

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 internees.

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?

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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.

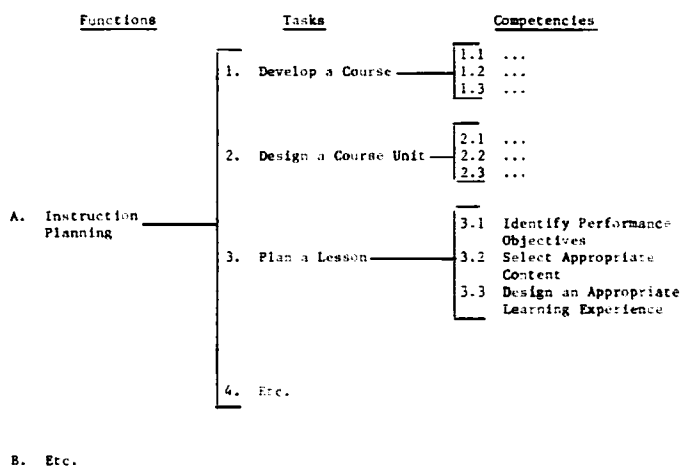
Once it is determined what operations must be performed in an occupation, the competencies needed to perform these operations can be determined deductively and/or empirically. For our discussion, a competency is a behavioral characteristic of knowledge, skills, attitudes, and judgments generally required 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

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**Figure I**  
**Relationship Among Functions, Tasks, and Competencies**



operation into many suboperations. The system employed for this operation was called Program Evaluation and Review Technique (PERT). This procedure allowed the space officials to examine and evaluate the "whole" and "parts" of this operation as well as the relationship existing between these parts.

The operation of bringing about behavioral changes in students through the teaching-learning process is also a complex and often an exacting operation. This is why the advocates of the competency approach to curriculum development believe this operation must be divided into the competencies a teacher needs to perform to be a competent teacher. A major concern of the educators critical of the competency approach to curriculum development is that this process would fractionalize teaching by breaking it down into parts which, when put together, would not equal the whole. To assert that the whole of teaching is not necessarily equal to the simple accumulation of its parts is, of course, a valid assertion. However, as Rosner indicated:

Even traditional teacher education programs fractionalize the acts of teaching via courses, lectures, readings, etc., into smaller and smaller units. Even humanists who would embrace the whole when they discuss teaching must address themselves to its parts. Competency-based teacher education (CBTE) does not deny that fractionation occurs. It is, in fact, deliberate. But CBTE has the edge over traditionally fragmented programs in that the parts are made more explicitly in an attempt to make sense of the whole. As long as one is involved in the evaluation of teaching and learning, fractionation will go on. As long as there is a desire to study teaching, fractionation will occur.

The primary question, therefore, raised by this issue is: Can the teaching-learning process be fractionalized in some manner so that the insight alluded to by Rosner can be obtained while at the same time include a clear perspective of the "whole" dimension of this process? The writer contends that the FTC approach more nearly obtains this objective because it has the advantage of being fractionalized at three hierarchical levels. The functions, which are the most general, provide a curriculum developer with an opportunity to deal with the philosophical dimension of curriculum development while at the same time develop a framework for identifying the operational units (tasks and competencies) of this model. Since the tasks are derived from a function, they are more specific than a function. Likewise, competencies are developed from a task and, consequently, are more specific than a task. Since this hierarchical relationship exists between functions, tasks, and competencies, they not only span a wide degree of general to specific statements but also serve as criteria for each other to determine their relevance and completeness for any given period of time.

#### Future Relevance of Competencies

"Nothing is more constant than change" has been a prevalent theme in education for more than a decade. Within this atmosphere of change, the critics of competency-based education have questioned the validity of competencies identified today for the needs of society tomorrow. An implicit assumption of this state-

ment is that the competency approach is static, not dynamic; that is, once competencies are identified, they are not evaluated regarding their continuous relevance over time. Regardless of the accuracy of this assumption, the writer believes that most curriculum developers perceive a curriculum as being dynamic. In order to be dynamic, a curriculum must change as change takes place in our society. The competency approach generally does not have a predesignated reference or criteria against which to evaluate the relevance of the competencies included in a given curriculum. Curriculum developed using the FTC approach has these references inherent in its model. Because the functions in the FTC model are quite general, they will not likely suffer any appreciable change over a given period of time. Thus, they serve as excellent criteria against which to make judgments regarding the relevance of tasks and/or competencies. For example, although the tasks and competencies needed to perform the instructional-planning function have changed and will continue to change, instructional-planning will undoubtedly be a function of the professional educator fifty years from now.

#### Specificity of Competency

Another crucial issue regarding competency-based curriculum is determining at what level of specificity the parts (competencies) must be defined. The question of how discrete the units must be is an empirical one that has not been completely answered at the present time. Rosner states that:

The answer probably lies in the research strategy designed to test any specific hypothesis concerning teaching behavior and pupil learning. Ultimately, the discreteness issue will be resolved when we discover the level of teacher behavior at which we begin to discern variability in pupil learning or variability in effective school operation. If it can be demonstrated that "global" definitions are related, then that is the level to be addressed if very discrete behaviors are related to pupil outcomes or school operations, then that is the way to proceed. The level of discreteness or generality is likely to vary across classifications of teaching behavior.

Since the FTC has competencies as one dimension of its model, it has to some extent the same problem regarding specificity as the competency approach. This problem should not be as crucial for the FTC model, however, because of the tridimensional aspects of the model as previously described. Because specificity (or generality) occurs at three hierarchical levels in the FTC model, the functions and tasks directly influence the specificity of the competencies. Once again, the competency approach does not have these types of references inherent in its model.

#### Definition of Competency

Probably one of the most crucial issues regarding competency-based education is how competency should be defined. The range and nature of positions taken regarding this issue will vary in accordance with the major purpose for which a curriculum is being developed. For example, according to Villeme, the various positions taken on this issue regarding a curriculum for preparing prospective teachers can be stated in the form of three basic questions.

Is teaching competency the ability to demonstrate mastery of knowledge about teaching? Is teaching competency the ability to perform the behavior and tasks of teachers? Or is teaching competency the ability to bring about desired learning outcomes? The underlined portions of these questions reflect three different philosophical positions found in the literature regarding the definition of teaching competency.

Although the FTC does not explicitly relate directly to this issue, it does provide a curriculum developer with an excellent means of obtaining information regarding this issue. Probably the best method of determining a competency level of an individual is to observe the individual using the competency in a real life situation. This implies that educators must conduct follow-up studies to determine if their educational programs have, in fact, reached their objectives. The FTC model provides a framework in which such a systematic evaluation can be conducted. Thus, results from such an evaluation effort should provide considerable insight for the curriculum developer regarding which philosophical position in this issue is most valid.

### Concluding Remarks

Although the writer does not wish to leave the impression that the function-tasks-competencies approach is a panacea to curriculum development, he does believe it resolves some of the issues raised by the competency approach. The major strength of this approach is that it provides for both the intellectual and functional operations. The FTC approach provides for the intellectual dimensions of developing and examining a philosophy and establishing conceptual relationships between the parts "of the whole." While at the same time, it provides for functional elements (competencies) for operationalizing a curriculum. In this way, it should serve as a compromise between the advocates and critics of competency-based education.

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## THE STUDY TOUR AS A TECHNIQUE FOR TEACHING AGRICULTURE

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### THE EXPERIENCE OF OTHER OSU DISCIPLINES WITH STUDY TOURS

The Ohio State University has had a long and distinguished program in the study tour area. This program was initiated in 1963 by Dr. Leon Twarog of the Slavic Languages and Literatures Department when he and 22 students spent 6 weeks in Russia studying the language. Dr. Twarog became OSU's first Director of International Programs and has been followed in this position by Dr. Osborn Smallwood. Both of these men have been ably assisted by Dr. Richard Cameron of the OSU faculty. Since this first experience, tours have been conducted annually and approximately 1200 students have taken advantage of this opportunity.

In 1974, the Departments, Divisions or Colleges of: Administrative Science, Botany-Zoology, Classics, German, Humanities Education, Physical Education, Slavic Languages and Literatures, Social Work - Law, and Sociology, conducted tours for 129 students to: East Africa, East Asia and The People's Republic of China, Germany, Great Britain, Greece and Crete, Northern Europe, Northern Europe and the U.S.S.R., the U.S.S.R., the U.S.S.R. and Eastern Europe, at an average student cost of \$1589 per tour.

Having an "International Programs" office and organization of this magnitude on campus certainly is quite an asset to an Agricultural College which is contemplating participation in a study tour program.

### STUDENT INTEREST

A recent survey of a Freshman Animal Science Course at OSU was conducted to ascertain student interest in an International Study Tour Program after a previous tour was discussed. The tabulation would indicate that 92% were interested and 65% would sign up to participate if they had to make an immediate decision. The latter percentage is probably overly optimistic but nevertheless indicates the tremendous student interest if the program is described to them in detail.

### DESCRIPTION OF AN OSU AGRICULTURAL STUDY TOUR

This report is a description and evaluation of a 1970 Animal Science Student Study Tour of Europe. The objectives of the course were:

1. To acquaint the students with different philosophies of Animal Science.
2. To visit selected Animal Science educational and research facilities in Europe.
3. To meet and visit with European Animal Science personalities so that future reading of their publications would be more meaningful.
4. To view commercial operations of animal industry from the farm to the table.
5. To expose the students to different cultures by meeting the people, listening to their history, observing their government in action, and viewing their way of life.

The foundation on which the course was constructed involved the philosophy of the recruitment of mature, well-adjusted students and the development of a program demanding intensive preparation in the classroom and hard work while on the tour.

The course was one quarter in length and consisted of 5 weeks of preparatory work on campus, 5 weeks of organized formal tour in Europe and 10 days free time in Europe. The students received 15 quarter hours of credit and the course was equivalent to a normal full time academic load for one quarter.

### Selection of Students

Students were selected only if highly recommended by their advisor and one other faculty member, and after two personal interviews by the tour leader. Qualities that were stressed were: academic performance, Animal Science background courses and, above all, the ability to function under stress. The students selected were: 1 Sophomore, 3 Juniors, 5 Seniors, 1 B.S. graduate and 1 graduate student and all were in the Department of Animal Science.

### Cost

Cost was on a shared basis and totaled \$1076 (1970 dollars). This included the following: