Competency-based teacher education and its characteristics
by John Folkert Sipkens [and] Tony Frank Turkovich

A dissertation submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of DOCTOR OF EDUCATION
Montana State University
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Abstract:
This project dealt with the problem of developing a model to implement a competency-based teacher education (CBTE) program in the department of secondary education in a teacher training college. Although numerous articles and books exist the deal with the various aspects of competency-based teacher education, there appear to be only limited references that described a model competency-based teacher education program. The writers found that there is a definite need for a CBTE program model which along with the definitions could prove beneficial for teacher educators desiring to develop a competency-based program.

The CBTE program model cannot be considered a complete "package" or a set of "blue prints" which if adopted would bo a panacea for all developmental problems. The proposed model is presented as a guideline which provides direction for the development of a CBTE program.

Some of the major conclusions reached as a result of this study were: 1) Many competency-based teacher education programs have been implemented without a clear set of criteria for the goals of the program, 2) The most successful CBTE programs were developed through the use of consortia (cooperative) type committees and continue to actively use consortia for providing leadership and feedback for program improvement, 3) The selection of a project director and providing for on-going inser-vice training for all personnel in the program is crucial to the development and continuation of a CBTE program.

Some of the major recommendations reached as a result of this study were: 1) The model and materials developed in this project should be implemented in a field-centered CBTE program by the Department of Secondary Education after a commitment to such a program is present in the faculty, 2) The development of a field-centered CBTE program should not be considered experimental, but, it should become an alternative to the traditional teacher education program, 3) Since the development of a CBTE program requires considerable faculty planning time, the administration should provide release time for certain faculty members to plan a program and to develop material for CBTE, 4) A consortium committee should be established in the initial planning stage to develop the assumption and goals essential to successfully initiate a CBTE program in the College of Education, 5) The faculty with the consortium committee should develop on-going program evaluation to ascertain the degree to which goals are being realized and to recommend changes in the model and in the program.

Since investigation revealed that the modular program has been extensively used in successful CBTE programs, a Teacher's Handbook of Modular Construction was also written. Tnis Handbook is available for review from the Library, Montana State University.

COMPETENCY-BASED TEACHER EDUCATION AND ITS CHARACTERISTICS

by

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A dissertation submitted to the Graduate Faculty in partial
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ABSTRACT

This project dealt with the problem of developing a model to implement a competency-based teacher education (CBTE) program in the department of secondary education in a teacher training college. Although numerous articles and books exist that deal with the various aspects of competency-based teacher education, there appear to be only limited references that described a model competency-based teacher education program. The writers found that there is a definite need for a CBTE program model which along with the definitions could prove beneficial for teacher educators desiring to develop a competency-based program.

The CBTE program model cannot be considered a complete "package" or a set of "blue prints" which if adopted would be a panacea for all developmental problems. The proposed model is presented as a guideline which provides direction for the development of a CBTE program.

Some of the major conclusions reached as a result of this study were: 1) Many competency-based teacher education programs have been implemented without a clear set of criteria for the goals of the program, 2) The most successful CBTE programs were developed through the use of consortia (cooperative) type committees and continue to actively use consortia for providing leadership and feedback for program improvement, 3) The selection of a project director and providing for on-going inservice training for all personnel in the program is crucial to the development and continuation of a CBTE program.

Some of the major recommendations reached as a result of this study were: 1) The model and materials developed in this project should be implemented in a field-centered CBTE program by the Department of Secondary Education after a commitment to such a program is present in the faculty, 2) The development of a field-centered CBTE program should not be considered experimental, but, it should become an alternative to the traditional teacher education program, 3) Since the development of a CBTE program requires considerable faculty planning time, the administration should provide release time for certain faculty members to plan a program and to develop material for CBTE, 4) A consortium committee should be established in the initial planning stage to develop the assumption and goals essential to successfully initiate a CBTE program in the College of Education, 5) The faculty with the consortium committee should develop on-going program evaluation to ascertain the degree to which goals are being realized and to recommend changes in the model and in the program.

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Chapter 1

COMPETENCY-BASED TEACHER EDUCATION

American education today faces the strongest challenge it has met in two hundred years of existence. Changing conditions have generated social and economic crises of considerable proportions. Houston and Howsam (1972) pointed out that education systems, beign relatively slow to change, find themselves subject to criticism from all sides. At issue are questions of relevancy, effectiveness, and adaptability (Anderson, et al., 1973).

For several decades the primary basis for teacher certification has been the completion of a number of courses in a particular area of study, coupled with a recommendation from a recognized teacher education institution for a teaching credential. Operationally, such criteria for certification require that a student demonstrate that he knows enough in the various courses to pass with a minimum grade of "C"; that he is able to function at a minimal level as a student-teacher; and that he is physically, mentally, morally, ethically, and attitudinally acceptable as a member of the teaching profession. The recommendation for certification is made by representatives from the college of education and by the supervisor of the student teaching experience.

Generally speaking, the basic assumption of this approach to teacher education is that knowledge of subject matter, teaching methods, child psychology, and so forth--as measured by course grades--is a basic predictor of teaching capability (Anderson, 1973). This knowledge is coupled with a brief testing of the ability to apply what is known, in a student teaching situation and subjective judgment as to the acceptability of a particular student to the teaching profession.

WEAKNESSES OF TRADITIONAL TEACHER EDUCATION PROGRAMS

The critics of teacher education are many; they include public school personnel, prospective teachers enrolled in the programs, parents of children in schools, university professors, and social commentators. Banathy (1968) said that many of the criticisms directed at teacher education programs are legitimate.

Limited Conceptualization of the Total Program

Many teacher education programs are currently operated without comprehensive conceptualization (Mager, 1968). The educational faculties assume these programs will include a course in educational psychology, one in the philosophy or foundations of education, methods courses in particular curriculum areas, and a six-to-fifteen-week student-teaching experience. Few programs are built on assumptions about the teacher's role within the school and the changing society or the kinds of skills and attitudes a teacher needs to grow continually as a person and teacher of children (Mager, 1968).

Banathy (1968) stressed that serious questions need to be asked about teacher preparation programs. For example, should the teacher's primary role be to individualize instruction? Should the teacher be an innovator? Should success be measured by ability to bring about certain kinds of pupil outcomes? The concept of the teacher's role should suggest the structure and components of a program. The problem is that programs are often constructed only in terms of courses that meet state certification requirements (Anderson, 1973).

Vaguely Defined Goals

Popin (1971) pointed out that many teacher education programs operate without specific goals or objectives. Even if a program has specifically stated goals, they are frequently so vague and general that, although they are easily accepted, they provide little direction for designing program components. General goals are necessary as broad guidelines for a program, but program planners need to develop comprehensive, specifically stated outcomes which they wish to achieve (Elam, 1971). The planners can design a program that achieves its broad goals only by defining and designing program components to achieve them (Banathy, 1968).

Piecemeal Changes and Innovations

In recent years a number of innovations, such as microteaching, interaction analysis, and simulation, have been introduced in teacher preparation programs. These innovations have great potential value, but as Anderson (1973) pointed out, too often they have been tacked onto an existing program with little or no adjustment in the rest of the program. One problem is that teacher educators have not viewed the teacher education program and its goals as an integrated system (Banathy, 1968). Thus, teacher educators failed to consider (1) whether and how the innovation in question will help to achieve the program's goals, and (2) what effect the innovation will have on the other components of the system. Banathy (1968) emphasized that this failure has sometimes resulted in wasteful overlap and disharmony. Houston and Howsam (1973) argued that the net result of the addition of innovative practices has not significantly changed the total program in the desired direction of improvement.

Lack of Program Evaluation

The lack of specific objectives in most teacher education programs contributes to another problem: the lack of programmatic evaluation processes for determining the degree to which program objectives are being met (Popham, 1971). If program objectives are not specified, it is difficult to determine whether they are being achieved, because the degree to which objectives are made explicit determines the level of evaluation possible (Mager, 1968). Even when program objectives have been clearly specified, according to Popham (1971), often times a systematic program evaluation has not been utilized, and when evaluation procedures have been employed, they have been focused on student progress rather than program effectiveness.

Inadequate Data Base for Program Decisions

Just as the lack of specific objectives precludes effective program evaluation, poor program evaluation makes data based, programmatic decision making most difficult. Burns (1972) made a strong case for the position that if a teacher education program is to be most effective in achieving its objectives, it must be continuously revised on the basis of constructive data supplied by sound evaluation procedures. Those responsible for making decisions must have access to data that permit them to determine which elements of the program warrant maintenance and which warrant change. Without such information, the program cannot improve and, in fact, deteriorates (Baird, n.d.).

Unresponsiveness to Environmental Change

Woodruff (1973) suggested that at least two factors contribute to unresponsiveness to environmental change: (1) program planners have rarely applied procedures for evaluation and using information regarding the program effectiveness, and (2) teacher education institutions have tended to be closed systems assuming sole responsibility for the education of teachers. One solution to this problem is implicit in these statements of Woodruff (1973): (1) program planners must collect and use constructive data in program decision making, and (2) teacher education institutions must become equal partners with a wide range of organizations directly and indirectly concerned with teacher education, including the schools, the community, government educational agencies, professional organizations, education industries, and students. Woodruff (1973) stressed that by sharing ideas with one another we can provide a climate in which responsiveness to social change is possible. In the past, the slowness of social change has meant that teacher education programs have not needed to change rapidly. The rapid social changes we are now experiencing require teacher education institutions to be far more responsive to societal needs than ever before (Arends, 1972).

Lack of Client Orientation

Closely related to the notion that teacher education must take place in an open system, was expressed by Lewis' (1971) thought that teacher education must become much more client oriented. Lewis (1971) goes on by saying that recent campus unrest proved this point all too clearly and that it seemed clear that student indictments of college programs as irrelevant were largely warranted. Future teacher education programs will surely be judged at least partially by their responsiveness to student demands for a voice in determining program content and process (Lewis, 1971).

The teacher education student, however, is not the only client to which programs must be responsive. Public school pupils and the community at large must also be considered, since they are influenced by the behaviors of program graduates (Dunn, 1973). Dunn (1973) commented that public school and community involvement in program decision-making processes seemed imperative.

USE OF COMPETENCY-BASED, SYSTEMS APPROACH TO HELP CORRECT WEAKNESSES

If the reader accepts the validity of the weaknesses in traditional teacher education programs, the question then becomes: How can these weaknesses be overcome? After an extensive review of current educational literature and visits to several Schools of Education that have competency-based programs, it is the opinion of the writers that most of these weaknesses can be alleviated by utilizing new approaches to the systematic design of teacher education programs. Specifically, the application of a systematic approach to the design of a competency-based teacher education program would help considerably in overcoming the problems cited earlier.

A systems approach to teacher education requires analyzing, describing, and designing of the total program (Banathy, 1968). A system as defined by industry has a product. The product of the educational system are the teachers who graduate from the program. The primary measure of the program's success is whether these teachers have acquired the knowledge, behaviors, and attitudes the program has as its goals and whether they can bring about the desired outcomes in their pupils. This implies that some sort of evaluation is necessary to ascertain the degree to which the teachers possess these competencies.

The information derived from this evaluation is then fed back (hence, the term feedback) into the system in order to make any necessary alterations to the purposes, processes, or components of the program. When these corrections are made, the whole cycle of feedback is repeated again, becoming an ongoing regenerative process (Banathy, 1968).

The program and its goals must be conceptualized in totality in order to determine the purposes, processes, and components. Thus, the systems approach forces a total look at the program's objectives, means, and subsystems and their relationships to one another (Banathy, 1968).

Goals and objectives are strongly affected by the systems approach. Objectives must be stated precisely, because the design of the processes and components depends on the objectives of the program (Mager, 1968). Program objectives are the criteria by which the system's effectiveness is judged. If the criteria are too vague, it is impossible objectively to evaluate the program's processes and components. As Banathy (1968) pointed out, if you don't know what you are trying to do, there is no way of finding out if you've done it.

In the past, teacher educators adopted a piecemeal approach to innovations in their programs; and as Banathy (1968) stated, the systems approach forces planners to establish how these new practices relate to the goals and objectives of a program. The fact that something is new and others are trying it is not justification for its adoption. Anderson (1973) said, any innovation must be considered in relation to the program's purposes, processes, and components, because all the elements of the program are interrelated and affect one another. Changing one element of the program will have some effect on the other elements, and this fact must be recognized.

The basic concepts of a systems approach are not new. The ideas have been around and applied for a long time in industry, although the current terminology is relatively new. The ideas and processes have even been applied in education, but until recently they have not found their way into teacher education (Banathy, 1968).

However, a systems approach called competency-based teacher education (CBTE) is drawing much attention from teacher education. Houston and Howsam (1972:viii) pointed out:

> Rarely, if ever, has any movement swept through teacher education so rapidly or captured the attention of so many in so short a time as has the competency-based movement. Already underway, the approach holds promise of renovating and regenerating teacher education. Equally significant, it appears probable that it will do so in record-setting time.

What is this competency-based teacher education that is drawing much attention? According to Houston and Howsam (1972), a competency-based teacher education program specifies the competencies to be demonstrated by the student's performance of the competency, and holds the student accountable for meeting that criteria. At first glance this definition appears to depict a rather harsh, almost mechanistic process, but Anderson (1973) argued that nothing could be further from the truth. The competencies referred to are attitudes, understandings, skills, and behaviors that facilitate intellectual, social, emotional, and physical growth in children (Elfenbein, 1972). The student is held responsible for demonstrating these competencies, because they are necessary to teaching effectiveness. He may, however, help to determine either the competencies to be acquired, or the setting in which the competencies are to be demonstrated, or both (Lewis, 1971). Three types of criteria are used to determine the student's level of achievement in these competencies: (1) knowledge criteria, which are used to assess the cognitive understandings of the student; (2) performance criteria, which are used to assess the teaching behaviors of the student; and (3) consequence criteria, which are used to assess the student's teaching effectiveness by examining the emotional and intellectual growth of his students (Arends, 1973).

Competency-based teacher education programs provide excellent opportunities for identifying appropriate teacher competencies through research that attempts to relate observed teacher behaviors to student outcome measures (Rosenshine, 1971). While several competency-based teacher education programs have been developed, the relationship between the specified competencies that the teachers are to demonstrate and the desired changes in their students' behaviors has yet to be established (Rosenshine, 1971). Rosenshine (1971) stated that the present competencies represent experienced teacher educators' opinions regarding the knowledge and skills a prospective teacher should possess.

In spite of the lack of criteria from a research base, the researchers argue that performance or competency-based programs offer "....ways to increase our knowledge of the relationship between these specific teacher behaviors and measures of pupil achievement" (Rosenshine, 1971:65). When researchers have identified teaching behaviors that relate strongly to pupil outcomes, teacher education will have a research base that can lead to improved training programs (Rosenshine, 1971).

DESIREABLE CHARACTERISTICS OF COMPETENCY-BASED PROGRAMS

There are several essential characteristics that a competency-based teacher education program advocates. One of these characteristics is emphasis on field work. The trend in teacher education is to place increasing emphasis on the use of performance and product criteria and less reliance on the traditional knowledge, or course completion, criterion (Cooper, 1972). Competency-based programs tend to be reality oriented; the students spend a great deal of time in the schools interacting with children, and many of their competencies are evaluated in that setting (Cooper, 1972). Gooper (1972) also said that there seems to be increasing acceptance of the notion that what teachers know about teaching in no way assures their ability to teach or foster growth in children.

Another desirable characteristic of a teacher education program is personalized instruction. This means active involvement of the student in the learning process. The flexibility of the competency-based program allows students a choice of goals and objectives within the framework of specified college of education goals. This increases their chances of becoming independent, self-directed, and continuing learners. This model enables teachers to translate the principles and processes of personalized instruction to the education of their students (Houston and Howsam, 1972; Anderson, 1973; Dunn, 1972).

In a traditional program, time is held constant, and achievement varies. That is, the program is set within a certain time limit--usually four years--and students go through an established number of courses and are required to obtain a particular number of credits and a minimum grade point average. The emphasis is on the completion of the courses regardless of whether the student has acquired mastery in all areas of study (Houston and Howsam, 1972). On the other hand, in a competency-based program achievement is held constant in a sense, and time varies (Arends, 1972). The program specifies the criteria levels at which competencies are achieved, and the student moves through the program at his own rate; he moves as quickly as he wishes and is able (Houston and Howsam, 1972; Masla, 1972; Elam, 1971).

Traditional programs emphasize program entrance requirements, while competency-based programs emphasize exit requirements (Houston and Howsam, 1972). Baird (n.d.) said that it seemed more logical to look at an individual's abilities after he has completed a program than before he has entered it.

At the heart of the competency-based teacher education program is the instructional module. An instructional module can be defined as a set of learning activities intended to facilitate the learner's acquisition and demonstration of a particular competency or particular competencies (Arends, 1973).

Arends (1973) described an instructional module as comprised of:

1. A rationale that (a) describes the purpose and importance of objectives of the module in empirical, theoretical, and/or practical terms; and (b) places the module and the objectives of the module within the context of the total program.

2. Objectives that specify the competency or competencies the student is expected to demonstrate.

3. Prerequisites, i.e., any competencies the student should have prior to entering the module.

4. Preassessment procedures--usually diagnostic in nature--that provide the student with an opportunity to demonstrate mastery of the objectives or relevant to the objectives.

5. Learning alternatives, which are the various instructional options available to the student and each of which is designed to contribute to his acquisition of the objectives.

6. Post-assessment procedures that permit the student to demonstrate achievement of the objectives.

7. Remedial procedures to be undertaken with students who are unable to demonstrate achievement of the objectives on the post-assessment.

Arends (1973) further pointed out that a number of things about the various elements of the module are worthy of emphasis.

1. The objective or objectives are made public.

2. The preassessment provides the student with an opportunity to demonstrate competencies he already possesses and the option to bypass the instructional activities relevant to those competencies he has demonstrated.

3. Both the preassessment and post-assessment should be reality oriented, that is, the testing situation should be as close to the "real thing" as is possible. Therefore, performance and product criteria are frequently used to assess student progress.

4. Most important, a modular approach increases possibilities for self-pacing, individualization, personalization, independent study, and alternative means of instruction.

PURPOSE

The writers suggest that one of the best responses to the weaknesses of traditional education cited earlier is a field-centered, competency-based teacher education program which incorporates the aspects of other new trends in teacher education, such as a systems approach, personalized instruction, interdisciplinary curricula, and other new technology. Field-oriented, competency-based teacher education holds great promise and deserves adequate testing.

This paper will deal with the problem of developing a model of a field-oriented competency-based teacher education program which includes planning for change, the need for consortia, field-orientation, use of objectives, personalization, modules and evaluation. The writers hope that through the development of this model a viable alternative to traditional teacher education will be presented.

PROCEDURE

The procedures which the writers followed to gain the background knowledge for this paper were:

1. Documentary research. An intensive and thorough review of the literature, as it pertained to competency-based teacher education, was conducted by the writers. An extensive library of books and other material on competency-based teacher education has been

collected and will be left with the Department of Secondary Education at Montana State University. ERIC has been searched, all the available references to CBTE were reviewed, and the most productive articles were either obtained in hard copy or reproduced from microfiche. Thirteen colleges recognized by the American Association of Colleges for Teacher Education that have developed programs in CBTE were contacted and materials were received from twelve of them.

2. Personal interviews. Non-structured interviews were held with educators who had firsthand knowledge and experience in initiating a competency-based teacher education program. To accomplish this, trips were made to:

(a) University of Washington, Seattle, Washington

(b) Western Washington State College, Field Center, Seattle, Washington

(c) Central Washington State College, Ellensburg, Washington

(d) Eastern Washington State College, Cheney, Washington

In addition to these personal visits, authoritative second-hand information was obtained from members of the Department of Secondary Education at Montana State University who made visits to:

(a) Weber State College, Ogden, Utah

(b) Brigham Young University, Provo, Utah

(c) Utah State University, Logan, Utah

(d) University of Arizona, Tucson, Arizona

3. Conventions. The writers attended the national convention of the Association of Teacher Educators held in Chicago in February, 1973. At the convention they heard many of the authorities in the field of competency-based teacher education speak. They were able to personally discuss some of the problems of initiating a CBTE program with Robert Arends and John Masla of State University College at Buffalo, New York; James Cooper of University of Houston, Texas; Joseph A. Broudy of Columbia College, South Carolina; and C. Leland Smith of University of Kentucky, Lexington, Kentucky.

4. Faculty feedback. The ideas in this paper have been presented previously to the Committee on CBTE, Department of Secondary Education and Foundations, Montana State University and many of their suggestions have been incorporated into this final draft.

A HYPOTHETICAL TRADITIONAL MODEL

Before looking at an alternative to traditional teacher education, it is important to review what is commonly meant by the term "traditional teacher education." There are some problems in attempting to describe a traditional teacher education program and a typical education major. Certainly programs and students vary from institution to institution; yet, a general portrait of a student in a typical traditional program can be presented and it will serve to facilitate a comparison with the proposed alternative to teacher education.

John Doe is a senior history major at Ivory Tower University who has decided to teach in high school. Last year, as a junior, he enrolled in introduction to education, foundations of education, and educational psychology. Through these courses, he became aware of the many problems involved in education but is still anxious to become a teacher. John's first opportunity to determine his ability in teaching and affinity toward it will be during the last year in college.

John is also interested in Indian education. If the program allows, he may be able to take an elective in Indian education during the last semester. But that is in the next term, and presently he is concerned with the current assignment, student teaching. Tomorrow he begins to teach his first class. Actually, John has not been in a high school for four years except for a few days of observation. Except for a few minutes of microteaching in the methods course, he has not taught a class of students. Tomorrow he will face attendance rolls, study halls, lunch hour, and teaching. If he is successful, the students will learn. John's only consolation is that, whatever his degree of success in teaching, his chances of officially failing are approximately one in a hundred (Johnson, 1968).

Although the program described may present a somewhat bleaker picture than warranted, it is fairly representative of most teacher education programs. The student begins with introductory courses, often called "foundations of education," usually followed by educational psychology. Both are general in scope and difficult to relate to the classroom. Next is a methods course, concerned with classroom tactics and procedure, with observation of schools sometimes included. Finally, there is student teaching, often cited by students as the most beneficial phase of their education (Mattson, 1972). In addition, the average program offers a number of electives for prospective teachers with particular interest in such areas as diagnosis of reading difficulties, tests and measurements, and others. The program described, except for the number or nature of electives, has been reasonably constant over the past several decades and is typical in many colleges of education.

A HYPOTHETICAL FIELD-ORIENTED, COMPETENCY-BASED PROGRAM

In order to develop an alternative model to traditional teacher education, the stage must be set for the essential elements of a CBTE model. As the writers talked with teachers and program administrators in informal interviews and studied the available literature on competency-based teacher education, several essential elements or characteristics which must be included became clear.

A competency-based program includes:

1. Statements of departmental goals for the program and performance objectives for implementation of these program goals.

2. Providing for a meaningful involvement of all persons and units contributing to teacher education.

3. Being committed to a field-oriented clinical program rather than a classroom-oriented program.

4. Identifying and organizing the competencies, performance, skills, knowledges, and attitudes necessary for a teacher and stating then in objective terms.

5. Providing for individual differences in students by developing an individualized and personalized program that encourages continuous progress of the trainee at his own rate of development.

6. Developing a modularized program that instructs through the use of objectives and alternative learning activities.

7. Providing a system for on-going assessment of the trainee's strengths and weaknesses.

Let us assume that long and short range plans were formulated, people were oriented, public relations were initiated, and the proposed program had been explained while it was being designed. At no other stage in program development is involving people more vital. Professors, administrators, teachers, students, community members, and professional associations generally want to be involved in new ventures. Long-range commitment and integration of CBTE necessitates early efforts to involve staff in awareness conferences, decision-making committees, program design, and policy councils.

With these initial steps accomplished, let us follow Jane Doe through a hypothetical CBTE program at C. B. Teacher's College. During the freshman year she takes the general studies curriculum recommended by the college for all general studies students. Jane, since the first grade, always wanted to be a teacher. During the freshman composition course, Jane began to wonder if she might not enjoy fulltime English teaching rather than becoming an elementary teacher.

During the sophomore year there were thirty hours of observation in the public school as part of the course "Introduction to Education." While Jane had the opportunity to visit a number of grade levels, she was also expected to observe and report on different learning procedures and classroom management techniques during the weekly, small-group seminar. Jane became aware of the many problems of education during this time and at the same time became convinced that secondary education should become her area of concentration. In "Introduction to Education," Jane was introduced to an alternative teacher preparation plan based on field work and "doing things" rather than just "learning theoretical things." In consultation with an advisor, a class schedule was planned so she could take the necessary concentration of English courses to prepare for certification in English and at the same time allow her to fit in the two quarters of field work scheduled in the alternative plan. The remainder of the sophomore year and in the first two quarters of the junior year, she concentrated on English courses and the general education requirements of the college. The electives were held to a minimum since they could be scheduled during the field experience, to gain additional credits.

Spring quarter of the junior year, Jane enrolled in a special section of education psychology reserved for the student in the alternative education program. The instructor explained that this was an orientation class in preparation for the field experience and that most of the course content would be accomplished in the field through the use of modules. The emphasis was on motivation, discipline, classroom management, and legal responsibilities for teachers, but most of all, it was stressed that she would be working with people in a classroom setting. The microteaching experience was somewhat frightening, particularly when she saw herself on videotape. The videotape session was followed immediately by student critique on how to improve her performance.

During this quarter she began to receive replies from the applications on file with several school districts that were cooperating with the college's field program. Several principals had interviewed her on campus and reported that her application would be reviewed by a staff committee. The greatest thrill was receiving a letter inviting her to join the staff at Capitol High School for the field experience. Jane felt nearly as elated about the temporary "contract" as did the graduating seniors who were offered actual teaching contracts.

Early in September Jane reported to Capitol High School to take part in teacher orientation. During the orientation, Jane was actually treated like a teacher; in addition, she was expected to assume the responsibilities of a teacher.

Jane's college field supervisor also met with the twenty field students from the vicinity and explained that during the first two weeks they would not have a permanent classroom or field associate assignment. During this period they would be scheduled to visit different classrooms in their subject areas. Additionally, Jane was introduced to the "course work" in the form of modules or learning activity packets. Since only half the day would be spent in the classroom with the pupils under the supervision of the field associate (cooperating teacher), ample time would be available for small-group sessions, research, and study. Jane enjoyed the first quarter in the classroom. The classroom supervisor soon involved her in individual tutoring and small-group supervision, and after a few weeks Jane had full responsibility for a sophomore English class. The modules proved challenging because so much was related directly to the classroom and the learning seemed relevant.

During the second quarter of field experience Jane took over most of the field asociate's English classes and in every way functioned as a full-time staff member. The college supervisor and field associate dropped in regularly for observation and consultation, but Jane felt that much help came from the weekly discussion seminar in which all of the interns participated.

Following the field experience Jane returned to the university campus anxiously anticipating job interviews. It was not long until she was offered a position, and as a result of the field experience and the temporary teaching certificate, was placed on step two of the teacher's salary schedule.

SUMMARY

The purpose of this chapter has been to clarify competency-based teacher education and examine its potential. Competency-based teacher education is an alternative strategy for developing the teacher knowledge, skills, and attitudes necessary to facilitate teacher education. It stresses careful definition of objectives and focuses instructional effort through continuous feedback. CBTE has five essential elements: 1) teaching competencies to be demonstrated are role-derived, specified in behavioral terms, and made public; 2) assessment criteria are competency-based, specify mastery levels, and made public; 3) assessment requires performance as prime evidence and takes student knowledge into account; 4) the student's rate of progress depends on demonstrated competency; 5) the instructional program facilitates development and evaluation of specific competencies.

Characteristics implied by the essential elements are program individualization and modularization; emphasis on exit rather than entrance requirements; the systemic, open approach, with feedback loops and program alternatives; and student and program accountability.

Related and desirable characteristics include a field setting, a broadened base of decision making, the use of protocol and training materials, student participation in decision making, role integration, a research orientation, and career-continuous preparation.

The promise of competency-based teacher education lies for ✓ the most part in:

1. That most of its focus on objectives and its emphasis upon the sharing process by which those objectives are formulated in advance, are made explicit, and used as the basis for evaluating performance.

2. That a large share of the responsibility for learning is shifted from teacher to student.

3. That it increases efficiency through systematic use of feedback in motivating and guiding learning efforts of prospective teachers.

4. That greater attention is given to variation among individual abilities, needs, and interests.

5. That learning is tied more directly to objectives to be achieved than to the learning resources utilized to attain them.

6. That prospective teachers are taught in the way they are expected to teach.

7. That competency-based education is consistent with democratic principles.

8. That it is consistant with what is known about the psychology of learning.

9. That it permits effective integration of theory and practice.

Having defined competency-based teacher education and looked at a hypothetical situation, the remainder of the paper will be devoted to the development of a model of competency-based teacher education and an indepth study of its essential elements.

Chapter 2

IMPLEMENTING COMPETENCY-BASED TEACHER EDUCATION

The process of implementing a competency-based teacher education (CBTE) program is complex and difficult (Giles and Foster, 1971). The process involves the collection of large amounts of information and considerable discussion by many persons of different backgrounds and expertise (Houston and Howsam, 1972). The writers suggest that this process be viewed as consisting of two major phases: (1) designing a plan for specifying the program assumptions, goals, and objectives; and (2) implementing and operating the plan.

The development, design, and implementation of CBTE, according to Anderson, et al. (1973), should be accomplished through the systems approach. A commitment to a competency-based teacher education program implies a parallel commitment to the systems approach in the design of the program (Anderson, et al., 1973). All levels responsible for decisions about instructional alternatives, from deans and superintendents to faculty-student committees, must commit themselves to a systems approach fostering a continual flow of pertinent data with which to make decisions (Anderson, et al., 1973).

Before the process of developing assumptions, goals, and objectives can be initiated, decisions must be made about the purpose of teacher education. Anderson, et al. (1973) said that there are many questions that need to be answered. For example, is the program to be designed for the purpose of preparing a specific number of teachers, or is it to be flexible enough to accommodate as many candidates as seek admission and meet requirements? Is the program to be designed for the purpose of preparing a single kind of teacher, for instance, at the elementary school level, or is it to serve the preparation needs of specialists as well? Is the program to be continuous from admission to retirement, or is it to be a pre-service preparation program? These and similar questions must be answered as the purposes of the program are defined.

In developing the purposes that are to give direction to the systematic design of a CBTE program, experienced program developers that were interviewed by the writers stated that in the early stages of development the various institutions and individuals that will be involved in determining the purposes to be served by the teacher education program must be identified. The systems approach to teacher education implies that relationships are developed among all institutions having responsibilities for aspects of program development and operation (Anderson, et al., 1973). To assure commitment to program goals, these cooperating agencies or institutions must be identified early so their representatives can be participants in the determination of purposes. In addition to the value of ideas from a variety of sources or points of view, early involvement results in a sense of cooperative and continuing participation in the program. Interviewees in CBTE programs at the University of Washington and Western Washington State College stated that the institutions that should be considered in the initial stages, include the local schools in which students will serve as teacher interns; the several departments, divisions, or faculties on campus that have some responsibility for planning of instruction in the teacher education program; the state department of education; and professional education organizations.

Information about the nature of the student presently entering or expected to enter the institution is of importance in helping a consortium committee determine the nature of the proposed teacher education plan (Houston and Howsam, 1972). The needs of the state or region also must be considered in the development of the program plan. Once this information is available the consortium should explore a large number of potential alternatives. Once a final selection is made from the list of alternative programs, a statement of purposes must be carefully designed and a decision made by the institution that these purposes clearly identify the direction to be taken by the developing teacher education program (Chamberlin, 1973).

PROJECT DIRECTOR

At this point in the program development, if it hasn't been done earlier, the school of education must appoint a creative project director. He is responsible for continued program direction development and leadership. He is also responsible for guiding the staff in the development of modules (Giles and Foster, 1973).

Following implementation, the project director will continue to direct the competency-based teacher education program. Through his leadership, resource persons within and outside the college may be unified in an effort to revise the present curriculum from traditional teacher education to CBTE.

Lewis (1971) pointed out that the director's chief responsibilities would be:

1. To become knowledgeable in all aspects of CBTE.

2. To keep the college administration informed of the various thrusts and directions the program development is taking.

3. To keep abreast as a generalist of the latest developments in CBTE, such as new educational technology, new techniques and methods.

4. To work closely with elementary and secondary field supervisors and to assist them in their contact with the local schools.

5. To be in charge of evaluation of the new CBTE program and to recommend changes that may be needed in the on-going program.

6. To prepare and project the budget for the CBTE program development.

7. To be the chief institutional representative and to meet with parents, community groups, educators, and other persons interested in the content, development, and purposes of CBTE.

8. To be responsible for a resource area housing materials,

supplies, audio visual material and that equipment is maintained for use by field supervisors and teacher trainees.

9. To maintain records of teacher trainees as they progress through the program.

10. To establish a consortium of students, teachers, supervisors and college personnel for continual input into the program to keep it up-to-date.

11. To become knowledgeable in all aspects of module construction.

12. To work closely with the college staff in developing and implementing the modular program.

13. To establish a follow-up program on the modules in use with provisions for modifying them for greater effectiveness.

14. To devise all the necessary guides, pamphlets, and forms that are necessary for the implementation and the dissemination of information about the program.

15. To be responsible for establishing a pre-service and an ongoing in-service training program.

DEVELOPING ASSUMPTIONS

Assumptions about teaching are beliefs that are fundamental to the conceptualized role of the teacher (Anderson, et al., 1973). Assumptions about teaching are based on what we believe about how the human organism develops and learns, society's present and future needs, and the role of the teacher in the instructional process. Modifications or changes in these assumptions usually suggest modifications or changes in the teacher education program (Wiley, 1970). Assumptions are statements of what is thought to be effective, right, good, or desirable. Some illustrations of teaching assumptions are (Anderson, et al., 1973:45):

> 1. Teachers model their teaching on selected teaching practices they have experienced.
> 2. Teachers must have knowledge about how environments affect people in order to relate to the needs satisfaction of pupils.
> 3. In order for a teacher to meet the needs of individual pupils he must possess a wide variety of teaching competencies.
> 4. Learning is more apt to occur when the learner possesses himself and his environment), and a sense of connectedness (his relationships with others).
> 5. Each person is unique in the way he learns most effectively.

To understand the importance of assumptions in program development, suppose one assumes that each student is unique in the way he learns most effectively. Then the teacher education program must prepare teachers who can make provisions for individual learning styles, and who themselves have been able to use their own learning styles in the teacher preparation program. Schools are then developed that allow the student to choose, with counseling, alternatives best suited to his learning style. If one assumes that there are no differences in learning styles, a program is developed that requires everyone to learn in the same way. Each student reads the same materials, listens to the same lectures, views the same visuals, and is expected to respond the same to test items. Thus, the assumptions one makes tend to provide direction for the total teacher education program.

DEVELOPING GOALS AND OBJECTIVES

The previous section has shown how assumptions about teaching are generalized statements that provide the value system on which the program is founded. However, these values do not specify what a teacher should know, feel, or be able to do. For this information one must turn to goals and objectives. Teacher education goals are statements explaining the mission of the teacher education program (Anderson, et al., 1973). That is, they tell in general terms what the trainees of the program are to accomplish. These statements, when reduced to the more specific terms called instructional objectives, indicate the competencies that teachers must possess if they are to effect desirable changes in student behavior.

Goals for Teacher Education

In the past, goals for teacher education have usually been statements that indicated concern for professional education and broad liberal education (Houston and Howsam, 1972). Anderson, et al. (1973) indicated that little had been written that clearly defined comprehensive goals for teacher education. Teacher education goals are one basis for developing and specifying competencies (Houston, 1972). The goals statements should be broad and inclusive but not so broad as to allow a variety of interpretation. Houston and Howsam (1972) believed that there are many sources for determining the goals for teacher education programs but that the main sources are assumptions about teaching and the needs of the society the program is to serve, particularly as expressed by those individuals most directly involved in the program. That is, the goals of any teacher education program should not only reflect what we know to be effective teaching, but also parallel the beliefs of society about what education should accomplish.

Anderson et al. (1973:47) has given the following as illustration of possible goals for teacher education:

> 1. A teacher education program will help each teacher develop a personally relevant teaching style.
> 2. A teacher education program will prepare each teacher to employ teaching behaviors that will assist each pupil to acquire a positive attitude toward school and the learning process.
> 3. A teacher education program will prepare teachers to help children acquire understanding of their social and physical environment and means by which it may be modified and/or changed to meet the needs of man and society.
> 4. A teacher education program will provide for the preparation of teachers who can help children acquire an appreciation of the social and physical environment that surrounds them.
> 5. A teacher education program will help teachers acquire a sound understanding of how the human organism learns to adjust to and control his social and physical environment and how children and youth best acquire the behaviors that will assist them in exercising the processes of adjustment and control.

During the process of specifying goals for teacher education, it is important to maintain a consistent viewpoint (Houston and

Howsam, 1972). That is to say, the desired effect of the implementation of one goal should not conflict with the desired effect of another. Furthermore, program goals must be consistent with program assumptions.

Objectives for Teacher Education

The instructional, or teaching, objectives for a teacher education program are statements of the competencies thought to be essential for effective teaching. They are derived from the goals for teacher education but are much more specific. For each identified teacher education program goal there are usually several instructional objectives that describe competencies to be demonstrated by the prospective teacher. Houston and Howsam (1972) defined the term competencies as the "attitudes, understandings, skills and behaviors that facilitate intellectual, social, emotional, and physical growth in children." Objectives may also be stated at various levels of specificity. Moreover, statements of teacher competencies should indicate the expected teacher behavior, and should be stated in somewhat general terms. For each of the goals of teacher education, a number of teacher competencies may be specified, each reflective of the goal from which it is derived.

Anderson, et al., (1973:50) presented the following list of teacher competencies as examples that might be derived from a specified list of program goals. Some are applicable to the teaching of particular school subjects; others relate generally to what might be called "the teaching process;" and still others concern themselves with the learner's self-realization.

1. The teacher demonstrates an understanding of word recognition skills and the ability to teach tem effectively.
2. The teacher diagnoses pupil study performance and prescribes and implements procedures for assisting learners to apply effective work study skills.
3. The teacher evaluates pupil development in musical performance using acceptable judgmental criteria.
4. The teacher uses evaluation feedback to assess his teaching behavior and amends his behavior accordingly.
5. The teacher engages learners in discussions of contemporary social problems during which the learners identify their values and indicate how these values affect their proposed solutions to these problems.
6. The teacher adapts, modifies, and combines various communications media to develop effective instructional materials designed to satisfy specific teaching objectives.
7. The teacher creates a classroom atmosphere conducive to personal acceptance and comfortable interaction for all participants in the learning environment.
8. The teacher guides learners in acquiring oral communication skills that allow them to convey with considered intent such elements as meaning, mood, emotion, overtones, and variety.
9. The teacher effectively evaluates the products of the learner's written language using acceptable criteria.
10. The teacher uses classroom management procedures that organize and coordinate the cooperative efforts of students in ways that lead to the accomplishment of individual and educational objectives.

Most of these statements of teacher competencies can be reduced to even more specific instructional objectives. Anderson, et al., (1973:51) stated that, as an example, the following statement of objectives might be drawn from competency number 10 listed above.

In a classroom setting, the teacher will:

1. Achieve group cohesiveness, pride, morale, and cooperation.
2. Establish and maintain productive and effective group norms.
3. Improve group effectiveness using participatory problem solving techniques.

4. Change inappropriate and unproductive patterns of behavior.
5. Handle group conflict in nonpunitive ways.

As a final step in the development of assumptions, goals, and objectives, a small group of professional workers should summarize and assemble all the ideas produced into a single document that expresses the educational viewpoint of all the participants. Heish and Yarger (1972) suggested that the essential parts of such a document might be: (a) a statement of purpose, (b) a rationale, (c) a list of assumptions underlying effective teaching, (d) the physical and social boundaries, and (e) a list of program goals and instructional objectives. When reproduced and distributed, this document would be a constant reference for the competency-based teacher education as it is designed and developed.

DEVELOPING INSTRUCTIONAL STRATEGIES

According to Bolman (1970), the importance of good planning cannot be overstressed. Good planning should approach the problem of curricular change through an examination of the question of programmatic goals while temporarily ignoring a consideration of current personnel, materials, equipment, and facilities.

Bolman (1970) stressed that the task of instituting curricular change in a teacher education program is often characterized as a search for answers to the question: How can the personnel, materials, equipment, and facilities of the present program be employed in the implementation of the new program? The problems implied by that question serve as constraints in the process of designing and implementing new programs.

From the work of the consortium on goals and objectives, the goals of teacher education undoubtedly changed from the present goals. This probably meant that the instructional process of achieving these goals also changed. Keeping the program objectives in mind helps the designers relate the processes with the products (Bolman, 1970). They can see which processes of instruction will promote specified competencies in program graduates.

An Instructional Philosophy

Earlier in this chapter the process of developing goals and objectives for the program was discussed. Moreover, instructional philosophy, strategies, and activities are a direct outgrowth of program goals and objectives. In addition, a wide range of assumptions of both a general nature and a specific situation nature are not only possible but even necessary. However, if we are to continue the development of the proposed alternative plan, there are several key assumptions that should be made. Therefore, the writers assume that to be effective, a teacher education program should: (1) be competency-based; (2) be field-centered; (3) be regenerative; and (4) be personalized.

Competency-Based Teacher Education Programs. The notion of comptency-based teacher education has been a major focus of this paper. As defined earlier by Arends, Masla, and Weber (1972), a competency-based teacher education program specifies the competencies to be acquired by the student and the criteria to be applied in assessing the competency and holds the student accountable for meeting those criteria. Those competencies are the attitudes, understandings, skills, and behaviors that facilitate intellectual, social, emotional, and physical growth in children. Three kinds of criteria are used in assessing the student's competency: (1) knowledge criteria for the student's cognitive understandings; (2) performance criteria for his teaching behaviors; and (3) product criteria, which assess his teaching effectiveness by examining the achievements of his pupils. Competency-based programs emphasize the use of performance and product criteria, while traditional programs have emphasized knowledge criteria.

Some of the characteristics that differentiate competency-based programs from traditional programs play a major role in influencing the nature of instructional processes:

1. In a competency based program, criteria for achievement of the objectives are held constant and time varies, while in a traditional program, time is held constant and achievement varies.

2. Competency based programs emphasize exit requirements, while traditional programs place heavy emphasis on entrance requirements.

3. Competency-based programs tend to be more field-oriented than traditional programs; consequently, students spend a great deal of time in the public schools interacting with children and many of their competencies are evaluated in that setting. In traditional programs instructional activities and assessment, except for the student-teaching experience, usually take place in the college classroom.

4. In competency-based programs clearly stated objectives are used to specify the competencies to be acquired by the student.

Field-Centered Programs. One of the most complicated parts of the change in teacher education deals with the use of the Public Schools (Field) in a completely different way (Giles and Foster, 1972). Limiting factors may be the amount of field experience available locally, the distance to various field sites, and the willingness of teacher trainees to travel or even live away from campus.

Giles and Foster (1972) suggested the use of field experience will mean:

1. The development of mutually acceptable perception of education among professors, field personal, and teacher trainees.

2. The development of a compatible perceptive of roles which professors, field personnel, and teacher trainees play in teacher education.

3. The development of mutually acceptable ideas of teacher competencies among professors, field personnel, and teacher trainees.

4. The willingness of school personnel to make day-to-day adjustments in the classroom to accommodate teacher trainees in their program.

5. The necessity for teacher trainees to learn to adapt to the expectations for regular professional teachers rather than function outside them.

6. Providing an inservice training program for the classroom teachers who become "field associates" to provide for the development of the necessary skills and knowledge to enable the field associate and the teacher trainee to interact successfully.

Regenerative Teacher Education Programs. Teacher education programs must reflect the changing nature of society and the effect this change process has on the role of the teacher (Arends, Masla, and Weber, 1973). To be most effective, teachers need to be critically, but openly, receptive to change (Houston and Howsam, 1972). If they are to help students acquire such attitudes, teacher education programs must also be open, flexible, self-reliant, and self-renewing.

As stated earlier, the systems approach is, in part, an attempt to make and keep programs relevant through rigorous application of systemic techniques in program design and management. The continuous, careful examination of the performance and effectiveness of program graduates through the use of feedback allows for data-based decision making regarding the selection of students, the allocation of resources,