Blending Computer Skill Development into an Undergraduate Orientation Course

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Abstract

Blending computer skills into an orientation course has tremendous advantages for the students, the faculty, and the curriculum. Computer topics, resource availability, leadership development, discussion of personality type, and employment advice have been blended together into a one-hour course for agricultural economics majors in such a way that the noncomputer topics provide a reason for the use of the computer lab and the computer instruction gives students the background to complete the assignments with greatly reduced frustration levels. Although the mix of topics at first sounds unusual and incompatible, it can be developed into an extremely effective package.

Introduction

The undergraduate experience is extremely valuable in the world today for securing employment, for developing into an informed citizen, and for preparing for the challenges one might expect over a lifetime. Given these expectations, getting the most out of an undergraduate education then is extremely important. Orientation courses should be used to provide students with the background to take full advantage of their undergraduate experience.

The orientation course in the Department of Agricultural Economics at Kansas State University was developed with these principles in mind. This paper describes the development of the course, the content of the course, and the changes that have occurred in the content in order to meet the changing needs of students.

Progress in computer technology presents instructors with the challenge to enhance student awareness and abilities in the new developments (Herr and Parsons, 1995). Experiences with Internet and e-mail are extremely useful to students early in their careers, so that they can benefit throughout their program of study. Learning to develop neat and attractive papers and presentations using word processing and graphics will benefit them throughout their entire careers.

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Course Development

Kansas State University has had a long history of providing an orientation course for beginning students in the College of Agriculture. The Department of Agricultural Economics, however, had not required the course, although advisers had strongly recommended it for their advisees. Over time, the department faculty saw the need for a required course that would meet a number of needs that students had, particularly computer skills and job search skills..

To address the computer skill needs of students, the department had been offering a computer applications course since the spring semester of 1984, five years prior to the introduction of the orientation course. This course originally started with the very basics (this is a floppy, difference between hardware and software, word processing, etc.) and moved to more advanced applications (problem solving, finance, regression and linear programming). Two developments occurred that tended to make this course increasingly out of sync with students needs. First, over the years, the backgrounds of the students changed dramatically from most having no computer experience to many having considerable experience, particularly with word processing software. Secondly, faculty saw the benefits that students got from the computer applications course and encouraged it earlier and earlier in the students' programs. This certainly was justified for the introductory material in the course, but the more advanced material was too complex for students very early in their programs. It became increasingly clear that some of the most basic topics were no longer needed, some topics were needed even earlier in the students' programs, and the advanced topics should be reserved for later in the students' programs. This lead to a reorganization of the computer course, with the introductory material being incorporated into an orientation course with additional material that also was lacking in the students' programs, and the more advanced material being left in the computer applications course.

At about the same time, the job market facing students had become increasingly competitive. Surveys of agribusinesses and alumni were conducted to identify characteristics that employers desired (Broder and Houston, 1986; Litzenberg and Schneider, 1988; Morrison and Edwards, 1987). Students were being encouraged to become more aggressive in the job search process and to begin the process earlier. Leadership and extracurricular activities were seen

as useful indicators of student abilities and characteristics that were valuable in the job market. People skills were seen as extremely important, and some believed that interpersonal skill development was as important as technical agricultural skill for job security and promotion (Barkley, 1991; Bruening and Scanlon, 1995). Resume development was being encouraged earlier in their careers. The Career and Employment Services office on campus was offering new programs of value to students in their career search activities. Internship programs were more useful and more varied than they had ever been. There was increasing need to make students aware of these possibilities and the demands that would be placed upon them.

To meet these needs as well as a number of others, the Department of Agricultural Economics began offering, in spring semester of 1989, an orientation course that is required of all students in their first semester in the department. One of the more controversial issues with regard to making the course a requirement was whether junior college transfers also should be required to take it, considering the likelihood that they had already had an orientation course. The arguments were made that transfer students have a number of needs specific to Kansas State University resources, they have only two years to find their way around, and potentially they could benefit from the course as much as or more than nontransfer students.

Course Content

The topics included in the orientation course at first appear to form a rather unusual mix and do not seem compatible. However, computer skills, leadership development, and employment advise and activities have been blended together in a fashion such that the noncomputer topics provide a reason for the use of the computer lab and the computer instruction gives students the background to complete the assignments with greatly reduced frustration levels.

This one-semester-hour course meets twice a week for the first half of the semester. The format is largely lecture with some discussion when topics permit and several demonstrations of computer topics, which are accomplished with the use of a portable computer connected to the same local network that the student lab uses. The demonstrations rely on the use of a computer projection panel placed on an overhead projector, which allows the students to see everything displayed on the computer screen that the instructor is using.

One instructor is in charge of the course, but many guest lecturers are invited to handle sections in which they are experts. The department head is invited to welcome the students and give them a summary of department activities. The undergraduate student program coordinator provides details of the program and procedures that the students should know. The scholarship committee chairman provides details of scholarship application and competition. A faculty member addresses the delicate issue of how to get along with an academic adviser, what advisers expect from students, and what

students can expect of advisors. Library personnel are invited to present information on the library and a demonstration of a remote library search using the computer network. Personnel from university offices are invited to present information on resume development, leadership development, career opportunities, career planning and placement procedures, and resources and counseling services. In general, resources available to students and procedures for making use of these resources are covered in sufficient detail for students to feel comfortable seeking out those services.

The course is not designed to teach all the features of any particular software. Rather, the course is designed around the need to do certain things and how those certain things are done. The students learn different computer procedures in order to accomplish certain tasks that are required to complete assignments for the class. Students frequently ask if they have to use some particular software, and the response is that they benefit greatly by using as many different software packages as possible, so that learning to use the next software package that is developed becomes easier. Although growing numbers of students have access to other computers for their own use, a large majority (nearly 80%) use the computers in the lab for their assignments. Shifting between machines and between software packages is becoming easier as windows-based programs using similar formats are becoming more standard.

The first major sector of the course introduces the students to the department and covers advising issues, enrollment questions, and scholarship information as well as introduces the students to the computer lab that is available to them. The first assignments are designed to provide repetitive exposure to the computer lab so that they become familiar with the computer system that they can use for all their work at Kansas State University. Instruction and demonstrations are held in the lectures to illustrate the use of the lab, the word processing software, and the network. The third assignment of the course is to combine the first two assignments (essays on "why I came to Kansas State University" and "why I chose agricultural economics or agribusiness") with "what I want to do for a career." This assignment is included in the file that each adviser has for each student.

Computers are now major information sources for students, reflecting recent trends with the development of networks and the Internet. Thus, reliance on the computer for information is excellent experience that should be beneficial upon graduation. The students are exposed to use of the Internet, e-mail, remote library searches, and job information availability, as well as other student information on the network, such as course information and advertisements for sale items.

The second major section of the course revolves around employment issues. The development of resumes appears to be necessary earlier and earlier in the careers of students. They are being used for summer jobs and internships, which come long before students begin the search for a permanent job. The accompanying computer assignment is to produce a resume. In this section of the course, leadership development

also is encouraged. The computer assignment accompanying that is to develop a "projected" resume, one that shows what they want to be involved in and accomplish by their graduation date. Both the current resume showing actual accomplishments and the "projected" resume also are included in the file each adviser has on each student. These become valuable resources for the student who must generate a resume on short notice; for the Career and Employment Services center on campus; and for the adviser, who has better information with which to respond to requests for letters of recommendation for students. The projected resume also provides the advisor with information regarding the aspirations of the student for leadership activities, extracurricular activities, and grade goals. Students are introduced to the Career and Employment Services center and the services it offers, as well as internship possibilities and cooperative employment programs that are available for students.

The Myers-Briggs temperament indicator, which is a popular way of getting to know more about the differences between individuals, is developed for each student. The implications for teacher-student interactions and the implications regarding learning styles are discussed, as well as the career implications of different personality types. Students tend to find this section of the course very valuable also from an interpersonal relationship standpoint. A paper discussing what they learned about their own personality types is required.

The final section of the course involves the use of spreadsheet software. Students currently are less experienced with spreadsheet software than with word processing software. Because of this, more demonstrations and assignments are devoted to the use of spreadsheet software. First, the students are required to use a template already developed to generate a cash flow for themselves for the school year. Second, they are required to generate a relatively simple budget, and, finally, they are required to generate several graphs that are used frequently by agricultural economists.

Course Evaluation

This course was a result of constantly evaluating the needs of students regarding computer background and proficiency and in other areas. The course has had to adjust continually to accommodate the changing needs of students and particularly the quickly changing hardware and software environment. The fast-changing computer environment has resulted in the need for a substantial financial commitment to the computer lab. Student backgrounds also have changed dramatically and quickly, so a student computer background survey is conducted each semester. Data from this survey provide information regarding the computer training students have as they enter the program. The most recent survey (spring semester 1995) indicated that 100% had some word processing background, 75% had experience with spreadsheet software, and 41% had some programming experience.

Student evaluations of different sections of the course also are done each semester. Students have rated the course favorably by giving it an average ranking of 1.8 (1 is great and 5

is awful). Continual monitoring of students' opinions and backgrounds is essential to ensure that the course remains beneficial for future students.

Faculty generally have been very supportive of the course also, because it benefits them as advisors in several ways and provides a basis for improvement of the entire curriculum, particularly with regard to computer use. Information obtained from students in some of the writing assignments and the resumes is valuable to advisors. The session dealing with how to work with your advisor provides students with some knowledge that makes the adviser's job easier and provides students with a better grasp of their responsibilities. The computer aspects of the course support the use of computers in other courses in the curriculum and increase the level of sophistication that can be expected of students, thus improving the overall degree experience.

Summary and Conclusions

An orientation course for beginning students can be very valuable by helping them become aware of details of the program they have chosen. It also can provide valuable information to advisers regarding their students. Introduction to the computer as a source of information and as a method of preparing high quality, visually attractive papers (including graphics) for projects and to the computing power of spreadsheets also should be a high priority for beginning students in an agricultural economics or agribusiness program. Weaving an introduction to the department and its program, the resources available to students, early indications to students about what employers expect, and the use of computer technology into a first semester course for new majors has not only been feasible, but has been well received by students and appreciated by faculty. Faculty then can make assignments requiring the use of computers and the network with less difficulty, because students are already familiar with the computers and the laboratory. This provides an environment that allows greater expectations of students and results in an improvement in the entire program. The overall benefits are substantial and should be highly encouraged.

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