

What to tell students-

- Be sure they have activated their university computer account so they can sign on to the network. Part-time students are often unaware that they even have a university computer account.
- The student should check out a laptop prior to the exam and practice, practice, practice until they are comfortable with the technology.
- Watch proximity of computers – students with computers back to back experienced some difficulty with the wireless connection until they moved their computers further apart.
- Whether you will provide or they should supply, their own floppy disks. I would suggest providing them if a student might have an advantage by bringing saved data to the exam.
- Have the students write their answers down on paper if possible. In the heat of an exam, they may not remember to backup their answers – see Summary.

What worked-

- The wireless connections worked extremely well- no problem with slow connections previously experienced in the traditional computer labs.
- Class was able to utilize our regular classroom for the exam- no requirement to reserve a tightly scheduled computer lab.
- Having one of the college's computer staff in reserve for difficult technical issues solved several problems that were beyond my abilities – hardware issues, log-in

issues. The result was a successful experience rather than several students having unresolvable problems.

- I checked out the laptops and peripherals in advance. Computers were then assigned by me to each student (by computer number) to maintain control over the equipment.
- After the exam, many students commented that more exams should be given in this format (bringing computers right into the classroom for an exam).

What didn't work-

- One computer died halfway through the exam – see Summary.
- Installing the FARS CD-ROM database on each laptop was a significant problem – over half the students experienced some difficulty with either installation or operation of the database.
- To allow for more room in the main classroom, some students were assigned to an adjacent classroom. Due to the number of inquiries directed to the instructor, all students should be in one classroom.
- Some students apparently did not practice with a laptop as suggested and appeared to be uncomfortable. Attaching a mouse obtained from the lab appeared to help.

Summary

My first experience with this type of exam was very successful. I owe many thanks to the College of Business Computing Staff for their assistance in this endeavor. While I intend to utilize this format in the future, there was one significant problem. One student's computer screen went dark and the computer froze halfway through the exam. Despite technical help from the college's computer staff, all the data the student had saved was lost. Unfortunately, he had not backed up his data or written out his answers. Of course, this problem is not unique to this exam format and could just as easily have occurred in the traditional computer lab.

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