

one channel and the program driven from the second channel. A separate sound amplifier might be needed under some conditions if existing equipment is not available.

3. A multi-channel programmer is needed if more than two channels of information are to be required. A person can manually operate two units by following a script but will find it quite a hassle if he tries to coordinate three or more channels. Two types of programmers are generally recommended. One type is called digital and the other tone. Either kind is effective and the selection should be based upon dealer availability and price. Do not underbuy program capability because as you gain experience you will need and want more channels, so buy beyond your first need if at all possible.

4. Dissolve controls provide flexibility and variety to your programming. Buy a dissolve control that has the capability of being programmed to dissolve between slides or "cut" from one slide to another instantly under control of the program unit. Variety is essential and a presentation that dissolves from one image to another at a fixed rate can become mo-

notonous and boring. A dissolve unit solves this problem.

5. Specialized equipment will probably be needed as you gain experience. Right angle lenses and mounting bases will become essential if you wish to use dissolve units with rear projection. A right-angle wide angle lens is necessary to show motion pictures in the right perspective with rear screen presentations.

#### Reference

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## AGRICULTURAL BUSINESS INTERNSHIP PROGRAM

by Thomas I. Gunn

Chairman, Department of Agricultural Economics  
California State University - Fresno

A new academic emphasis developing in many institutions of higher education is career education. Programs being initiated provide opportunities for students to integrate their academic training with direct practical experience in businesses, community agencies and organizations. These career education programs have been in the form of internships, cooperative education projects, work-study and various other types of learning programs where credit is awarded.

One of these programs is the Agricultural Business Internship which was established in 1972 by the Department of Agricultural Economics at California State University-Fresno. This program has been so successful that the entire School of Agricultural Sciences is now establishing a coordinated Agricultural Internship Program which will encompass all departments.

The purpose of the Agricultural Business Internship is to give upper division students an opportunity for specific supervised experiences in an actual agricultural enterprise and to receive university credit at the same time. The program has made it possible to develop a close relationship between the agricultural business community and the Department of Agricultural Economics in the educational process of students. It has also given faculty relevant business and economic examples for classroom instruction.

Certain features of the Fresno State internship program are unique. Because of the proximity to the campus of so many different agricultural businesses, many internships are arranged so that students spend only one full day per week with the cooperating firms. This permits the student to take courses at the university while concurrently completing an internship. Thus, a close student-advisor contact is insured. This closeness to the students contributes greatly to maintaining a strong academic emphasis. Many internships or similar programs at some institutions have lost contact with the internees because they were not on campus for long periods of time.

The central location of Fresno State to many different types of California agricultural enterprises offers a prime setting for an internship program. With expansion to the entire School of Agricultural Sciences, new features of the program are contemplated. Some of these will permit more flexibility in the amount of time that a student can devote to an internship. In the past, up to 6 semester units of credit have been allowed. Under the new program, from 1 to 8 units will be permitted. The credit allowed will be determined on the basis of the expected time to be spent on the internship, as well as other factors.

Under the Agricultural Business Internship Program, a student is expected to become acquainted with the entire operation of the business. The cooperating firm agrees to provide opportunity for the internee to become familiar with all aspects of the business by actually doing (where possible) rather than just ob-

servng. The supervisor in the cooperating business establishes a schedule of activities for the internee during the entire period of the internship.

To maintain close supervision over the program, students are required to periodically meet (every two or three weeks) with their internship advisor to discuss problems and determine the progress they are making as an internee. In addition, the advisor contacts by telephone, or personally visits the cooperating business several times during the semester to ascertain progress of the student.

As a part of receiving university credit for the internship, students must prepare various reports. A weekly report is submitted to the advisor in which the activities of the internee are recorded for that particular week. A final comprehensive report must be prepared which is graded and serves as a record of the internship. This report includes such things as: history and organization of cooperating business, services of business, work accomplished by task assigned, problems observed and alternate methods of solving them, how the program has helped the internee, etc.

These training programs with agricultural firms have provided students the opportunity to become acquainted with the day-to-day operations of businesses and to develop skills not readily available in the classroom. The Fresno State program has included the following types of cooperating firms: commercial banks, land banks and production credit associations, agricultural chemical and seed businesses, farm equipment agencies, corporate farms, radio-tv broadcasting stations (Farm News), and legislative committee. Banks and farm credit institutions have been utilized to the greatest extent because of ongoing training programs they conduct for their employees which could be adapted to university internship students. However, during the past year more students have been placed in firms involved in selling and marketing agricultural products. As the internship program expands to all areas of the School, many different types of firms representing various aspects of agriculture will be included in the program.

In general, most agricultural business firms, when approached by the university, have been willing to cooperate in the internship training program. These concerns are interested in broadening the learning experiences of students. Some firms find that internship programs are a means of looking over prospective employees before hiring. Also, the public relations of cooperating agencies and businesses are improved when cooperating with institutions of higher education in career education programs of this type.

The success of the Fresno State program is expressed in comments received from some of the cooperating firms:

"We would like to thank you for allowing your students to participate in this program with us. It gives us an opportunity to know the stu-

dents, and they in turn to know some of the needs of the business community. We look forward to working with you again in the near future in the Internship Program.”

Another business wrote:

“It has been a very good experience for our firm to get better acquainted with the University and one of your top students. We hope the feeling is mutual all around.”

The chairman of a state legislative committee wrote the following about a young lady interneer:

“My purpose in writing you is to officially give recognition to \_\_\_\_\_ for her outstanding work while she was with us. She arrived in a new and rather hectic work environment at the height of the last session of the legislature and proceeded to dig right into her work in a quiet and effective manner. My committee consultant has the first draft of her report and has expressed his satisfaction with her results to date.

“I would also like to commend Dr. \_\_\_\_\_ for taking the initiative to contact us when he had a student of such high caliber interested in our subject matter and obviously able to make a quality contribution.”

Beginning with the Fall term 1974, the internship program will become a School of Agricultural Sciences activity including all departments. The new Agricultural Internship Program has several requirements and regulations:

1. A maximum of 8 units is permitted in the Agricultural Internship. Units taken for a particular semester will be determined on the basis of expected time to be devoted to internship.
2. Preference is given to juniors and seniors. It is preferable that a student have one or more semesters to be taken on campus following the experience.
3. Only students with a GPA of 2.0 or better and departmental approval are eligible to become interneers.

4. Grading is on a credit/no credit basis. This will neither count for or against a student's GPA.
5. A student may be paid by a cooperating agency during his internship, but where credit is to be allowed, this must not interfere with maximizing the educational experience.
6. Students should not enter a training program where they have already gained considerable proficiency.
7. Before an internship program is finalized, a complete Memorandum of Agreement must be evaluated and signed by the student, student's internship advisor, cooperator, department head, and the school internship coordinator.
8. A program should be finalized prior to the 10th week of the semester preceding the semester in which the internship is to be taken. Only in exceptional cases will a program be approved in a shorter period than that specified above.

The chairmen of the four departments in the School constitute an Internship Committee. They have been instructed by the Dean to keep a watchful eye on the entire program to assure continued high quality and to recommend changes which would improve the program.

The success of the internship program at California State University-Fresno can be measured by the interest of the students. Each semester there are more applicants than openings. Most students who have completed an internship say that the program was the highlight of their academic training and better prepared them for employment upon graduation. The success of the entire School of Agricultural Sciences involvement in an internship program is yet to be evaluated. It is anticipated, however, that opening up the program to all agricultural students will enrich their educational experiences and better prepare them for occupations in their chosen field.

## FUNCTION-TASK-COMPETENCY APPROACH TO CURRICULUM DEVELOPMENT – A COMPROMISE?

Harold R. Matteson\*  
University of Wisconsin

During the past few years, educators and administrators of educational institutions have spent considerable time and energy attempting to identify the best possible means of improving their curricular offerings, thus better serving the publics to whom they are accountable.

Although a variety of curricular approaches have been tried to obtain this goal, one of the approaches receiving considerable attention at the present time is the competency approach to curriculum development. As research and experimentation regarding this approach increase, a number of issues have surfaced which raise serious questions regarding the validity or soundness of this approach. Some educational issues raised by competency-based education are related to: (1) the fractionalizing of the teaching process, (2) the relevance of competencies identified today for future societal needs, (3) the level of specificity a competency should be defined, and (4) the definition of the term “competency.”

The primary hypothesis of the writer is that many of these issues could be minimized or possibly alleviated if the competency approach to curriculum development were expanded to include two additional dimensions – tasks and functions. This article includes a discussion of the function-task-competency approach (FTC) to curriculum development followed by an explanation as to how this approach responds to the issues raised by the competency-based approach.

What is the Function-Task-Competency Approach to Curriculum Development?

A function is a process consisting of a number of tasks which contribute to the overall success, operation, and continuance of an occupational area. According to Cotrell, the teaching occupation, for example, is composed of a number of functions such as

instructional planning, instructional execution, instructional evaluation, etc. One of the major arguments used by advocates of the functions approach to curriculum development such as Gleason, is that it is not job specific, but rather it transcends many jobs. An English teacher in Detroit, a science teacher in Los Angeles, and a trade and industry teacher in Denver all must be involved in the previously mentioned functions as they perform their professional roles. Since a function is conceptual rather than operational in nature, it does not provide a curriculum developer with the type of information or insight needed to operationalize philosophical curricular decisions. Thus, a group of more specific related operations (tasks) which are performed in the execution of a given function must be identified. Some of the tasks included in the instruction-planning function might be: 1) developing a course, 2) designing a course unit, 3) planning a lesson, and 4) selecting instructional resources.

Once it is determined what operations must be performed in an occupation, the competencies needed to perform these operations can be determined deductively and/or empirically. For our discussion, a competency is a behavioral characteristic of knowledge, skills, attitudes, and judgments generally required for the successful performance of a task(s). Examples of competencies for the “planning a lesson” task in the instruction-planning function are 1) identify performance objectives, 2) select appropriate content, and 3) design an appropriate learning experience. The relationship among the functions, tasks, and competencies in this model is summarized diagrammatically in Figure One.

FTC Response to Issues Raised by Competency-Based Education  
Fractionalizing the Teaching Process

Placing a man on the moon was an extremely large, complex, and exacting operation. This operation could not have been accomplished if a method had not been devised to divide this

\*Department of Continuing and Vocational Education, College of Agricultural and Life Sciences, U. of W., Madison, Wisconsin 53706