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ABSTRACT

Because competency-based teacher education (CBTE) is being more extensively used to train teachers of handicapped children from birth to age 6 years, this booklet was written to provide an overview of the current literature and practice of CBTE. The author reviews the rationale for and essential elements of CBTE programs, as well as presenting two methods of identifying competencies: the consensus and the model-building approaches. The agencies and institutions that are developing competency-based training programs and the areas of competency they cover are also cited. Observing that the rationales must be clear for including CBTE in any state certification of personnel in early childhood special education, the author defines the problems in validating competencies and proposes some solutions. A list of references is included. (JW)

Competency-Based Teacher Education

by Patricia L. Hutinger

State

Series Paper

TADS

COMPETENCY-BASED TEACHER EDUCATION

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Information services are to be provided mainly through the preparation and distribution of four series papers yearly. Ideas for topics and contributors are most welcome from our state colleagues.

* * *

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INTRODUCTION

The term "competency" represents the accomplishment of a selected objective and the demonstration of the abilities and knowledge necessary to perform that objective. A competency-based teacher education (CBTE) program specifies the competencies students must demonstrate, indicates clearly the criteria to be used to assess the competencies, and holds the student accountable for meeting those criteria. If teacher certification, or completion of a teacher education program, is an endorsement of effectiveness as a teacher of young children and their families, then careful use of CBTE programs in the certification process may be a strong technique to ensure the veracity of that endorsement. Since CBTE differs from the broad objectives of traditional teacher education, many professionals believe that completion of a competency-based program provides far more information about a student's ability to teach or to work with children than do course grades.

Differences between the traditional approach to training teachers and the competency-based approach have been described by Stewart, Denson, and Stone (1976), who developed a CBTE early childhood program at the University of Houston. Traditional teacher education, primarily campus-based and lecture-oriented instruction, seldom specifies exactly what students need to do to become effective teachers. While a traditional teacher education program might cite as a performance objective that the student will "understand how to choose assessment measures for young children at different developmental levels," the competency-based program may specify the following objective: "From a selection of five instruments, the student will select, administer, and correctly score an appropriate language assessment measure to three different children, ages 18 months, 36 months, and 48 months."

Characterized by an emphasis on cognitive competency, traditional teacher education programs tend to be organized with broadly defined goals usually assessed by grade-point average rather than by attainment of competencies. Traditional programs tend to limit learning options to lectures and reading references. Considerable attention is paid to entrance screening of teacher candidates. Some professionals equate competency-based teacher education with field-based experiences where students spend practicum time in classrooms working with children and their teachers. However, competency-

based education is more than moving education students into the schools or other sites where children are served.

This paper will present a discussion of existing CBTE programs, procedures used to identify and develop competencies, criteria used to evaluate competencies, and content of competencies which presently exist. A discussion of the relationship of competencies to teacher certification and training programs at universities will be presented.

Competencies from over 20 programs representing 10 states were examined to prepare this paper. Early childhood special education experts were contacted to determine the current activity in competency development not yet represented in the literature. The paper was written using information from raw data (the actual competency-based programs themselves), a review of related literature, and the author's five years of experience developing and implementing a university CBTE program for bachelor and master degree students training to work with handicapped children from birth to age six years.

THE IMPETUS FOR COMPETENCY-BASED TEACHER EDUCATION PROGRAMS

Considerable attention currently is directed to identifying and transmitting the varied competencies demonstrated by effective teachers of young children with special needs. State teacher certification boards, institutions which train teachers, and employers are attracted to competency-based teacher education. One implication of CBTE is that teachers (learners) will develop what Turecamo (1981) calls "conscious competence," that is, knowledge of what they are doing and why. Teachers with "unconscious competence" get results, but do not know why.

A number of competency-based teacher training programs exist across the country to train teachers of handicapped children from birth to six years, or from age three to eight years. A group of infant intervention experts is now formulating a set of specific competencies for those who work in programs for infants.[1]

State departments of education recognize CBTE's potential to provide a new approach to certification. Houston and Howsam (1972) reported that by early 1972, 17 states either had announced certification changes based on competencies or had declared their intent to do so. In 1982, some states identified competencies which must be met--to some degree--by those who wish to be certified. However, problems with the competencies are many. Some competencies for state certification are stated in a general way and cannot be measured. Other competencies have been identified but are not related to coursework offered by the colleges and universities that operate the teacher education programs.

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[1]INTERACT Personnel Preparation and Training Task Force Meeting, Shirley Zeitlin, chair, February 10-12, 1982, Los Angeles, California.

ESSENTIAL ELEMENTS OF CBTE

Elam (1971) discussed these essential elements of competency-based teacher education: competencies are derived from concepts of the teacher's role; competencies are described explicitly in behavioral terms; competencies are made public in advance; and competencies must be demonstrated by the individual student. According to Elam, assessment criteria are congruent with the specified competencies; are stated explicitly in terms of mastery levels; are made public in advance; are designed to measure performance; and are negotiable. Further, demonstration of the competency, rather than passage of time or the nature of the course description, determines the student's rate of progress. By its very nature, the instructional program provides an appropriate framework to develop and assess specific competencies.

According to Elam (1971), a number of characteristics are important for success of a CBTE program:

** Instruction is individualized.

** The primary instructional component is the module--"a set of learning activities intended to help the student achieve and demonstrate an objective or set of objectives" (Arends, Masla, and Weber, 1973, p. 3).

** Formative feedback about the student's progress is possible when competencies are stated in objective and measurable terms.

** Learning is expected to occur through a series of coordinated experiences. The nature of achievements prior to entrance into a program is not nearly as important as the emphasis on the students' mastery level at the end of the program.

** A system to evaluate the entire CBTE program must be in place.

** Input on decisions to maintain or change specific components of the program should come from faculty, students, and supervising field-site staff.

** A mechanism to revise, retain, or delete competencies also must be established.

Competency Format

The competencies identified as objectives for teachers of young handicapped children frequently are stated in functional terms and are related to a broad set of behaviors--for example, "demonstrates skills in behavior management." More specific functions follow under this broad goal. For example, the University of Wyoming's competencies include the following:

> Competency 5.4.5. Given a "preschool-aged handicapped child" in a field setting, the candidate will pinpoint a behavior needing alteration, establish a behavioral management program, record/

display the data (i.e., chart the behavior) and work with other professionals to carry out the program.

At the next level, samples of appropriate behavior which can be demonstrated to meet competency 5.4.5 can be listed and at the same time can provide the basis for a student's self-rating and an instructor's observation and rating which occur in a field site.

There are accepted conventions used to classify the various behaviors which are a part of successful teaching of young handicapped children. Competencies include knowledge objectives, ability or skill objectives (application of various knowledge objectives), and attitude objectives. Though knowledge objectives are essential, even entry-level teachers must be able to apply that knowledge in their work. Therefore, application objectives most precisely identify desirable teaching behavior.

To meet the criteria Elam suggested for competencies, it is useful to use the conventions suggested by Mager (1972) in wording competencies. First, the competency must identify what the teacher will be doing when demonstrating his or her achievement. Second, the competency must describe the terminal behavior and the important conditions under which the behavior is to occur (including restrictions and limitations). Third, the competency must define criteria of acceptable performance.

If competencies are identified by state-level agencies, they probably will be stated at the first and second level of specificity described above. Competencies intended to serve as a basis for teacher certification must be specific enough to allow teacher trainers to go further and develop precise ways to describe terminal behaviors and to measure whether or not the learner actually demonstrates the competence.

METHODS TO IDENTIFY COMPETENCIES: CONSENSUS AND MODEL BUILDING

The underlying assumption of competency-based teacher education is that the identified competencies are indeed the specific skills that effective teachers must possess. But we must ask, How are competencies identified? How can we be sure that the competencies chosen are the critical ones--the ones that really make a difference in the progress of children?

Consensus Approach

The time-honored process to identify competencies in teacher education has been what Dick and his associates (1981) labeled "the consensus approach." In one format or another, the consensus approach involves asking teachers and experts in the field to identify the critical skills that must be mastered. Both teachers and experts are asked what they think they do successfully. Providing information about actual performance is not part of the scenario.

The inherent danger in the consensus approach is the assumption that experts know what good teaching really is. Most experts think they do know, yet in a study by Fredericks et al. (1977), the amount of time actually spent on instructional activities and the number of activities which were task-analyzed were more important in determining child progress than were some of the more accepted teaching behaviors. Neither of these factors was identified in the competencies examined during preparation of this paper.

In a recent article in The Educational Researcher, Arnold Gallegos (1981) suggests there is a need for new research on the nature of good teaching. Gallegos points to the tentative "but provocative" findings of Coker et al. (1980) which indicate that "much of what has been sanctioned as worthwhile practice in educational settings. ... may, in fact, be detrimental." It is important to note that Coker's work was not carried out with young handicapped children, therefore his results cannot be patently applied to early childhood settings.

However, Bruner (1982) also implies that there are other questions to ask about good teaching of young children. Bruner noted that research confirmed some common wisdom related to group size, but also disproved a great deal of common wisdom. In an interview Bruner said:

> For example, the cant of the play-group movement was "Keep the adult off the child's back; let the child do it spontaneously." We found that the presence of an adult is important. Play bouts are longer, language is richer, and you don't get the Lord-of-the-Flies phenomenon, in which the children turn mean.
>
> (Bruner and Hall, 1982, p. 62)

Bruner also indicated that his research showed materials such as sand, clay, and water, usually considered the basis of preschool activities, did not lead to the complex play that was associated with toys that challenge children (such as structured materials and activities like puzzles, blocks, or drawing).

The fact that researchers are questioning the accepted practices known as good teaching would suggest that those who train or hire early childhood personnel should look carefully at the nature of the competencies identified as critical. Perhaps our approach of "asking the experts" and the accompanying outcome do not match the set that would emerge if competencies were developed from actual observation of effective teaching over a wide range of teachers, children, and learning settings. Each set of competencies examined for this paper was developed using the consensus approach.

Because there is no systematic, formal observation of teachers on the job, the consensus approach of identifying critical competencies is somewhat similar to "armchair" analysis (Dick et al., 1981). It is a self-report system which depends heavily on the assumption that teachers and experts agree that the competencies are complete, acceptable, valid, and useful. Dick and his colleagues point out that the consensus method may give a high rating to socially acceptable skills, while at the same time negate competencies that are not in vogue or well understood. This makes it difficult to delete institutionalized but useless competencies.

In a study of use of the consensus approach, Linder (1980) surveyed 162 direct service programs and state education agencies (SEAs) and asked them to rate 41 suggested competencies. Linder found that the highest ranked competency was in "areas of assessment," followed by "programmed strategies" and "working with parents." "Specific knowledge" and "leadership" were ranked as least important.

Model-Building Approach

Educators traditionally have used the consensus approach to determine the skills, knowledge, and attitudes that an individual must possess to be a successful teacher. However, Dick and his colleagues (1981) recommend the "model-building approach" used by military and industrial groups. On-the-job observation and job analysis are used to identify the frequency of skills performed and the degree of importance of each skill. Through analysis of these skills, those that must be included in the curriculum and means of assessment are addressed.

The model-building approach involves efforts to determine goals and functions for a system, to determine the relationships between means and ends, and to prescribe alternative ways to accomplish goals (Dick et al., 1981). The whole range of competencies and skills required (identified through on-the-job observation and analysis) includes: needs assessment, needs analysis, planning, management, design, delivery, evaluation, and revision. According to Dick, the model-building approach identifies a wider range of skills than does the consensus approach. And the former identifies curriculum and evaluation procedures. The model-building approach must be considered for use in early childhood special education.

SOURCES OF COMPETENCY DEVELOPMENT

In this country, there are at least four general sources where competencies are developed. Field sites, university programs, state boards of education, and agencies outside the field of teacher education have identified competencies for teachers of young handicapped children.

Field-initiated competencies are developed in service delivery programs and include, but are not limited to, competencies developed by various demonstration models of the Handicapped Children's Early Education Program (HCEEP). These competencies include those developed by Project KIDS, Dallas; the SEEC model, Schaumburg, Illinois; the Macomb (Illinois) 0-3 Project; Child Development Resources, Lightfoot, Virginia; and Project Optimus, Quincy, Massachusetts. DeVoid, Hodson, and Schubert (1977) of the Winston L. Prouty Center for Child Development, Brattleboro, Vermont, have developed a set of in-service competencies for staff.

Various departments in colleges and universities (Special Education, Health Science, Language and Speech, Early Childhood Physical Education, Psychology, and Elementary Education) have developed competency-based programs.

A period of rapid development of CBTE programs in this arena occurred between 1970 and 1975. Programs frequently were funded for development purposes through grants from the U.S. Department of Education's Bureau of Education for the Handicapped (now, Special Education Programs) Personnel Preparation Division and the U.S. Rehabilitation Services Administration. Examples of these programs include: Ohio State University (1974, 1975); California State University (Gorelick, 1975); Virginia University (Mann, 1974); City University of New York (Cohen, 1975); University of Washington (Office of Field Experiences, 1973); University of Missouri (Gautt, 1981); and Western Illinois University (Hutinger, 1981).

White and Watts (1973) and their colleagues at Harvard University studied the development of overall competence in young children (1973) and described basic elements of adult competencies for interaction with young children. Their work, which has implications for competency development, resulted from a research approach that shares elements of the model-building approach. Careful analysis of hours of observation of child-adult interaction identified adult behaviors that produced competent children.

State agencies in a few states (West Virginia, Wisconsin, California, New York, and Maine) have initiated competencies earmarked for teacher preparation programs. Some of these efforts have been the result of State Implementation Grant activities funded by U.S. Special Education Programs.

Agencies and institutions outside the field of teacher education have also developed competencies for teachers of young children. The Child Development Associate Consortium (CDA), a credential-granting group, has been working to ensure that competencies are demonstrated by caregivers in Head Start, nursery schools, and day care centers. The Wyoming Department of Health and Social Services has issued competencies for developmental center personnel. The CDA credential and the Wyoming competencies intend to provide standards personnel must meet to be hired to work in early childhood settings.

Recently, the Texas Developmental Disabilities Program developed a Critical Characteristics Inventory for Early Intervention Services (Lowry, 1981) which can be used for both summative and formative evaluation of early intervention programs. The inventory includes sections that refer directly to teacher competencies.

CONTENT OF COMPETENCIES

Examination of the content of competencies shows great similarities across programs. Differences occur in the nature of activities in which the content is demonstrated. Differences also occur in the degree to which the competencies can be measured. Most programs include these areas: child development (typical and atypical), classroom management, assessment, program design and planning, teacher-child relationships and management, staff and co-worker relations, professional work habits, parent relationships, community relationships, advocacy, and resources (Gorelick, 1974). Some competencies include self improvement (Miller, 1977). Though operational definitions for

affective behavior can be developed, few competencies relate to this idea. Wisconsin includes a most important attribute: "a sense of humor."

RELATIONSHIP TO STATE CERTIFICATION PROCEDURES

Responsibility for the determination of appropriate competencies for school-aged children tends to reside within the schools and within colleges of education. The case is somewhat different in early childhood, where input is needed from a variety of sources traditionally thought not to be a part of the educational system (i.e., Home Economics, Child Development, Nursing, Physical Therapy, and Occupational Therapy). Further, programs for nonhandicapped children under age five years (or kindergarten entrance age) are not part of public school programs. Therefore, few states have certification standards for teachers of nonhandicapped young children. The exception is the Child Development Associate credential that is used outside the public school system in Head Start, day care, and nursery schools and has a component related to children with special needs. Standards for certification of teachers of young handicapped children have only recently become a source of interest (Trohanis, 1981; Hirshoren, 1977).

Should credential-granting agencies and the educational profession certify persons who do not have a general education base but have completed a competency program? This question has raised concern in California where suggested competencies were viewed by some as more reflective of the medical model than of an educational model.

It is true that expert knowledge in early childhood special and regular education frequently resides outside the public schools in agencies and institutions from which educators are unaccustomed to seeking advice. The now familiar idea of multidisciplinary staffing for young handicapped children sets a precedent for seeking and accepting input on competencies from a broad range of professionals from varied fields.

In some states where competencies are used by state education agencies for state certification, universities sometimes place a stronger emphasis on specific competency content or function than their state certification requires. For example, the program at the University of Missouri places a greater emphasis on parent involvement than do Missouri's state requirements. Program administration issues also are regarded as more important by the University than by the state.[2]

If competencies are to provide a base for state certification of early childhood special education personnel, a rationale for selecting competencies must be presented and the intent of the competency must be clear. Explanations for choosing a particular set of competencies must be explicit.

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[2]Personal communication, Sandra Gautt, January 22, 1982.

As a result of the competency-based movement (McHenry, 1973), there have been significant changes in state management procedures and in certification of general and special educators. Strong movements toward competency-based teacher certification are occurring in state education agencies in West Virginia, California, Connecticut, and Wisconsin; Maine also has been involved in the processs of competency development.

State level efforts to develop certification tied to competencies often run into snags at the university level. In one state, a group of early childhood professionals developed a set of competencies which presented a balance of objectives of knowledge, skills, and attitudes. However, when the objectives were translated into college coursework, the competencies disintegrated into an almost unrecognizable set of knowledge competencies with few application competencies remaining. The college competencies represented a traditional approach to the problem rather than the intended competency-based teacher education program.

Efforts to legitimize at the state level competencies that have been developed in the field or at the university level encounter difficulties since a single program usually does not have enough political power to affect state procedures. A group effort that begins with representatives from the state department, from universities that wish to participate, and from selected field sites demonstrates cooperative effort and is a strong strategy.

MORE PROBLEMS AND SOME SOLUTIONS

A number of practical problems must be solved if a CBTE program is to be accepted in colleges and universities. The discrepancies between individual rates of competency attainment and the usual course schedule must be resolved. Students who take longer than one semester to complete the competencies identified in a particular course must be graded, according to most universities, at the end of a period. Yet, according to CBTE assumptions, students may acquire competencies at different rates. A system of granting "incompletes" is inadequate but provides one response to the problem.

Organizing the delivery of the program so that it fits within the university course structure is imperative. Scheduling the student's work at field sites is almost impossible if courses not part of the CBTE program also are scheduled in the same semester. The needs of personnel at the field sites are also important factors; student participation for two or four hours weekly is not a benefit for a field-based supervising teacher. If a competency-based program comprises the student's entire program for a specified time (for example, two semesters), then scheduling of modules and field experiences is not so difficult.

Faculty attitudes and behavior change slowly. There is an internal conflict between the traditional delivery of content (i.e., lectures) and the delivery method required to teach competencies. Faculty must be willing to place responsibility for learning squarely upon the shoulders of the learners. Faculty must also be willing to assume the role of facilitators in learning experiences, rather than remaining center-stage behind the lecture podium.

Further, faculty must be willing to allow for individual differences in competency attainment.

A determination of how competencies will be evaluated must be agreed on and made public for both faculty and students. Though some feel that the competency either is present or not present, others prefer to rate the degree of competency attainment exhibited by entry level individuals compared to master teachers. This particular issue can be argued a number of different ways and recurs when new faculty members join a competency-based team. The issue must be resolved if the CBTE program is to function effectively.

In order for students to move through a competency-based program easily, a number of instructional materials and learning packages are needed. Module development is time-consuming, yet it takes no more time than does developing a traditional course syllabus with handouts.

Record keeping is cumbersome in a CBTE program. Decisions must be in place concerning the establishment of an effective record keeping system.

Though lack of funds may be cited as a reason for maintaining existing traditional methods of teacher education, the development of a competency-based system requires money less than it requires cooperation and motivation. While many programs have been developed as a result of U.S. Department of Education Personnel Preparation grants in Special Education, competency-based programs can be developed within the existing structure, given interested, knowlegeable, and enthusiastic faculty and administrative support. Professional release time for competency development would be ideal, but it is not essential. Participation in a CBTE program can become a motivating, self-renewing activity for university faculty.

In programs for young handicapped children, input from more than one university department is desirable, since competencies cut across traditional academic disciplines. Sometimes it is easier for individual faculty members from varying departments to cooperate on a program than it is to gain departmental participation across colleges. A core of individuals who have an investment in the program is essential.

SUMMARY

Competencies can be used as a basis for teacher education programs, for evaluation of teachers on the job, or as rating scales for self-evaluation. In any case, their use holds great promise in the development of effective teachers of young handicapped children. Yet, competencies also present a series of new problems.

As greater emphasis is placed on competencies in early childhood special education, the need grows to gather existing data on CBTE for analysis and comparison. A comprehensive summary of existing CBTE program content is needed. There is no need to reinvent descriptions and lists of competencies that have already been developed elsewhere. Instead, we must determine

whether or not the competencies already developed through the consensus approach actually represent the critical behaviors that produce positive changes in children. Use of a model-building approach to develop a competency-based program is a crucial next step. Since programs for young handicapped children cut across a wide range of disciplines traditionally separate from education, contributions from all disciplines must be incorporated into the competencies identified for certification and training.

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