This overview of the competency-based educational process examines the basic reason for its growing popularity with professional educators and to professionals in other fields: the fact that it produces "doers" rather than "knowers." Three assumptions forming the basis of competency-based education are: (1) programs should be based on the competencies essential to the performance of the occupation for which the program is designed; (2) programs should accommodate individual learner differences; and (3) programs should be developed by a system that promotes goal attainment without diminishing goal quality or the humanizing procedures by which they might be attained. The educational process begins by specifying essential competencies for which the students are to be trained, then moves to selection of appropriate training methods, then to an evaluation of learner needs and progress. Competency-based education's dependence on the principles of modern systems management means a focus for all operations on the desired ends. It better assures a prospective employer that the job applicant is trained to perform adequately on the job, not simply have knowledge about it, before he is hired. (MJB)
Competency Based Programs for Preparing Professional and Technical Workers

Charles E. Johnson
Professor of Education
University of Georgia
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Competency based (CB) programs are making their mark upon American education today. A study in February, 1973 shows that over 40% of the 1200 teacher training institutions contacted either have CB programs now or are in the process of developing them. Laws requiring CB teacher certification already have been passed in eleven states, and many other states are contemplating such legislation. Nor is interest in CB education limited to professional educators. The impact of this approach to education is currently being studied and tried by engineers, chemists, veterinarians, business administrators and others in professional and technical fields.

Principles and Assumptions

One reason for growing interest in CB education is the appeal of its basic principle which holds that until a worker is fully prepared to perform adequately on the job, he should not be regarded as an acceptable member of his occupational group. Knowledge alone is not enough preparation for those who endorse CB. A person must demonstrate his qualification by actually performing competently in his area.
There are three assumptions which form the basis of CB education, none of which are new. Integrated into a focal point for program development, they result in a design which challenges many currently accepted program traditions.

The assumptions are:

1. An educational program should be based on the competencies essential to the effective performance of the occupation for which the educational program is designed.

2. An educational program should provide for the differences among learners such as their accumulation of experience, extent of achievement, and rate and style of learning.

3. An educational program should be developed and implemented by a management system which facilitates the attainment of goals without deterring either from the desired quality of the goals or the humanizing procedures by which they may be attained.

In short, CB education uses objectives directly related to actually doing a job (not just learning about it), makes realistic allowances for differences among learners and is so managed as to conserve available resources — both human and material.

Some tools for the implementation of CB instruction are suggested by the basic assumptions. These are modularized content organization, personalized instruction, evaluation by mastery performance criteria, extensive on-the-job field experience, and the increased involvement of both practitioners and learners in program planning and design.
Instruction for Competence

CB education begins by specifying the essential competencies for which the student is to be trained. A competency is a performance which a worker must do when the objectives of his job require that it be done. For instance, to have competency in teaching, a teacher must have knowledge and skill in the subject he is teaching. He must also have knowledge about his students, and about how they learn and should be taught. He must be skillful in making professional decisions; be able to adjust to his profession, and understand his feelings toward it and all the other elements of the learning environment. He must above all perform professionally and technically in such a manner that he is acceptable as a member of his profession.

Once competencies have been specified, then CB educators employ the most effective means of helping students acquire them. Certain of these tools have already been mentioned. Others are: instructional modules, diagnostic instruction, differentiated staffing, team teaching, instructor accountability, and humanized and personalized learning environments.

Evaluating Learner Performance

Diagnosing the learner's needs and evaluating learner progress are among the most essential processes of the system. In general, paper and pencil tests are used to determine the extent of the
student's knowledge, simulations are used to reflect his thought processes, and various types of observation checklists based on mastery criteria are used to determine his proficiency in performing. Values and attitudes are determined by observed behavior, and by both impressions and feelings of the learner toward himself, and of others toward the learner.

Management by Objectives

A CB program's dependence upon the principles of modern systems management means that the focus of all operations is upon the desired end. Each operation must begin with a clear picture of what is to be accomplished. A detailed strategy for the attainment of this goal condition is then designed. Designing the strategy takes into account what activities have to be undertaken and the sequence in which they should be done. It considers the resources that are needed such as equipment, supplies, time, and personnel.

Management also focuses on program evaluation with what is called the regenerative feature. This becomes evident in a process of program review-feedback-revision which provides dynamics for what otherwise might be a static condition soon to be discarded in a rapidly changing society.
A Closing Note

CB education has become appealing to occupational educators both in and out of the field of professional education because it offers as its product a "doer" instead of "knower." It weaves already existing assumptions about education into a new design which provides the student with a rounded, individual, total approach to his field of preparation. It provides the means whereby an employer is better assured that a prospective employee can perform adequately on the job, not simply have knowledge about it, before he is hired. And unlike static systems, CB education has a fluidity that will enable it to incorporate new dimensions as they become important to society, to the student, to the professional educator and to the employer.
References
