

# Industry Speakers Teach Agricultural Marketing At Oklahoma State University

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### Abstract

*The University plays an important role in the development of skills useful for future employment. However, many students find it difficult to apply theoretical material from courses to practical situations in industry. At Oklahoma State University, guest lecturers from industry participate in course lectures to help students visualize the relationship between theory and reality. An analysis of student backgrounds, learning patterns and evaluation of guest speakers suggest that this may be a useful role model for other universities to follow in agricultural courses.*

Universities must accept a leadership position in the economic progress of the United States (Edgeman, 1988). Students must develop the capacity to translate course material into practical applications to fully utilize their formal education. Recent research illustrates that one of the major problems in education is the one isolation of the curriculum from actual experiences (Larke et al., 1985). Current levels of understanding are not sufficient to ascertain fully how graduates assess their education in terms of its relevancy to employment. Even so, a consensus exists that strengthening linkage between the classroom and actual employment activities is positive. Research indicates that students grow vocationally as well as chronologically, emotionally, socially, and academically (Duffy, 1989). Thus, an early emphasis on career development can help students make a larger future contribution to the economy.

In the undergraduate agricultural marketing course at Oklahoma State University, guest lecturers from industry bridge the gap between theory and reality. Industry leaders stimulate student interest in learning related theoretical material and affect their demeanor and appearance at formal activities and professional meetings (Stoll, 1988). Applying research learned in the classroom to "real world" situations enhances the confidence of students in their respective discipline (Russell et al., 1987). There is insufficient documentation concerning the linkages between course material and practical situations. It may be more extensive than commonly understood (Beardsley, 1988).

If the role of the university is to provide new opportunities to youth for social and economic advancement, then curriculum should reflect the necessary content to provide such opportunities. Research shows that the social histories and psychodynamics of families significantly influence the decision to matriculate in higher education. Family support

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increases as the perception of an educational experience relevant to upward mobility increases (London, 1989). In short, the benefits derived from the university helping students to relate the classroom experience to future career tasks are: greater confidence, increased family support, improved demeanor and a larger university contribution toward economic development.

### The Course and Student Background

"Agricultural Marketing" is a junior level course at Oklahoma State University. In the Spring 1989 Semester, 48 percent of students enrolled were juniors with 29 and 23 percent seniors and sophomores, respectively. All numerical results presented in this paper were obtained from a survey administered to students in undergraduate agricultural marketing at Oklahoma State University during the Spring Semester of 1989. Ag Marketing enrolls 90 to 120 students who have completed a rigorous introductory course in agricultural economics. The role of the course is to extend a student's knowledge of agricultural marketing theory and practice. Hopefully, this is done in a manner that helps them utilize the material in their career.

The students in junior level agricultural marketing are a typical cross-section of rural youth in Oklahoma. Sixty-two percent have a commercial farm background, 21 percent a hobby farm and 14 percent a small town background. Seventy-one percent were FFA members and 70 percent participated in 4-H. Ninety-four percent of the students plan to work in agriculture after graduation. Seventy-three percent of students in the course are male.

While junior agricultural marketing is a core course of the undergraduate program in agricultural economics, there is significant enrollment from other departments within the Division of Agriculture. In the Spring Semester of 1989, 52 percent of students were agricultural economics majors and 24, 4 and 20 percent of students came from animal science, agronomy and agricultural education, respectively. Thirty-six percent of the students reported their cumulative GPA as falling between 4.0-3.1 and 59 percent reported 3.0-2.1. Agricultural Economics majors do better in this course, possibly due to background and motivation. The high GPA of students in this course may be consistent with reports that suggest a positive correlation between expected grades and level of interest (Stufflebeam, 1988).

### Student Learning Patterns

Learning patterns are an important aspect in understanding the potential usefulness of guest lecturers in undergraduate agricultural marketing. If students strongly feel that

textbooks are the most important aspect of a course, then guest lecturers might have limited usefulness. The credibility of guest lecturers is supported if learning patterns and source credibility lean towards oral forms of communication.

Fifty-four percent of students in undergraduate agricultural marketing selected "university coursework" when asked what portion of their educational experience contributed most toward their understanding of agricultural economics. This compared to 34, 10 and 2 percent who indicated a farm background, studying outside of class, and reading farm magazines and newsletters, respectively. The low utilization level of the farm press surprises the author since many of the farm magazines and newspapers contain particularly valuable agricultural marketing material.

Thirty-seven percent of students felt that grades were "very important," but 62 percent felt that grades were not as important as other factors that will determine career success. Only 60 percent of the students indicated that their parents had a strong interest in their course grades and 39 percent said that their parents only occasionally asked about grades. Fifty-seven percent of students indicated that they believed their parents also felt grades do not matter as much as other factors that determine career success.

The dichotomy between the student's selection of university coursework as the most important contribution toward their understanding of the subject matter and the perception that other factors are more important in career success suggests that students do not fully realize the practical applications of their university education. The course itself should illustrate these linkages to complete educational process (Boulding, 1988).

The preference for verbal dissemination of knowledge is striking (see Figure 1). Eighty-three percent of students surveyed selected a form of learning involving verbal communication as being most important. Research indicates that students recall the origin of material presented in a lecture

Figure 1: The Importance of Verbal Dissemination of Knowledge. Student Selection of the Part of an Agricultural Economics Course that Helps Them Learn the Most. Eighty-three percent of students selected a form of learning involving verbal communication as most important.

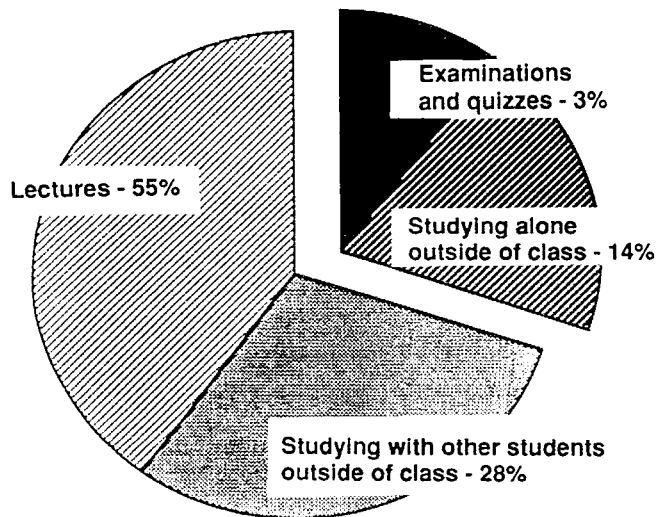
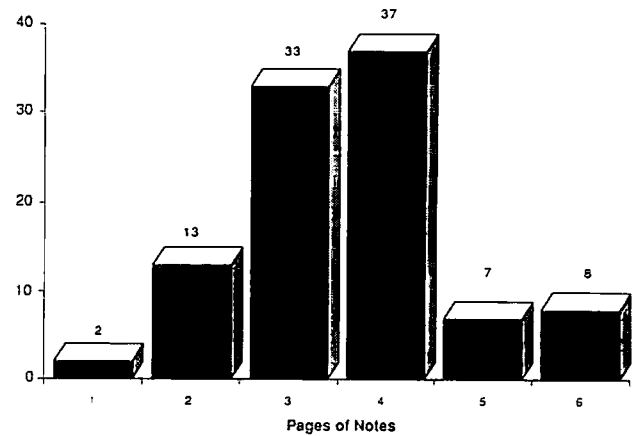


Figure 2: Pages of Handwritten Notes Taken Per Day of Lecture. Percentage of Students



more than the origin of material through other means (Hanley and Collins, 1989). Metamemory, the study of what a person knows about what and how they remember, can provide useful insights into the improvement of agricultural courses.

When studying for a test, 83 percent of students said their handwritten notes were the most important resource. Only 16 percent of students said that notes were of equal importance with the text and readings. Seventy-six percent of students indicated that overheads were the most important visual aid the instructor can use, compared to 13, 4, and 7 for the blackboard, slides, and movies, respectively. In agricultural economics, the use of graphs has generated a demand for precision in lectures (Harris, 1985) that may be presented by overheads.

Lecture notes are generally used for clarification, keys to thought processes, study guides, and reference material (Barbarick, 1985). The majority (70 percent) of students in agricultural marketing take 3-4 pages of notes per day of lecture (figure 2). These notes are the written summary of verbal knowledge transmission and their content may play a key role in strengthening the linkage between theoretical course material and "real world" career challenges.

## Industry Lectures

In undergraduate agricultural marketing, industry lectures have been used to strengthen the linkages between future career activities and the theoretical material covered in class. Support from the agricultural industry within the state has been high. The majority of guest lecturers request the opportunity to return and address the class in a future year. The need for students to apply classroom knowledge to farm and agribusiness needs is high (Drinka, 1985) but student expectations of being able to do so are low (Saxow-sky and Leitch, 1985).

There are several specific reasons the guest lecturer concept was chosen to help close the classroom "practicality gap". First, source credibility is a powerful element in the learning process (Arnold, 1988). Students believe what they hear from someone who is actually in the type of position they plan to hold. Second, research has shown that incorporation of real-life experience can enhance the learning and retention of economic concepts better than vicarious experiences (Laney, 1988). Guest lecturers often point out to students that they already have experience in many applied

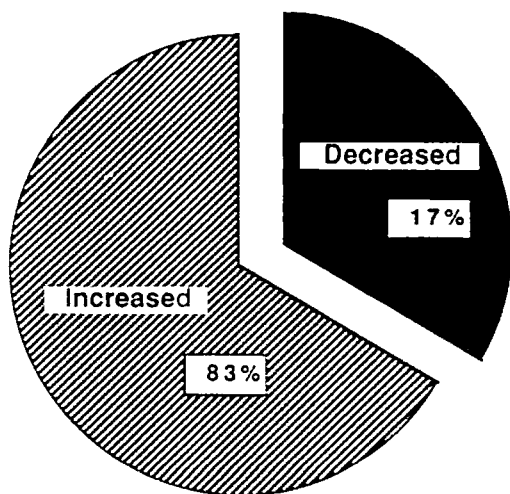
marketing areas. Third, exposure to outside experience has been shown to have a positive impact on student grades through increased self-motivation and personal commitment (Moses, 1987). Fourth, guest lecturers generate a pygmalion affect, or self-fulfilling success prophecy, within the students. If they are told that they are capable of independently applying course material to future career challenges they may become able to do so (Knight, 1988).

Student acceptance of the guest lecturer concept is high. Eighty-three percent of students feel that the guest lecturers increase their desire to ask questions and participate in the course (Figure 3). Eighty-five percent of students feel that the use of guest lectures should be expanded to include all courses in agricultural economics, 14 percent felt that it should be limited to one or two courses and only one percent believe that the practice should be discontinued. Ninety-two percent of students indicated the 2-4 lectures per semester should be devoted to presentation by invited guest lecturers.

Students are clear about the type of guest lecturer they prefer. Sixty-eight percent prefer a speaker from within the state, compared to 26 and 6 percent for out of state and overseas speakers, respectively. Fifty-three percent of students prefer a speaker who is from an agricultural marketing field (the subject matter of the course) compared to 19, 12, 13, and 3 percent for a farmer, input industry representative, government employee, or university faculty from another institution, respectively. Seventy-six percent of students prefer a speaker who represents wheat and beef (the two most important agricultural commodities within the state), compared to 10 percent for alternative enterprises, 10 percent for regional commodities such as corn and soybeans, and 4 percent for overseas commodities such as tropical fruits. Fifty-one percent of students prefer a speaker who represents a traditional agricultural occupation compared to 30 and 19 percent for new and emerging agricultural occupations related to and not related to computer technology, respectively.

The student's opinion of the most important thing a guest lecturer can provide coincides with the objectives of the exercise. Sixty percent of students rated guest lecturer's practical examples from industry experience as the most

Figure 3: Percentage of Students Whose Desire to Ask Questions and Participate is Increased or Decreased when a Guest Lecturer is Invited.



important contribution, compared to 19, 18, and 3 percent for advice on how to prepare yourself for the future, career information, and interpretation of economic analysis, respectively (Figure 4). Forty-three percent of students responded that the guest lecturer was a unique opportunity to learn more about their chosen field, but 57 percent said the experience might be good or bad depending upon the quality of the speaker. The students rating of the amount learned from the guest lecturers was 32, 57, and 11 percent, for high, medium, and low, respectively.

## Summary and Implications

The use of guest lecturers in agricultural marketing at Oklahoma State University has given students exposure to respected individuals from industry who provide examples and help relate course material to the "real world". The survey results reported above show that students favor the practice.

Several additional benefits not mentioned in the survey might also exist. First industry representatives might be more favorable towards the employment of OSU graduates if they have themselves participated in course lectures. Second, firms that have provided speakers might accept a student intern at a future time, thus providing another educational opportunity. Third, interaction between faculty and industry representatives is increased and faculty awareness of current problems strengthened.

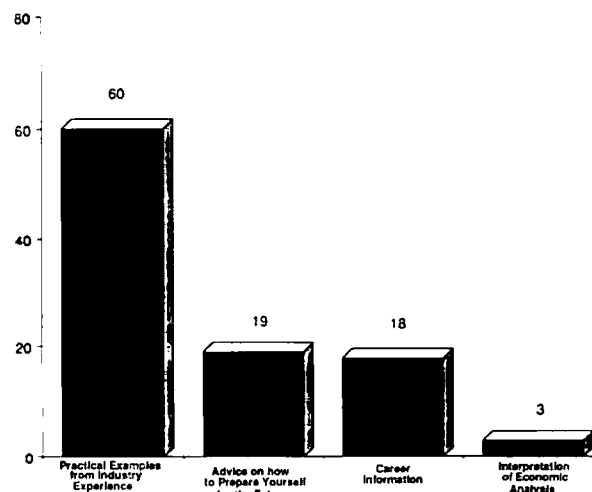
The guest lecturer concept may be utilized in many types of agricultural courses. The OSU experience may serve as a role model for other universities to follow in carrying out the land grant university mission of providing quality, practical education for students.

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Figure 4: Student Selection of the Most Important Thing a Guest Lecturer can provide.

Percentage of Student Selection



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## EDUCATIONAL OBJECTIVES IN SOIL MORPHOLOGY

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One of the primary functions of college education is to teach students to think effectively. Students face a variety of employment opportunities beyond college, and each job has unique responsibilities and problems that can change from year to year. It is unrealistic for colleges to attempt to train people for specific niches in society when technology is changing so rapidly. The knowledge that is attained in college must therefore be based on fundamental concepts that can be applied in diverse situations. The ideal program in soil science should have basic courses in soil science, physics, chemistry, and mathematics in addition to upper level classes that stress methods of application to diverse situations in the world. Each course in soil science should be designed with objectives for the students to think at higher levels. This is what we attempt in soil morphology at the University of Nebraska-Lincoln.

The course begins with the fundamentals of soil morphology, and the system of soil classification in the United States (Soil Survey Staff, 1975). This portion of the course uses the knowledge level in the cognitive domain that is

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described in Taxonomy of Educational Objectives (Bloom et al., 1956). The higher levels are engaged later in the course. Analysis occurs when the students study soils from different areas and learn that each soil has unique properties. Synthesis is used when individual soil properties are compiled to derive a soil classification. Evaluation is important when the students observe soils in the field and then must decide how to delineate them on a map.

The students can also utilize higher levels in other domains. Valuing in the affective domain (Krathwohl et al., 1964) is important when students learn that soil morphology has practical applications in the world (e.g. land use planning, land value assessment, environmental studies etc.) Organization becomes important when the students incorporate various aspects of soil morphology into their respective disciplines. Psychomotor skills (Bilodeau, 1969) are also important because some aspects of soil morphology can only be learned from "hands-on" experience. Soil texturing is such a skill, and requires the students to estimate sand, silt, and clay for soils in the laboratory and field. Proficiency is developed only by practice with known soil textures.

Another important objective is to give the students a working knowledge of the interrelations of soil properties to climate, vegetation, topography, parent material, and time (Birkeland, 1984). The ability of students to grasp these concepts enables them to represent soil patterns on aerial photographs (i.e. make soil maps). Good soil scientists must therefore combine higher levels of thinking with basic knowledge of soils to predict and map the locations of soils on a section of land.

The aforementioned objectives are not unreasonable. Most of the students in soil morphology are upperclass and graduate students, and are therefore probably in relativism or commitment forms of intellectual and ethical development as proposed by Perry (1970).

Soil morphology is somewhat of a "terminal course" in that students need lower level classes to take the course, but soil morphology is itself required only for soil genesis (Agronomy 977). This gives an instructor some freedom when designing the course. It is always important to stress the fundamentals of soil morphology, but some variations can be used in laboratory and field exercises according to the needs of the students and the objectives of the class. One class may emphasize the process of description and sampling of soils, whereas another may need more study on factors of soil formation. A good adaptive mechanism in the course is a "special problem" where students propose a "land use activity", and then evaluate the suitability of a section of land for that activity.

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