

Oral Presentations

Learning by Doing: Internationalizing the Curriculum Via the Case Method (TechnoServe)

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TechnoServe a nonprofit international development agency based in Norwalk, Connecticut provides management training and technical assistance to community-owned and operated agricultural enterprises throughout Latin America, Africa, and Eastern Europe.

In addition, TechnoServe has an unique research and education arm -- the R&D Department: to increase our development impact by researching and sharing "lessons learned" from our 24 years.

TechnoServe's Teaching Case Program, is managed under R&D. The purpose: provide college and university educators with engaging tools with which to expose students to complexities of international economic development and management; students with creative methodologies through which to develop their skills: analytical thinking, problem-solving, group negotiating, and oral and written presentations.

The Design: Typically written in narrative form, the case method design presents a slice of a real-life situation. Complex, interrelated events are combined with description to engage students as vicarious participants and analysts.

Benefits Students learn problem solving; develop logical, cognitive thinking; become aware of interrelationships; communicate decisions clearly; broaden horizons; gain confidence in themselves and in how they relate to others.

Benefits Teachers: acquire current, international studies, "demand-driven" to deal with issues relevant to your classroom needs; receive the case, slides, maps, Teaching Notes on style, methodology, and with guiding questions', Resolution Notes, TechnoServe's response -- as one solution -- to the problem-at-hand; and Evaluation Form.

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Developing Professional Traits In Agriculture Students--The Effective Attendance Policy

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Attendance policies often vary between and within educational institutions. General attendance policy may be dictated by the university, the college and/or the individual

department. Variability in these policies may actually send conflicting messages to students regarding their basic responsibility of class attendance and discourage development of good time management skills. Conversely, an appropriate class attendance policy can be used to motivate students in developing time management traits consistent with professionalism in collegiate and ultimately, professional careers. Development of an attendance policy for agribusiness courses taught in the Department of Agriculture and Environment at Abilene Christian University (ACU) was begun in 1990. Compatibility with the official university attendance policy was stressed. Since many students will eventually begin careers in businesses using the practice of sick and annual leave accrual, this procedure was incorporated into the attendance policy. The intent was to orient students toward professional business practices and encourage formation of good time management skills.

For example, a student meeting class three times a week in a fifteen week semester may miss up to nine class meetings without being dropped from class (20%), based on university attendance policy. A student may accrue 4.5 days of sick leave and 4.5 days of annual leave. Work missed for sick leave may be made up, while work missed for annual leave may not. Tardiness is counted as missing 0.5 day of work. To encourage class attendance and participation in school-sponsored activities (excused absences are not counted), the policy included an incentive. Students accrue points for each day of sick or annual leave not taken during the semester. Accrued points, up to two maximum, are added to their final grade in the course. The incentive is designed to imitate the redemption of unused sick and annual leave in most businesses. Response has been positive among students.

Agribusiness Teaching Challenges In Agricultural Economics

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There have been major moves in recent years to shift emphasis in some undergraduate agricultural economics programs toward an agribusiness emphasis. Old courses are being revised, new courses are being offered, curricula are being redesigned, and new degrees are being offered. These changes result in new challenges for teachers in agricultural economics departments which are moving in this direction.

This paper discusses some of the difficulties agricultural economics faculty face in attempting to meet the challenge of teaching agribusiness courses. In particular, some of the similarities and differences between farm management and agribusiness management courses will be outlined since parallels are frequently drawn between farm management courses and agribusiness courses. Conceptually, farm management and agribusiness are the same, but they have massive differences in implementation which result in significant challenges for agribusiness course instructors. A summary of the differences follows. First, agribusiness lacks the tradition or the historical definition which farm management

has developed over the years. Thus there is currently a rather broad range of content which must be sorted through and distilled into a course by instructors teaching agribusiness courses. Second, the theoretical base of agribusiness is substantially different. Agribusinesses tend to operate in market structures which are more concentrated (that is, oligopoly or oligopsony market structures) rather than pure competition market structures. This forces reliance on a different theoretical base and a switch in emphasis more toward strategic planning and other business strategies. Third, student experiences and instructor experiences have a significant impact on instructional strategies and the use of examples in the class. Finally, research and extension support of agribusiness courses is compared to the support of farm management courses.

The paper suggests some alternative approaches to meeting the challenges faced by instructors who will be leading the way in the development of agribusiness courses.

Career Exploration Activities in a Two-Year Postsecondary Institution: A Case Study

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This paper describes several components of career orientation in a two-year undergraduate agricultural marketing curriculum. These components include a field interview with professionals, student club involvement, mandatory work experience, integration of new courses in the curriculum, and class activities which are oriented to career exploration. The format for this discussion will be the case study which spans the author's professional involvement with curriculum process at the University of Minnesota at Waseca. Specific items to be included in the case study include the background of the institution, a definition of career exploration, the delineation of career activities, and a discussion/evaluation relative to the constellation of activities in a holistic view. A discussion of work in relation to career exploration will be provided.

The major goal of vocational education is to place individuals in meaningful work roles that satisfy not only personal, but also societal needs for trained personnel. This goal is addressed in the mission statements of systems of vocational education such as the Minnesota Technical College System(1). The concept of career development which stems from initial job placement to a series of other job-related experiences over the lifespan is a more encompassing concept to establish in a two-year setting. This paper reports on a series of activities which fall under the umbrella of career-exploration for a two-year postsecondary institution which focuses on agricultural career clusters.

Institutional Setting

The University of Minnesota campus at Waseca was created by conversion of a focused secondary agricultural program to a postsecondary program which again directed its efforts at agricultural education. The conversion began in

1969 with program implementation in 1971(2). Many of the original staff of the secondary program--the Southern School of Agriculture--were transferred into the new postsecondary program. From its inception in 1971, the programs consisted on six vocational programs with a related education division to serve the general education needs. The six original vocational programs were in the areas of agricultural production, agricultural business, agricultural industries & services, veterinary technology, mechanized agriculture, home & family services, and horticulture. These areas comprised the domain of knowledge for several areas of occupational choice: entrepreneurship, preparation of technicians, and general occupational skills. The use of advisory committees constantly refined the delivery of programs and assured their relevance. In the earlier years of the campus, curriculum remained somewhat static due to the initial recommendations of the consultant who guided the transitional process. Curriculum was patterned after several agricultural technical programs in the State of New York and Ohio State University curriculum.

The author was appointed to a position on the curriculum committee in 1976 and served in this capacity until the present time. Over time, changes were made to curriculum as new occupational areas emerged and different ways of delivering courses were discovered. The advent of the mini-course, a course segment taught in a regular course, was instrumental in taking courses off-campus to the general public. The broadening of the college mission was acknowledged as the move toward off-campus delivery was instigated. This trend in curriculum greatly expanded the ability of the campus to serve community needs. Off-campus sites were established at a later time in the effort to stabilize the location of courses and guarantee delivery. Adult students were attracted by these courses and some eventually became enrolled as full time students. The author taught at a number of sites in the area of commodity marketing.

With change in academic leadership, an effort appeared to exist in 1979/80 to embrace the vocational aspects of education--particularly in the area of skills training. "Hands-on" education were emphasized in all areas of instruction. Courses developed over this period such as Livestock Management Techniques emphasized the basic elements of livestock care. Computer instruction began to emphasize this same approach. Student clubs began to emerge which were oriented to vocational aspects of programs such as Office Education Association, DECA, National Postsecondary Student Organization, etc. This reinforced the move toward a distinct vocational, as opposed to technical instruction. The completion of new buildings which allowed a livestock facility, UMW farm, the Gainey Center rental for the light horse program, and a new laboratory for mechanized agriculture plus autocad instruction were highlights of this era of expansion in facilities. Each of these buildings gave credence to Winston Churchill's statement--"first, we build houses, then they build us."

A financial crisis in 1982 led to close scrutiny of programs which did not meet the overall college mission which was strongly oriented toward agricultural education. The

Home and Family Services major was carefully examined at this time. This area proceeded in future years to establish a gerontology program to meet perceived needs in this area.

The last round of curriculum revisions were based on utilizing the existing facilities to the fullest use(3). A tele-communications system was established to allow uplink and downlink capabilities. At this time, it became clear that the addition of facilities signalled the type of education that was being delivered was high cost in nature. This was one of the factors involved in the decision to close the campus. Student numbers declined also which added to the cost of operations.

Theory of Career Education

The emphasis on career education is attributed to Sidney Marland Jr. He visualized "... the blending of academic and vocational programs into a new system" such that "... general education is ... done away with in favor of contemporary career development... ." (4). Career education has been further defined as "... a comprehensive, systematic and cohesive plan of learning organized in such a manner that... youth... will have the continuous and abundant opportunity to acquire useful information about the occupational structure of the economy, the alternatives of career choice, the obligations of individual and productive involvement in the work force, the intelligent determination of personal capabilities and aspirations, the requisites of occupations, and the opportunities to prepare for gainful employment(4). Defined in this way, career education includes personal and social skills in addition to vocational skills.

Career Exploration At UMW

Preparation for careers is accomplished in several ways, depending on the definition intended for "career education". Career education became a major thrust in the 1970's and 80's, a movement that in some ways did not fulfill its promise. If one defines career education as a combination of occupational preference combined with a life cycle concept of job advancement, it is abundantly clear that educational institutions teach this subject in almost an osmotic way. Students are expected to know clearly what type of job they desire and the path along which they must progress. But seldom does this process occur in exactly this way. Rather it describes an evolutionary process of ultimately finding out who a person really is, combined with an almost circular--rather than linear--process of discovering how knowledge, skills, and attitudes can best be used in the workplace. At UMW, the task of career education was eventually formalized and assigned to a staff member in student services. A SIGI computer program assesses vocational preferences and recommends available programs. A first quarter course titled "Agricultural Orientation" and later "University Life" introduced students to the placement office and career-related concepts. An individual process of instructor/counseling also provided a means by which career information could be relayed to the student. Special programs such as "Farmer in Residence, Horticulturists in Residence, etc." allowed direct interaction between the student and career professional. A "Getting Started in Farming/Business"

workshop style course was offered in the fall quarter for several successive years.

Career Activities

Some of the examples of career-related education fall in the realm of informal or out-of-the classroom learning. One example of this type of learning is through student involvement in clubs or organizations. One such organization devoted to career education in agricultural marketing is the National AgriMarketing Association student chapters. These professional chapters sponsor a number of student chapters at colleges and universities and offer programs such as the Mentor program where a student is matched to a professional for the year to learn firsthand about what the professional does. Student marketing competitions also allow students to develop realistic marketing campaigns for products and services.

Other organizations provide leadership training and other benefits to students. The National Postsecondary Student Organization provides skill-building and other benefits to students.

Work and Career Education

What many colleges miss in the realm of career education is a meaningful presentation of work. And this appears to be what career education is all about. It should consist of career preparation, assessment, and recycling(4, p.91). Work is defined as a purposeful activity which requires effort. This is in opposition to leisure which does not require effort(4). It is important to instill in students that the jobs of the future must be created. Examples of these are paid employment and volunteer activity. Many experts in the field of labor suggest that volunteerism is an important part of a person's life. Civic and charitable organizations rely on volunteerism to accomplish their goals. While internships or work experience are part of many programs, it is not commonly recognized that volunteer efforts can be structured in a similar way. Commodity and general farm organizations as well as cooperatives also rely on graduates to perform roles in their organizations. It may well be that the most important role for which students are trained is in serving these organizations. Without them, agriculture could not exist as it does today. Youth service activities have become popular in high schools and colleges as students experience the need to serve others.

Where these efforts are underway, the unveiling of career education is progressing. However, there are many examples of the lack of effort into this topic. In retrospect, UMW did try to accomplish many things in this area that could be judged as effective.

Bibliography

- (1) Minnesota Technical College Mission Statement--1990.
- (2) UMW Self Study Evaluations--North Central Association of Colleges and Universities.
- (3) Curriculum committee and Educational Policy Minutes. UMW
- (4) NAMA Student Compendium--1991/92.
- (5) Calhoun Calfrey C. and French Alton V. (1990). The History and Philosophy of Vocational Education. Chapters 4,5.

Computer Prescribed Student Advising

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The Pennsylvania Department of Education requires "practical agricultural experience" in order for certification to be granted to teach agriculture. The Department of Agricultural and Extension Education at Penn State is responsible for determining if and when this requirement has been met. A detailed procedure has been established to accomplish this. Upon entering the agricultural education program, students take a computerized competency inventory.

A faculty committee then interviews the student to verify the accuracy of the inventory. Recommendations and/or requirements for activities and courses are given to the student based on the inventory and interview. The requirements are monitored by the Department of Agricultural and Extension Education before certification is approved.

Because of the hundreds of technical agriculture courses offered at Penn State, it is very difficult to recommend which courses would be "best" for a particular student to take. The researchers developed a computer program that assists in ranking the available courses based on the number of competencies each course teaches. This program enables the computer to assist in the advising process therefore, the recommendations become very prescribed to each individual student. The overall result of this procedure is to provide a more concrete set of course recommendations that will be prescribed to the specific needs of each student. Because of the use of this program, the students receive higher quality prescribed advising regardless of their backgrounds or the backgrounds of their advisors. The computer generated printouts of the recommended courses are calculated to be the "best" course in each subject matter area based on the competencies in which the student needs experience.

B.S., M.S. and Doctoral Degrees - Are they worth it?

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Assessment of student outcome and satisfaction is becoming increasingly important for institutions of higher learning. This paper discusses the assessment of post-graduate employment-related variables and attitudinal variables toward the University of Illinois for graduates of the class of 1976. Comparisons are made between the University as a whole and the College of Agriculture. The median salary for B.S. graduates for the entire University increased from \$10,500/year in 1977 (one year after graduation) to \$51,000/year in 1991 (fifteen years after graduation). The median salary in 1991 for graduates attaining the B.S., M.S. and doctoral degrees in 1976 was \$51,000, \$50,000 and \$58,000 respectively for the University as a whole. For the College of Agriculture the median salary for graduates attaining the B.S., M.S., and Ph.D. degrees in 1976 was \$37,000, \$46,000,

and \$60,000 respectively. However, those students graduating with the B.S. in 1976 and then going on for the M.S. or Doctoral degree reported median salaries in 1991 that were lower than their B.S. counterparts. Significantly higher salaries were realized for MBA, DDS, Law or MD degrees. The percentage of 1976 graduates with a B.S., M.S., and Doctoral degree from the College of Agriculture currently employed was 76, 86, and 91%, respectively. Similar results were reported for the University. The percentage of 1976 graduates that would choose the same program if they were to start over today was approximately one-half for the B.S. degree and two-thirds for the Ph.D. degree for the University as a whole and not unlike the response from the College of Agriculture. For the University as a whole the proportion of bachelor's graduates employed full time was higher after five, ten, and fifteen years than it was after only one year. The proportion of graduates with highest job satisfaction also increased with time after graduation.

Implementing an Interdisciplinary Computer Graphics Technology into Agricultural Curricula

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Computer graphics is a relatively new technology in the post-secondary arena. However, industry has utilized this technology in a less sophisticated form since the 1950's. Educational leaders involved with curriculum decisions pertaining to agriculture are now recognizing that the vast majority of businesses and industries are using CAD technology in their development and manufacturing processes. The advantages of CAD over traditional manual graphics are readily apparent when these two technologies are compared. Frustrations may well surface, however, in addressing the complexity of terminology, facilities and equipment and the costs incurred in implementing this technology. Increasingly, employers look for agricultural graduates with skills in CAD technology and related computer graphics. Further, CAD training is desired by agricultural employees as they continually seek to upgrade their technical expertise through continuing education offerings.

Partnerships to Enhance Communication Competence of Animal Science Graduates

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Project:Class (Communication Literacy in the Animal Sciences) is a unique partnership of faculty, students and industry representatives working to improve communication competency of University of Nebraska animal science graduates. Through Project:Class, animal science faculty formed a partnership with faculty of the Department of Agricultural Communications to give students greater opportunities to practice the writing skills an Animal Science career requires.

With the support of a Kellogg Foundation grant to New Partnerships in Agriculture and Education (NUPAGE), these faculty partnerships grew and new partnerships developed among faculty, students and industry representatives. Undergraduate student partners have served as advisors to the project team, providing feedback about students' needs and expectations. But perhaps the most influential group in convincing both students and faculty of the value of communication competence has been the project's industry partners, including livestock producers, a livestock association executive, editor of an agricultural journal and an independent writing consultant. This very dedicated group has provided invaluable support to the project in the form of time, energy and encouragement.

Two major components of Project:Class are a support system for faculty and regular association with industry partners. Faculty support includes workshops and resource material, informal gatherings of faculty to discuss writing activities, a writing resource room in the Animal Science Department and trained reading assistants. Industry partners have worked directly with faculty and students. Their most notable contribution, "Communicating With the Pros Day," brought industry representatives to animal science classes to talk about importance of effective communication in animal science careers. Responses from students, faculty, university administrators, and industry representatives all indicate that the project is addressing a critical need in preparing students for successful careers in animal science.

Hypermedia in Science Education

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Hypermedia computer simulations give students instant access to a variety of electronic information including computer animation, written text, video, and sound, all accessed by 'clicking' or 'dragging' screen icons with the computer's mouse. A hypermedia simulation of plant cell division was developed at UW-River Falls and evaluated last Fall semester by Introductory Biology students and Cell Biology students. This highly interactive program, developed using Macromedia Director authoring software, enables students to guide a plant cell through the stages of cell division. The program develops critical thinking skills by enabling students to collect data and test hypotheses. Corresponding video footage of division in an actual plant cell is available at any time via a laserdisc player interfaced with the computer. Student reaction has been very favorable, and a proposal to develop additional simulations for use in cell biology and biotechnology courses has been submitted. Additional information was provided on the integration of laserdisc players into the science classroom, for both the CAV and less expensive CLV videodisc formats. Voyager Videostack software has been used to easily incorporate laserdisc control into hypercard stacks for use in ornithology lectures and quizzes. Although biological examples were used during this presentation, the techniques described have widespread applicability in agricultural education.

Teaching Styles, Techniques and Philosophies: Panel Discussion

T.L. Ferris, P.B. George, and D.E. Wachholz

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Three faculty members recognized for their teaching effectiveness lead a discussion sharing insights and techniques. The use of a lecture format was addressed. Reasons for the use of the lecture style included: control rests with instructor, once written, the lecture requires less preparation, allows the instructor to be the "star," and permits the student to be a passive learner. The class discussion method was offered as an alternate style in order to make the student an active participant, to involve the student, and empower the student to develop life-long learning habits. In this style, the teacher becomes a person who empowers and a facilitator. Techniques to encourage student involvement in a discussion style format included:

1. Use of three sheets of carbonless paper for quizzes. The student completes the quiz on the first sheet and turns it in. The student then grades the second sheet writing down the correct answers as well as the grade and turns in the second sheet. Now the student keeps the third sheet, has immediate feedback as to the answers, the grade and the instructor has the quiz graded.

2. Use of videotaping of student performance and allowing peer evaluation. The caution was provided that students are more critical of each other than the instructor is generally.

3. Presenting the current "political" nature of the discipline, separating the students into small buzz groups to prepare a list of actions to share with the class.

Visual Aids to Illuminate or Obscure Your Message

Dave Trechter

Mark Stephenson

Visual aids always make an impression. Often, they add clarity and life to a presentation, helping the audience understand the key points of your talk. Use of visuals is not complicated and need not be expensive. Properly implemented, visual aids will add clarity to a complicated idea and help to fix important images in the viewer's mind. Some types of visual displays work better under different circumstances. The type of material that you are presenting, the size of the audience and the facilities in which you will be presenting are all key variables in your selection. While color is almost always preferable to monotone visuals, multivariate material may require the use of color to distinguish results.

Slides are an excellent choice for large audiences or when color is essential. Slides may not be the best choice if your talk is to be given after lunch--the biological urge to digest is a difficult opponent for even the most gifted speaker.

The use of overhead projection in a large room often is a poor choice because the image may be distorted or too small

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