

Social Issues and Technology

Social Issues and Technology is a poster presentation about a course which examines some of the social issues related to , and arising from, the agricultural technology courses taught at a four year comprehensive regional state university in Missouri. The experience is unique in the fact that it is team taught with from two to four faculty members on the team. The experience involves a historical, contemporary, and futuristic look at technology (and science) and the social issues (society) that technology causes and resolves. The course is multi-media using slides, overheads, videos, and computer-generated data/charts. There are individual, small group, and large group activities. Choices of topics for outside readings, term papers, and small group presentations are the decisions of the students, either individually or collectively.

This presentation will share how this unique student-faculty experience is done, and provide a summary of student feedback/evaluations. Handouts will include syllabi, sample readings, project topics, and their unique course features. This course is required in the Agriculture-Business, B.S. degree and addresses general university objectives in the areas of valuing and communicating.

Faculty for the course include an agronomist, two agricultural economists, a veterinarian, and an industrial technologist. Working with this combination of faculty, whether two, three, or four, offers some unique opportunities and challenges.

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Assessment of Demographics, Animal experience and Academic Performance of Student s in Introductory Animal Science

The responses and admission records of 821 students enrolled in the introductory animal science course at Texas A&M University during the 1992-1993 academic year were evaluated. Classification of students included 32% freshman, 30% sophomore, 25% junior, 9% senior and 4% post-baccalaureate. This represents a shift from a similar study in 1983-1984 by Edwards (1986) in which class composition was 48% freshman, 34% sophomores and 18% upperclassmen. Majors represented were 34% Biomedical science, 20% Agri-

cultural Economics, 18% Animal Science, 7% General Studies and the remaining 21% consisted of 25 other majors (<3% of the total for each). The individuals cited most often for influencing the students' decisions regarding a major were parents, Texas A&M University staff and students. Results indicated 20% of the students were from farms or ranches and this represents a decline from the 29% observed by Edwards (1986) nine years previously. Interestingly, 44% of the 1993-1994 enrollment were from large urban settings (>50,000). Only 8% of the students came from families who derived over half of their total income from farming or ranching. In terms of livestock experience upon entering the course, 12% cited previous experience with dairy cattle, 21% with sheep, 27% with swine, 43% with beef cattle and 53% indicated experience with horses. In addition, 83% had seen seven or more years experience with dogs and cats. Nearly 70% of the students reported that agricultural science was offered in their high school; however, fewer than 30% had taken a single agricultural science course. Academic performance in lecture and laboratory were significantly correlated ($P < .01$) with SAT score and high school percentile rank; thus, SAT score could be used as a moderate predictor of academic performance. It was evident that current enrollments in introductory animal science courses reflected diverse backgrounds with limited animal agriculture experience. These findings initiated a re-thinking of the instructional methodology utilized to meet the educational needs and foster greater understanding by the aforementioned students. Consequently, a continual re-evaluation must occur to refine the approach utilized in introductory animal science to meet the instructional needs of future students.

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Advanced Degrees in Agronomy: Value Perceptions from the North Central Region of the U.S.

Employment opportunities for advanced degree graduates in the sciences have been gathering increasing attention around the nation. This study was designed to compare the current perceptions and future expectations of the value of advanced degrees in agronomy specifically by graduate students, faculty and employers from the North Central region.

In 1994, questionnaires were sent to all domestic graduate students and faculty from 12 colleges of agriculture which award MS and PhD degrees in agronomy and 145 addresses of private and public employers. A return rate of questionnaires was 48% for graduate students (n=151 PhD and n=151 MS students), 49% for faculty (n=333), and 38% for employers (n=55).

The highest ranked reasons why agronomy graduate students pursued an advanced degree were 1) job opportunities and job security, 2) specific career goal, 3) personal growth, and 4) work in preferred area of study. The majority of graduate students also expected their advanced degrees to increase salaries (86%), job opportunities (78%) and job stability (65%).

Using a four point scale where 1=excellent, 2=good, 3=fair and 4=poor, graduate student, faculty, and employer perceptions of current employment opportunities for MS graduates were strikingly similar with mean ratings of 2.72, 2.71, and 2.74, respectively. Participants were slightly more optimistic about future employment for MS graduates with mean ratings of 2.60 by graduate students, 2.66 by faculty and 2.55 by employers. Employment opportunities for PhD graduates were consistently rated less optimistically by all three groups (especially faculty) compared to MS opportunities. Current (and future) employment opportunities for PhD graduates were rated as 2.91 (and 2.63) by graduate students, 3.32 (and 3.06) by faculty and 2.89 (and 2.42) by employers.

These results substantiate the need for collaboration among professional societies, universities and industry to facilitate changes in graduate student education in the near future.

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Land Use Planning as a Method of Teaching Familiarity with Soils Surveys

Soil Resources (Soil Science 153, Univ. of Nebraska-Lincoln) introduces soil survey reports in a land use planning class project. The objectives of this project are to properly use a soil survey report and to make soil interpretations for given land uses. A land use project connects the basic soils and conservation knowledge to a realistic planning situation. By using the soil survey as an educational tool, this project introduces planning and conservation issues to postsecondary learners.

Proper use of the soil survey report, besides promoting familiarity with the report itself, assists in making in-

terpretations on soil behavior and provides an opportunity for learning by discovery. The project involves five learning activities: select and appropriate land area based on projected use; collect data on land use capabilities from the soil survey report; design a detailed plan for the use of the land area; write recommendations and rationale for the planned area; draw a map showing locations and land areas allotted to each activity.

Parallel exercises have been developed to design a county fairgrounds or an urban housing development. The exercise enhances students' understanding of soil behavior by giving them first-hand experience in gathering and interpreting soil data. The activity allows students to build and share land ethics through environmental interpretations.

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A Model Program for Staff and Faculty Training in Agricultural Distance Learning

In all, 227 staff and faculty participated in the program and 118 completed the program evaluation instrument. This multidisciplinary group of participants came from departments such as agricultural education, agricultural economics, agricultural engineering, agronomy, animal science, entomology, food science, forestry, horticulture, sociology, and veterinary medicine.

Overall, participants provided favorable evaluations of the program. Participants indicated that the distance learning experts provided current, accurate, and relevant information. Site facilitators noted that the project served as a catalyst for the development of new ideas and approaches to agricultural distance education. Seventy-two percent of the participants indicated that they were satisfied with the program and 89% noted that they would be willing to participate in additional programs of this nature.

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The Peer Evaluation Model For The College Of Agriculture At The University Of Florida

The faculty in the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida voted in the summer of 1994 to implement a policy of peer evaluation that would play an integral role in the tenure and promotion of teaching faculty. This decision was influenced in part by the national emphasis on improving teaching in higher education, the Teaching Improvement Award program at the University of Florida and the interest of leaders in the College of Agriculture to stress excellence in teaching as a college-wide goal.

After the decision was made to implement peer evaluation for promotion and tenure, the IFAS Academic Development Committee and the IFAS Teaching resource Center (TRC) developed recommendations for departmental adoption. Departments in the College were given freedom to modify the recommendations presented to fit their particular situation. The model has been adopted throughout the College of Agriculture and has been implemented since the Fall semester of 1995.

Faculty and administration are in agreement that this process is working well in IFAS. Many faculty members have been peer evaluated and many others have served as peer review committee members. The College of Agriculture has learned a great deal throughout this process and is continually refining its peer evaluation procedure.

Although the model is not perfected, we believe it would be of benefit to others who are struggling with the development and implementation of a peer evaluation program. The presentation would include:

- A definition of peer evaluation
 - The role of peer evaluation
 - The benefits of peer evaluation
- Components of the peer evaluation process
 - Pre-evaluation assessment
 - Committee selection
 - Pre-evaluation conference
 - Data collection
 - Classroom observation
 - Course materials
 - Post-evaluation meeting
- Peer evaluation instruments
- A look to the future
 - Peer evaluation of advising

Peer evaluation for tenured, full professors

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Innovative Excellence in Teaching: A Cornerstone for Building Effective Portfolios

Unfortunately, effective teaching alone may not always result in good administrative evaluations and the associated rewards. It may be helpful for teaching faculty to begin to develop some of the same types of documentation that are used to evaluate research excellence. Higher administrator evaluations of teaching will usually result when faculty are able to demonstrate and document not only the effectiveness, but also the scholarship in their teaching. This presentation will describe how innovative approaches to two very different entomology courses (a small enrollment, hands-on, field course and a large enrollment lecture course) have spawned competitive grants, refereed publications, invitational presentations, and awards for the instructor. This documentation along with student and peer evaluations has formed the basis for a strong teaching portfolio. Suggestions will be given for developing these kinds of teaching credentials.

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Creating Computer-based Instructional Animations: Examples from an Entomology Course

Techniques for creating computer-based, instructional animations will be demonstrated. Both command-based animations and those created using the graphical user interface will be featured. Techniques to be demonstrated include changing the screen coordinates of the corners of an object, hiding and showing, moving, script recording, path animation, and frame-by-frame animation.

Animations from an entomology course will be used to demonstrate the techniques.

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Experiences of Teaching an Animal Breeding Course via Interactive Television

An animal breeding course was taught spring quarters in 1995 and 1996 via interactive television from the University of Minnesota, St. Paul campus to the Crookston campus. The course was modified in several ways to adopt it to a television format.

A. A course outline (140 pages) was prepared prior to the course and sold through the bookstore.

1. The outline was formatted for a television screen so that the instructor could work off the same outline as the students in class.

2. The instructor brought a blank copy of the outline to the classroom and a copy with the blanks filled in.

3. Practice problems along with answers were included in the outline that the students received.

B. Student-teacher interaction was encouraged.

1. A seating chart was made so the students could be called by name.

2. The teacher made a visit to the remote site to meet students.

3. A maximum of ten minutes of lecture was given before posing a question to students.

4. Students were often asked to work on problems in groups.

5. Students were given positive feedback whenever answering questions.

6. Personal letters to the students' e-mail account invited interaction from students.

C. Instructional formats were varied.

1. The course outline over the Elmo was the backbone of the course.

2. Pictures, slides and videos were inserted into a lecture with less disruption than in a traditional course.

3. A computer simulation program provided reinforcement of concepts taught in lecture.

4. Humor was inserted in the course by humorous slides, jokes and visits from hand puppets.

D. Projecting a professional image over the television is important.

1. Lecture notes need to be more organized

2. Enthusiasm is important.

3. Medium to dark blue clothing projects a professional but warm feeling over the T.V. Avoid stripes or plaids

4. Have a few lectures critiqued for annoying mannerisms that may be amplified over the television.

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Evaluation of Teaching Reproductive Physiology via Interactive Television (ITV) to Distance Site Learners.

Our objective was to determine if a typically hands-on farm animal reproduction class could be efficiently and effectively taught via ITV to a site 300 miles away. Course content was the same material presented by the lead instructor via 50 min. class lectures to animal science undergraduates at St. Paul and via 90 min. ITV lectures to Crookston undergraduates. Weekly labs were different between campuses but 3 labs were held during one day when the Crookston class travelled to St. Paul. Preparation for the ITV class required a full year from concept to implementation even though a traditional reproduction class was being taught on both campuses. A 100 page notebook containing all overheads, slides and day-by-day lecture outlines was prepared prior to the class. The following observations were made: Students needed to know the ITV instructor to overcome a "television mentality". This was accomplished by the day long lab at St. Paul and by the on-site instructor attending the ITV lectures with the students to answer questions or explain again difficult concepts. The on-site instructor also was responsible for writing and grading the weekly quizzes, the two exams and conducting the laboratory. Interactive dialogue between the two instructors enhanced the lectures by raising practical, controversial and/or ethical questions that stimulated the students to critically evaluate what they had heard. This also personalized instruction and kept it from becoming a TV course. Student evaluations for all 3 years were very positive, all indicating the ITV teaching was nearly as effective as live presentations. The trip to the St. Paul campus for its labs was rated extremely valuable. The teaching tools and skills needed to successfully promote student learning in each environment, were found to be the same.

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Distance Learning/Interactive Television at the University of Minnesota, Crookston

Interactive television supports 2 way audio & video links between sites. UMC, is part of a regional network made up of 10 colleges with statewide & global access. In the 1994/1995 academic year, UMC used ITV to deliver or receive 34

courses for a total of 116 credits. Connectivity is being established to all school districts & public libraries in Minnesota.

Two networks directly serve UMC. They are the University of Minnesota digital network & the Northwest Educational Technology System, NEETS. UMC houses the coordinating office of NETS. The U of M digital network ties all of the U of M campuses & the Rochester Center together in a proprietary, compressed T1 digital network. NETS is the regional infrastructure for northwestern Minnesota colleges. It employs FM fiber optic technology to link all 10 public colleges in the region & several independent K-12 networks. With over 14,000 hours of collegiate programming in 1994/1995, NETS is Minnesota's second busiest.

The Minnesota Distance Learning Network, MNDLN, is a compressed digital network that links all regional ITV networks in the state. MNDLN also interfaces with global long distance carriers.

Classrooms are designed to be instructor or student operated and contain:

Instructor Camera, Student Camera, Controls, VCR to Record or Play, Receive Audio Amplifier, Telephone, VGA to NTSC Translators for computer Graphics, Graphics Camera, Camera Focus, Zoom & Aiming, video Output control Switcher, Instructor & student Microphones, Output Audion Mixer, LAN Ports (Some Classrooms)

Use of the World Wide Web will become an important support system for distant learners especially with the proliferation of desktop video. The UMC network access has grown substantially for 6 years. Connectivity is no longer the challenge faced by UMC and other institutions of higher education. The challenge is to put in place the programmatic & cooperative agreements between institutions to utilize network infrastructure. UMC's baccalaureate programs are dependent upon access to distant faculty resources & cooperative programs.

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Evaluating by the Baldrige Criteria

The Malcolm Baldrige National Quality Award was established in 1987 to recognize quality achievement of U.S. manufacturing companies, service companies, and small businesses. The Award Criteria are intended to help improve performance practices and capabilities, and serve as a tool for planning and assessment. Northwest Missouri State University began incorporating the concepts and criteria of the Baldrige Award into its planning process in 1991. In 1993 the

Secretary of Commerce announced a pilot program to address issues concerning making educational organizations eligible for the award.

The Baldrige Criteria are built upon a set of eleven core values and concepts that reveal the extent to which certain universal characteristics of effective organizations are present or absent. An important feature of assessment by the Baldrige criteria is that they are intended to be descriptive, not prescriptive. All organizations are assumed to share certain requirements to achieve quality, but those requirements are not necessarily addressed in the same way. The Criteria are, however, expressed in terms based on a for-profit business model and require some interpretation or customization to adequately fit the unique culture of education.

The Baldrige assessment process is supposed to discover whether the intended outcomes actually occur. The Criteria are results oriented, requiring evidence of desired outcomes while recognizing some results cannot be directly measured but are evaluated instead by indicators. The process assesses all aspects of an institution and evaluates each facet's connection to the institution's stated goals. The two most important indicators of overall school effectiveness are student performance, and the effectiveness and efficiency of the school's use of resources. Significant challenges to educational programs adopting the Baldrige Criteria for assessment are interpreting its jargon for their circumstances and possibly redefining responsibilities within the organization for continuous quality improvement.

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Teaching Introductory Financial Accounting at an Ag School: Introducing An Awareness of International Accounting by Developing an International Module and Utilizing Foreign Corporation Annual Reports

A primary objective of the International Accounting Module is to develop in the student an awareness and understanding that there is more than one major national accounting model. Another objective is to develop in the student an awareness and understanding that within the different major national accounting models there are many different accounting standards (practices), for example German GAAP vs U.S. GAAP.

For many students annual reports often give real world meaning to textbook accounting. Consequently one approach to help achieve the above stated objectives is to

use foreign corporation annual reports to illustrate these differences. The format of the foreign corporation's financial statements and the accounting standards upon which they are based can be compared with U.S. formats and standards. This is especially true of foreign corporations listed on the New York Stock Exchange as they must convert to U.S. GAAP and reconcile the net income differences.

Another approach is to obtain from the AICPA, the International Accounting Series of Studies, published by big six firms, in which selected accounting standards on various accounting topics are studied and compared from country to country (see references). Also, a publication of the accounting principles (standards), formulated by the International Accounting Standards Committee, can be obtained. This information can assist in the analysis of foreign corporation annual reports.

One advantage of these approaches is that they illustrate, on a meaningful real world basis, the utilization of different accounting standards and the consequent impact on financial statements. The major disadvantage of these approaches is that they are somewhat too advanced for first-year accounting students to fully understand; nevertheless, using these approaches helps the student become aware that implementing a uniform set of International Accounting Standards is not a simple or quick task.

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Methods of Note Taking and Classroom Learning

Students learn in a variety of different methods. Their ability to perform on an exam, successfully learn the material and/or apply it is often directly related to the manner by which information is presented to them. Students often seem to study, yet perform poorly on exams. This may be due to a variety of different reasons including: 1) not taking "good notes", 2) not spending time preparing for exams, 3) poor or no study habits, 4) little interest in the subject matter, and 5) other reasons. Most instructors at the post secondary level have completed a PhD degree and have a very different perception of taking notes, studying, etc., than their students who are completing a Bachelor's degree.

During Fall 1995 and Spring 1996, students from an introductory Economic Plant Science course were presented course material in three different manners: 1) oral notes, 2) notes presented on a chalkboard, and 3) prepared notes. Students were informed of the procedure at the beginning of the course and asked for their input via a questionnaire at the

completion of the course. Questions asked included: 1) preference in the method by which notes were presented, 2) their use of the text book, and 3) time spent outside of class studying notes and course material.

Most students preferred prepared notes, followed by notes presented on a chalkboard, while most students disliked oral presentations. Students performed best on exams when notes were presented on the chalkboard and performed poorly when they had prepared notes. Nearly all students purchased the text book, however, only about half used the text for additional help. Students spent very little time outside of class time studying their notes or the text book. The major reason was that they either worked or felt they needed to study only if there was an exam. In general, students had no regular study habits.

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Rewarding Teaching at The Ohio State University Agricultural Technical Institute

The faculty at The Ohio State University Agricultural Technical Institute are expected to engage in teaching, service, and professional development (including scholarly and research activities). The primary emphasis, however, is on teaching since that is the primary focus of the institute. Rewards for teaching are based in part on performance, and performance is determined thorough evaluation. Institute and college-level teaching awards (including cash) and salary merit increases are based upon the level of performance. Evaluation information is acquired through peer, student, division chair, and alumni evaluations of teaching and from the individual faculty annual reports. Several rewards not necessarily based on level of teaching performance are: division professional development funds, endowment professional development funds, institute funds for small scholarly/research projects, and limited supply/equipment funds. Institute criteria used to identify and evaluate the distinguished teacher are as follows: INSTRUCTION:(1) Stimulates and motivates the students to excel at learning and to apply what is learned; (2) organizes and presents subject matter effectively, clearly, sequentially, and satisfies the course goals and program objectives; (3) possesses a comprehensive knowledge of the subject matter and continues to pursue additional knowledge in his/her profession or area; (4) effectively utilizes people and material resources for developing teaching methods/techniques that enhance learning and understanding;

and (5) stimulates students to develop critical thinking skills enabling them to effectively solve problems. SERVICE: (1) Is involved in service to student and professional organizations; and (2) contributes to the development of The Ohio State University: College of Food, Agricultural, and Environmental Sciences; Agricultural Technical Institute; and his/her Division. PROFESSIONAL DEVELOPMENT: (1) Develops and maintains an excellent reputation in his/her discipline and/or profession; and (2) contributes to scholarly and research activities within his/her profession and related areas. This presentation will illustrate some of the criteria mentioned above, especially the development of visual science teaching materials.

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Evaluating Teaching Effectiveness: One Department's Experience

The Department of Agricultural Leadership, Education and Communication, University of Nebraska-Lincoln has adopted procedures for evaluating the teaching effectiveness of its faculty. The initial procedures were adopted on February 6, 1990 and are reviewed on an annual basis. All faculty with teaching responsibilities are evaluated for teaching effectiveness every year for merit consideration. Any person teaching a regularly scheduled, structured course, or the equivalent of three credits in independent study or workshop activities is evaluated for the contribution of teaching to his/her total job performance.

Both tenured and non-tenured faculty members submit a teaching portfolio separate from the staff activity report, describing the quality and quantity of teaching activities. The materials requested for the teaching portfolio include: student evaluations *(from CIEQ) of all classes and sections taught during the year; faculty member's written response*; annual and long-term goals and objectives for teaching activities*; creative activities in teaching and instruction; professional development activities in teaching and instruction; course outlines, objectives, and evaluation policies for all courses taught during the year*; classroom observation report (COKER)*

The Teaching Evaluation Committee consists of four faculty selected by peers. The members are elected irrespective of tenure line status or rank. No more than two members of the committee change in any one year. The committee evaluates the teaching portfolios, then forwards the portfolio scores to the Department Head for review. The committee also provides written comments to faculty members, with a copy to the Department Head. The committee will provide in-

depth feedback in a committee meeting setting upon request of the person being evaluated.

The teaching evaluation system has evolved since its inception and recent changes adopted by the faculty will be discussed. The process encourages faculty members to establish and maintain a teaching portfolio throughout their professional careers, and encourages faculty members to pause for reflection on the effectiveness of their teaching.

* Contract faculty complete these items only.

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Graduate Assessment and Recommended Changes of the Master of Agriculture Degree Program in Animal Science at Texas A&M University

The purpose of this study was to determine how the graduates of the Master of Agriculture Program in Animal Science perceived the quality of their professional education. This professional degree program requires a combination of course work, an internship and a professional paper. Surveys (n=98) were completed by 44 respondents, 4 were undeliverable and the remainder were non-respondents. The survey included two Likert-type scales and a variety of ranking questions, with results being reported as mean responses and standard deviation. Respondents ranked the magnitude of influence from 1 (none) to 5 (very strong) of person or factors affecting their decision to earn a master's degree. Persons most influential, in descending order were professors (3.05+/-1.47), parents (2.80+/-1.30), professional colleagues (2.47+/-1.37) and spouses (2.19+/-1.47). The factors most influential were the desire for further professional training (4.52+/-10.95) and doubts concerning vocational goals (2.79+/-1.57). The decision to pursue a Master of Agriculture degree rather than a Master of Science degree was based predominantly on the practicality of the Master of Agriculture program (4.43+/-0.89) and orientation toward a career in non research areas (4.34+/-0.96). The respondents rated highly, both the program effectiveness (4.07+/-0.85) and benefits (3.75+/-1.08). Graduates suggested increased course requirements in computer science, finance, management, rangeland management and veterinary science. A majority of the students (47.7%) located their internships through departmentally arranged interviews and found the internship experience valuable. A majority of the graduates (47.7%) present positions were characterized as somewhat closely related to their field of graduate study. The first position following graduation was typi-

cally in agricultural production, while the present position is primarily in the area of professional agricultural specialist. Graduates from the Master of Agriculture degree program in animal science at Texas A&M were generally satisfied with the degree program in terms of quality, effectiveness and perceived benefit. Internship opportunities were assessed favorably and assisted students in securing employment past graduation.

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Peer Review of Teaching

As a part of a college grant, the Department of Agronomy designed a comprehensive teacher review program. This program is based largely on peer review. The major components are the process, the five-year course review, and the rating form.

The process begins with a report presented by the teacher to the department head. On the basis of this report, the teaching coordinator prepares an evaluation of the teacher's performance using the rating form. Then for each teacher a review committee including the teaching coordinator and two persons from the teacher's disciplinary area discuss the performance and make a recommendation to the department head.

The new teaching rating form covers the entire range of a teacher's activities including course design, teaching performance, public service, professional service, honors and awards, and professional improvement. A copy of the completed rating form is forwarded to the dean of the college.

In the five-year course review, a committee selected by the teacher, including one member from the teacher's disciplinary area, one member from an outside disciplinary area, and one education professional, review all the course materials, attend class sessions, and make recommendations to the teacher for improvement. The teacher retains control throughout the process and all materials and reports are returned to him or her. The teacher then prepares a plan for improvement and shares it with the committee. This process is voluntary.

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Evaluating Interaction in the Distance Education Setting

Many educators agree that distance learning is the fastest growing instructional pattern in the world. Recently, interaction has become of interest to distance education researchers. Kearsley (1995) stated:

"One of the most important instructional elements of contemporary distance education is interaction. However, it is not clear from research or evaluation data that interaction does improve the quality of learning in most distance education programs." (p.366)

The purpose of this descriptive study was to investigate interaction and its relationship to success in agricultural courses taught via distance education. Data was collected from all students enrolled in distance education courses administered through the Off-Campus Professional Agriculture Program at Iowa State University during the Spring semester of 1995.

The 2-part questionnaire had a reliability coefficient of .95 and was developed by the researchers. It consisted of an interaction statements and demographics section. Ninety-five of the 139 students completed and returned the questionnaire for a response rate of 68 percent.

The data indicated that instructors need personal contact with all students, students desire interaction with each other, and students desire high quality interaction with distance education technology.

The results of this study indicate that interaction needs of learners, while similar in general, vary based upon the delivery method used for the course. Students taking courses via videotape did not seem to feel that interaction was as important to their learning and also desired more control over their learning. Sixteen percent of the students received no grade. Interestingly, 89% of those receiving no grade took their course via videotape.

Students enrolled in these classes were overall satisfied to very satisfied, however further research needs to be conducted with these populations to determine if there are differences in their interaction needs which should be addressed by distance educators concerned with program evaluation and improvement.

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Practicum in Postsecondary Teaching

Improving instructional skills and preparing future faculty should be components of programs to reward teaching. The Department of Agriculture Leadership, Education, and Communication (AgLEC) at Nebraska offers graduate students the opportunity to enroll in a credit practicum which may be pursued in traditional university classes, community college teaching, cooperative extension, or other adult educational settings. In this session, the presenters will describe the practicum experience from the viewpoints of the instructional supervisor (Lunde) and the graduate student (Fleming).

In the practicum, the instructional supervisor, who is the instructor of record for the practicum, helps the graduate student find a discipline mentor and arrange for an opportunity to teach, visits the class several times, gives feedback, and is available for consultation throughout the practicum experience. The graduate student develops a plan for the practicum, teaches 2-3 classes, conducts an evaluation of instruction, and submits a final paper reflecting on the experience. The role of the discipline mentor varies from full-time classroom teacher to outside consultant.

Over the past year, almost all practicum students have taught in traditional classrooms. Kim Fleming, however, elected to work with the "Gold Medal Management" training program which all Farm Service Agency borrowers are required to attend. As part of the practicum, Kim prepared an instructional unit for the soils management segment and taught nine hours of the training program. Both the discipline mentor, Todd Peterson, PhD., extension Cropping Specialist, and the instructional supervisor (Lunde) visited the class and gave feedback.

One main consideration in Kim's plans for instruction focused on the need to help Gold Medal participants make better decisions in their daily farm operations. Therefore the soils contents have to be practical and applied. Other considerations were getting off to a good start, employing active learning techniques, and motivating students and keeping them focused on task.

The experience proved beneficial for Kim and for the program as well. It provided practice in the real world of adult education; it led to improvement in teaching and in offering the Gold Medal curriculum for a second year; and it demonstrates how curriculum-based education can be developed within Cooperative Extension.

Participants who have enrolled in the AgLEC practicum so far report that it has been beneficial both in developing teaching skills and in appreciating the amount of time and effort good teaching requires.

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