



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 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 in-service 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. This Handbook is available for review from the Library, Montana State University.

COMPETENCY-BASED TEACHER EDUCATION AND ITS CHARACTERISTICS

by

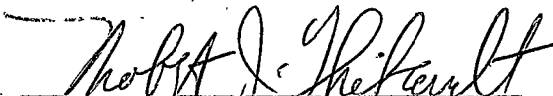
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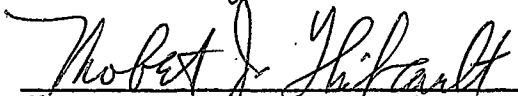
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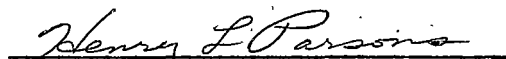
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## ABSTRACT

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 in-service 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, being 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). Cooper (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 them 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 associate'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 consistent 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 in-depth 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 them 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 competency-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,

and the modification of instruction (Houston and Howsam, 1972). Thus, the program becomes regenerative, and an open system that welcomes and accommodates change.

Personalized Teacher Education Programs. The assumption that instructional aspects of the teacher education program must be designed to meet the unique needs of each student places at least three major demands on program designers (Lewis, 1971):

1. A given instructional objective or activity must be appropriate to the interests, abilities, and learning styles of the student.
2. Procedures for diagnosing individual needs must be designed to permit the student to develop a realistic self-awareness so that he can design his personal program.
3. Feedback systems must monitor the progress of each student and the effectiveness of the program so that information is continually available to both students and program designers. In short, the instructional activities of the program must be personalized for the student. This statement becomes an assumption underlying the design and implementation of all instructional activities.

One way to personalize instruction is for the designer to consider instructional modules that provide for self-pacing and alternate routes, student involvement in the decision-making processes, use of new technology, and interdisciplinary approaches.

### The Instructional Module

In its simplest terms, an instructional module is a series of learning activities that facilitate the student's achievement and demonstration of a specific objective or set of objectives. An instructional module is characterized by (Arends, Masla, and Weber, 1973):

1. A rationale serving two purposes: (a) to describe the purpose and importance of the objectives of the module in empirical, theoretical, and/or practical terms; and (b) to place the module and the objectives of the module within the context of the total program.
2. An objective or set of objectives that specifies the competency or competencies the student is expected to demonstrate.
3. A description of prerequisites to the module, if any.
4. Pre-assessment procedures--usually diagnostic in nature--that allow the student to demonstrate mastery of the objective or objectives and to "test out".
5. Learning alternatives--various instructional options available to the student--that contribute to the student's achievement of the objective or objectives.
6. Post-assessment procedures that allow the student to demonstrate achievement of the objective or objectives of the module.
7. Remedial procedures for those students who are unable to demonstrate achievement of the objective or objectives on the post-assessment.

The use of instructional modules increases the possibility for alternative means of instruction, the individualization and personalization of instruction, and self-pacing within a module and the total program sequence. Modules may require varying lengths of student time depending on the objectives and the pace at which the student works.

### The Instructional Contract

Another way to personal instruction is through the instructional contract. The definition of instructional contract is: a series of written bargains and commitments between two sources, the teacher and the learner. Contracts personalize instruction in several ways (Lewis, 1971):

1. A contract program provides for flexibility in content, based upon inputs from the professors in regard to teaching strategies, skill development, and guidance.
2. Contracts provide for flexibility in pace and allow for variances in rates of learning.
3. Contracts are an avenue for increasing student responsibility for goal development as well as achievement.
4. Contracts offer experience in planning and developing responsible behavior patterns.

The use of instructional modules and contracts increases the possibility for alternative means of instruction. The modular or contractual approach makes it easier to change the program. As the

competencies required of the student change, modules or contract requirements can be added, modified or deleted with less effort than it usually takes to change a regular course.

Just as there should be alternative routes of instruction within the modules or through the use of the contract, there should be alternative routes through the entire program (Lewis, 1971). That is, the student must be able to build his own program by choosing and sequencing his experiences to fit his needs. This will require program designers to limit prerequisites to a minimum.

#### Student Involvement in the Decision-Making Process

A central aspect of program personalization is the provision for student participation in the design of his instructional program and experiences (Houston, and Howsam, 1972). Teacher educators must be consumer oriented, and they must not see themselves as being responsible for all decisions (Giles and Foster, 1971). Giles and Foster (1971) also felt that students must be responsible for their own learning if they are to be held accountable. Students should have the right to formulate objectives in addition to those stipulated by the program, and instruction should be provided to help students meet those self-determined objectives (Davies, 1973).

Normally teacher education programs allow each student to specialize in a particular area, such as grade level or content. The program should also encourage students to select areas of specialization

(Cunningham, 1970).

### SELECTING INSTRUCTION MATERIALS, EQUIPMENT AND FACILITIES

The following section is not intended to give the reader a complete description about instructional materials, equipment, and facilities. The purpose is to alert the teacher education program designer to certain notions that need to be explored. The writers, from their visitations and research, made these observations:

1. The selection and construction of instructional resources must be compatible with the program's instructional philosophy and methodologies. If the program is to be reality oriented, materials must be continuously updated. Unless the designer fully appreciates the necessity to establish linkages between instructional philosophy, methodologies, and resources, it will be difficult to build an effective program (Anderson, et al., 1973).

2. Instructional resources should be made available to the student from the widest possible range of sources. Giles and Foster (1972) suggested that one of the benefits of multi-departmental patterns of organization is that such patterns broaden the range of material and personnel available to the student. A sharing of resources across departmental lines is an effective method of decreasing costs; this is particularly important, for example, with regard to the development of instructional materials.

3. Instructional resources must support the program; the program should not be molded by existing or easily obtained resources. However, present resources must not be over-looked. It will take additional funds for new materials, but this can be minimized if present institutional resources, cooperating school resources, and teacher made materials are utilized. Davis (1973) was firm that components must be chosen to facilitate the processes which will help achieve program objectives, not vice versa.

4. Teacher education program designers must see that the critical variable in decisions about instructional resources is student time rather than money (Mangione, 1970). Admittedly, money is always an important consideration. But (Mangione (1970), stated that we must begin to achieve a better balance between the present situation, which places financial concerns ahead of human concerns, and one that totally ignores cost factors.

#### THE ROLE OF INSTRUCTIONAL PERSONNEL

Innovative teacher education programs require innovative instructional personnel. Anderson, et al. (1973) said that all too frequently one reads of a supposedly innovative program only to find on actual inspection a less exciting, more traditionally operated program than was depicted on paper. Anderson, et al. (1973) continued, while poor program planning or the lack of adequate materials, equipment, or

facilities often contribute to this problem, it is frequently the people who were called on to make the program work who have failed.

Innovative teacher education programs such as field-centered competency-based programs require a redefinition of roles with the learning process. As Houston and Howsam (1972) pointed out, if an individual has functioned successfully for a number of years in the lockstep approach of most current programs and is himself a product of such a program, he cannot be expected blithely to accept the innovations found in CBTE. The writers observed, during their informal interviews, that even where personnel accepted these innovations, one could not expect them to adopt new patterns of behavior without assistance.

In order to successfully transfer to a new program, specific role expectations need to be devised and communicated to the various personnel. Both current and new personnel need to understand the requirements and responsibilities of their new roles. They should also understand the nature of the system so that they can understand where and how they fit into it. Anderson, et al. (1973) pointed out that this phase of the program can be particularly stressful for current personnel. In other words, each individual must decide for himself whether he can fit into the new program. The individual may find it necessary to assume a new role or find other employment.

Anderson, et al. (1973) felt that there were at least three fundamental changes implied in a field-centered CBTE for the college faculty.

1. The most basic change is the recognition of student learning as self-initiated and self-guided. Instructional personnel will have to deal with this on a daily basis both in and out of class. The ideal implies a basic trust in the student that has been somewhat lacking in the college environment.

2. Instructional personnel will have to accept other programs personnel--many of whom will not be qualified college faculty--as peers with particular skills that are valuable to the program.

3. There must be a shift in the faculty reward structure. Teaching as an activity must be given status along with research and publishing. Extensive work with public school inservice programs should also be considered in promotional policies. Colleges should have promotional policies that recognize these assumptions and reward personnel for what they do to serve program and student needs. Further, the reward system must recognize the contributions of faculty members in situations increasingly characterized by team arrangements.

#### SUMMARY

Innovative programs will cause a reorientation of instructional and support personnel. This reorientation will be best accomplished through the use of specific job descriptions and long-term staff development. The result of such processes must be a job structure in which personnel do what they are most comfortable doing and what they do best.

The program designers should not assume that everyone can adapt to such a structure.

Moreover, at least four factors seem critical in implementing competency-based teacher education. These four factors are: 1) commitment to the development of such a program; 2) the availability of the kinds of resources needed to implement it; 3) ability to create and live within the new management structures required for its functions; and 4) the availability of time to get it started.

Furthermore, when prospective teachers engage in education that is competency-based, they are more apt to become independent, self-directed learners themselves. They can and will create a similar learning environment for the students they teach.

## Chapter 3

### CONSORTIA

Democracy in education and education for democracy both require increasing renewal of organizational effectiveness and of professional responsiveness to pluralism. The consortium, particularly where it is based upon some form of parity governance, is potentially one of the most powerful instruments for educational change and improvement (Houston and Howsam, 1972:75).

Hughes and Achilles (1971) stated that an educational cooperative or consortia is a joint effort of two or more educational organizations which has as its purpose change and innovation in education, and to enlarge the scope, quality and assessability of programs and services in education. An educational cooperative (consortium) is built upon an exchange system; it is a voluntary, mutually rewarding system. An educational cooperative allows each of its units to remain independent, is permissive in its operation, works toward comprehensive change, provides a cost-effectiveness ratio somewhat lower than an individual unit would have if it were working alone, and is primarily interested in developmental aspects of education and programs. In a voluntary educational cooperative, employees are not full-time members of a standard political unit, such as the local school unit. One goal of a cooperative is to provide clients access to certain features of quality education through the pooling and extending of resources. An educational cooperative is generally thought of as a system within a defined region,

containing a number of contiguous independent school districts which develop and share educational resources through the use of such things as communications media, joint research and development activities, and computer and data processing technology. The educational cooperative and multidistrict confederation provides the conceptual and organizational framework for local school systems to increase their capabilities to produce quality education. The consortia provides structure for the joint solution of interdistrict and interstate educational problems. It also promotes wide-spread dialogue among professional educators and the wider intellectual community. The educational cooperative is a confederation of autonomous school systems whereby each retains local control.

Houston and Howsam (1972) [Weber Ch. 5] contended that CBTE is committed to teacher education organizational patterns that are multi-institutional in nature. Operationally, this means that responsibility for the education of teachers should be shared by colleges, schools, and the educational community broadly defined.

Under the usual organizational pattern of teacher education programs the teacher education institution--a college or university--has the major, if not the sole responsibility for the preservice education of teachers. That responsibility has been shared to some extent with schools, but only with regard to the student teaching experience. The extent of this cooperation has been limited to the school's providing a

setting in which the student teacher practices teaching under the guidance of a teacher. Control, however, has remained in the hands of the college. In future teacher education programs colleges should share much more of their responsibility with schools and other segments of the educational community (Rosner, 1972; Anderson, et al., 1973; Maddox, 1972; Hughes, et al., 1971).

Such multi-institutional patterns will undoubtedly take many different forms. However, it seems that the groups sharing teacher education responsibilities will at least include colleges, schools, and governmental agencies. In addition, educational professional organizations, state departments of education, college students and student organizations, members of the community and the "noneducation" academic disciplines will be more involved in teacher education programs than at present.

The movement toward multi-institutional organizations and the greater involvement of "peripheral" elements are means of achieving two important objectives: (1) to maximize the resources available to teacher education programs, and (2) to involve more closely those both directly and indirectly concerned in the decision-making processes related to teacher education (Houston and Howsam, 1972 [Schmieder & Holowenzak, Ch. 5]; Hughes, et al., 1971).

## THE COLLEGE AND CONSORTIA

Traditionally, the college's major function has been to provide a setting where the student can experience instruction to facilitate his acquisition of specified teaching competencies. Operationally, this means that the college has provided the personnel, materials, and facilities constituting the bulk of the instructional program. Another important, but often overlooked, contribution of the college is the conduct of educational research. While this characterization is somewhat oversimplified, it does describe the traditional functions of the college in the teacher education program (Grupe, 1971).

Whatever one's feelings about the present effectiveness of colleges in the education of teachers, they have valuable resources-- personnel, materials, and facilities--to contribute to the educational process. It seems reasonable that recognition of their resources should include consideration of the benefits to be derived from consortia arrangements (Acres, 1971).

Consortia of colleges take many forms, but their common element is the establishment of mutually beneficial working relationships among a number of colleges. These relationships may be formal or informal, short-term or long-term, task specific or more general in nature. The preference is for relatively formal, long-term relationships that focus specifically on both preservice and inservice education of teachers (Anderson, et al., 1973 [Weber, Ch. 9]).

Faculty members are one of the greatest resources of a college. By bringing together a number of colleges and their faculties, a consortium increases the number of faculty members available to undertake a particular task or set of tasks relevant to the teacher education program.

A consortium also expands the instructional facilities and materials available to the college and the student. This is particularly important, because teacher education programs are placing increasing emphasis on the use of media and hardware. Cooperative materials production and computer time sharing are only two examples of the advantages a consortium arrangement might offer (Forehand and Moyer, 1971).

The major benefits of a consortium of colleges are the expansion of resources and the sharing of ideas. It is clear, however, that participating colleges must overcome problems of identity, trust and communications if they are to receive the full benefit of this pattern of organization (Forehand and Moyer, 1971). Achieving an organization that maximizes the resources available to each participating institution is not an easy task. Consortia leaders cannot be satisfied to coordinate old models of higher education when important new models are being developed (Anderson, et al., 1973 [Weber Ch. 9]).

The emphasis that competency-based teacher education places on field experience mandates close cooperation between the college and

schools, because competency based programs require continuous reality testing of program outputs and the schools provide the best situation for such testing. The schools not only furnish settings in which teacher education students confront real pupils but also provide skilled personnel to guide the student. School personnel will become integral parts of the differentiated staffing patterns that increasingly characterize teacher education programs and, consequently, will become part of the decision-making structure.

Closer school and college relationships are imperative. New mechanisms and new structures are being formed. These new structures call for new roles and rearrangements of responsibilities. Many things will be quite different in the future, including (1) the amount of time the college student will spend in the schools, and (2) the role of school personnel in teacher education. Students will be spending more of their time interacting with children and teachers in the schools; teaching experiences will occur earlier and more frequently in the student's preparation and will last longer. Very close school-college working relationships is a pattern that will become more common as its effectiveness is demonstrated (Patterson, 1971).

School personnel will play a much more active role in the decision-making processes of the teacher education program. They will be involved in specifying objectives and competencies, designing instructional activities, evaluating student and program progress, and

making policy. In short, the school will become an equal partner with the college in the preparation of teachers.

#### THE PURPOSE OF A CONSORTIUM

There are at least six general purposes for cooperative arrangements in institutions. They are: (1) To improve the quality of educational programs and institutional operations. (2) To expand educational opportunities. (3) To facilitate change. (4) To relate the institutions more effectively to their communities. (5) To achieve economies. (6) To raise funds (Patterson, 1971).

Joint purchasing of goods and services provides certain economies, of course, but the resulting qualitative improvements are viewed as being of greater significance. Thus, it is unfortunate, first, that the general financial plight of collegiate institutions is becoming a primary motivational factor in the development of new cooperative arrangements, and, secondly, that the monetary yardstick may become the standard for measuring their success (Luke and Mial, 1971; Acres, 1971; Alderman, 1972).

The groups vary, sometimes radically, from one to another. Just as each institution has some degree of uniqueness, a consortium represents a summation of the distinctiveness of its members. There is not and should not be one model for cooperation. Rather, the organizational structure, purposes and operational procedures of a

collective group are likely to be more relevant and effective when evolved from the peculiar characteristics, needs, and aspirations of the participants.

Consortia appear to have unlimited potential but they need to document their worth with more comprehensive data. Questions which are in need of research include: (1) How effective are the consortia in accomplishing their stated purposes? (2) What impact do they have at the campus level and in the surrounding communities? (3) What are the benefits in proportion to the resources invested (Nelson, 1972; Hughes, et al., 1971; Patterson, 1971)?

An example of improvements in the quality of programs through a consortium are: joint utilization of scholars in residence, visiting professors, lecturers and consultants; and acquisition of resource materials and equipment for shared use such as audio-visual materials. This purpose is regarded as one of the most important, and its attainment is the most difficult to assess. When a group of administrators develop a systems approach to institutional management, how is the improved efficiency evaluated and what relationship, if any, does this have for the eventual beneficiary, the student? Inservice training is an aspect of quality improvement well adapted to the consortium arrangement. The bringing together of a limited number of staff from several institutions provides an opportunity for communication and association (Metzner, 1970; Hughes, et al., 1971; Nelson, 1972). (See

Appendix A, page 204 for A Brief Program Description of Consortium Models.)

A consortium is concerned with broad-based participation. The following issues and problems need to be reconsidered in developing a consortium according to Houston and Howsam (1972) [Ch. 5, Schmieder and Holowenzak].

1. What should be the fundamental mission or purpose of consortia?
2. Can the primary effort of a specific consortium be involved with both preservice and inservice training, or should the consortium deal with only one of these areas?
3. When a consortium actually is training, how can the "service area" of the consortium be organized around a performance-based design?
4. What are the components of a consortium delivery system, and how would they operate?
5. What kinds of information systems will be beneficial for one consortia? What model information systems are now available?
6. The issue of evaluation and design-measurement instruments must be resolved. How can a monitoring system for consortia be organized? What agency should be responsible for evaluation and measurement? How can teacher performance be determined by members? How can the progress of the consortium and achievement of its objectives

be determined? How should personnel associated with a consortium be evaluated?

7. Within consortium systems, what types of priorities for trainees can be established?

8. To what extent can consortia have authority for funding, contracting, or subcontracting? What are the benefits and liabilities of such authority?

9. What future can consortia and teacher centers anticipate as there is a phasing-out of federal funding?

Hughes, et al. (1971) and Nelson (1972) said that any attempt to define a consortium soon leads to the conclusion that there are as many definitions as there are types of institutional partnerships or agreements. Little has been written about their character or purpose, and what has been written is scattered generally throughout a broad range of professional literature. Yet consortia continue to flourish, despite fuzzy delineation and sparse description in the literature. For example, they are basic to some of the most prominent new educational structures initiated in recent years; training complexes, portal schools, teacher centers, learning centers, staff-development centers, and educational service centers. Although consortia often produce anxiety that is caused by new and unusual relationships, their advantages far outweigh their disadvantages in most cases. The following are some of the advantages:

1. Consortia increase general economic support and effectiveness through mutually shared tasks, resources, and goals.
2. Consortia provide an expanded and renewing matrix of people, processes, products, and programs.
3. Consortia allow for greater differential identification of response components to meet personal and programmatic needs.
4. Consortia involve continual curriculum renewal, faculty reorientation, and the continuing development of processes for instruction, training, and education.
5. Consortia increase the range and responsiveness of services for students' emerging needs.
6. Consortia encourage an increase in the cost-effective utilization of independent special services and skills.
7. Consortia increase the probability of institutional accountability.
8. Consortia create an expectancy for future institutional growth, and provide for the beneficial consolidation of independent thrusts.
9. Consortia increase the growth of human and institutional parity in planning, implementation, and evaluation of education programs (Houston and Howsam, 1972 [Ch. 2. Schmeider and Holowenzak] p. 81-82).

#### ORGANIZING A CONSORTIUM

At first glance, the consortium concept seems simple and appealing. Colleges and universities--generally ones that are close geographically--band together in activities which they have been carrying on separately or offer programs that none of the schools can afford alone. Joint efforts that can conceivably result in savings--

or more likely in slowing the rate at which costs are rising--include sharing of facilities and faculty, exchange of students, combined departments, elimination of duplicate courses and joint buying of supplies. At least, voluntary cooperation makes it possible for many different kinds of institutions to offer more opportunities to more students and to serve the community better (Alderman, 1972, Patterson, 1971).

Creation of a multi-purpose consortium, however, is generally a slow, evolutionary process. Most partnerships, at least in the early stages, tend to be geared to a specific, limited purpose. When college or university consortia are proposed, every administrator involved thinks that his school has indispensably unique qualities. Trying to get colleges with diverse and often competitive academic programs to work together on a broad front takes time (Wood, 1971; Alderman, 1972; Patterson, 1971).

Talking about cooperation is quite easy. But trying to implement it with a competitive institution requires real effort and statesmanship.

One example, according to Alderman (1972), of a consortium that appears to be highly successful is Five Colleges, Incorporated. Five Colleges includes Smith, Mt. Holyoke, Amherst, Hampshire and the University of Massachusetts, all located within six or seven miles of each other. The consortium, administered by a full-time coordinator

operates, among other things: a radio station; a literary and public affairs review; a bus system providing hourly service among the consortium colleges; extensive cross-registration of students; faculty interchange; a research library; and a joint astronomy department.

Alderman, (1972) underlined diligent planning and consultation as being essential to the success of the consortium. Staffing, for example, requires careful administration. Alderman (1972) goes on to say that one of the most important concerns of the consortium is joint planning, particularly in the academic areas. Cooperation begins to have an impact on institutions when it affects academic offerings. Saving of faculty time is where the real value comes in working together in a consortium. Cooperative purchasing is of secondary value, in comparison (Luke and Mial, 1971).

The greatest administrative problem of cooperative ventures is master planning. Emphasis on this is particularly important. For example, an institution should not begin something that will affect others without thorough consultation in advance (Patterson, 1971).

If the activities of a consortium are limited to an occasional joint lecture, a few workshops and other short term projects, the financial implications likewise are limited. A certain number of easy projects are necessary in the initial development of a consortium to cultivate personal relationships and mutual confidence. After the

newness begins to fade, however, the cooperative relationship will not retain the interest of busy personnel if more important problems are not considered. This suggests that individual institutional priorities eventually should be reflected in consortium priorities (Patterson, 1971; Wood, 1971).

Patterson (1971:20) emphasized that:

The suggestion that the achievement of economies should be a secondary consideration in assessing the merits of consortia does not mean that cutting institutional operational costs, where possible, are unimportant. But the greater advantages of consorting are gained from a priority emphasis on academic programs of the member institutions, individually and collectively. To expect that any consortium endeavor should be justified first on the basis of direct savings to be accrued is comparable to requiring that a college determine each course offering on the basis of the least deficit to be incurred.

One of the few clear cut answers regarding financial implications of consortia is that an institution will increase its operational costs, not diminish them, as a result of joining a multi-purpose consortium. Consortia is misconceived if viewed as a source of financial relief. Their more significant benefits come in the form of improved quality, efficiency and relevancy and, economy wise, "by getting more bang for spending an extra buck."

A consortium should also devote some central office energies to the preparation of publications for members. House organs appear as an important means of keeping members aware of best practices by schools, of future programs, of meeting dates of study groups, and

reports on studies of general interest. Successful consortia devoted much attention to written reports as a means of communicating with member schools. A second major category of publications consists of the reports of research and conferences (Hughes, 1971).

#### PROBLEMS IN THE DEVELOPMENT OF A CONSORTIUM

Grupe (1971) stressed that assuming that both the quantitative and qualitative growth of consortia will continue, persons working with these organizations should recognize that some problems and limitations are common to all cooperative organizations. Unless this is the case, institutional personnel founding consortia can hardly begin to deal with these organizations in an appropriate way. Realizing that two to three years may pass before major projects leave ground zero requires sophisticated patience, and watching the downfall of pet project ideas demands unusual flexibility. The very low mortality rate of formally organized consortia provides strong evidence that these organizations succeed more often than not. Thus, these traits are generally present. At the same time, however, research on consortium formation has shown that problems such as geographic separation, equipment incompatibility, intracollege communications failures, or just plain apathy emerge as more significant obstacles than is admitted when such organizations are created.

The organizers and developers of a consortium according to

Grupe (1972); Luke and Miles (1971) face a herculean task if the initiators and their staffs are not really ready to commit themselves to major changes in their standard methods of doing things and to working out solutions to anticipated problems. Clearly, the creation of some consortia may have been troublesome because the participants involved were unprepared for the existence of difficulties which put many of their initial goals and plans to ruin.

Cooperative planning is more easily called for than accomplished, and it may well be that a precise understanding of cooperative program administration will not come without actual participation in these activities. Cooperative actions can rarely be pictured as unblemished and easily achieved successes. Although there are numerous advances for which consortia can take a good deal of credit, joint programs are seldom born easily and rarely just fall into place on their own accord. It may not be until well after a consortium is formed that it becomes apparent that within the newly organized consortium the only mutually agreed upon commitment was to form it (Grupe, 1971; Hughes, et al., 1971).

It is important that initiators of a consortium build long-term plans, and clarify the exact objectives the consortium means to achieve before it is operational or at least shortly after it is formed. According to Grupe (1971) in a survey he conducted, more than eighty percent of the consortia reporting were found to have been formed without having developed concise plans for administering the programs they eventually

undertook. Long-range and short-term objectives and goals must be spelled out in advance to initiating the consortium. It is, therefore, important to justify first and then create the consortium. One factor which may prevent the planning of long-range goals for a consortium is because of the actions of its member institutions (Grupe, 1971).

It is difficult, for instance, to foresee a cooperative being able to develop either rational long-range plans or suitable programs if its own members are unable or unwilling to construct and share their own plans. Interinstitutional cooperation is simply not that easy (Grupe, 1971).

However, consortium organizations will continue to contribute toward the resolution of the most pressing problems confronting education. Cooperation becomes a full time activity. Consortia do have characteristics which enable them to act as appropriate vehicles for dealing with many problems that are part of joint program development.

Wood (1971) stated that recognition of the difficulties likely to be present is fundamental to their resolution and does not prohibit ambitious goals from being sought. Complex problems generally involve complex solutions, and while cooperation may be a suitable process for resolving some types of problems, expectations for a consortium's success should be tempered by the knowledge that innovations of any type are always high risks. Only those consortia which are able to

overcome the inevitable obstacles that accompany any significant undertaking are likely to succeed.

#### THE CONSORTIUM AND ACCOUNTABILITY

Accountability has been called the "hallmark of the 1970's." Houston and Howsam (1972)[Ch. 5. Schmieder and Holowenzak] stated that the dimensions of the accountability process include the specifications for performance capability; the instructional components that produce results; the development of empirical research; and the management application employed to accomplish specific goals. As these points suggest, the issue of accountability will become the foundation stone for educational reform.

Although accountability has been defined widely and although educators now are quite familiar with its general implications, its specific meaning for competency-based consortia has been inadequately explored and articulated. The manager and other service agents who operate a consortium must consider the central question, how can a performance-based consortium be held responsible for the outcomes or performances of trainees? The answer to this question involves a wide range of considerations: accountability under what conditions? accountability by whom? accountability to whom? accountability for what cooperative actions and outcomes? accountability to what degree and over what period of time?

Houston and Howaam (1972)[Ch. 5. Schmieder and Holowenzak]

continued by saying consideration of these conditions leads in turn to program problems, such as the following: (1) To what extent should each member of the consortium process--from students to administrators--be held accountable for specific kinds of results? (2) How are these "results" to be measured? (3) To whom will educators be responsible, and what are the consequences if the program fails to meet its designated objectives?

Both the competency-based consortium and the concept of accountability involve a primary concern for implementation of those educational principles and techniques that can be utilized to assure a high level of attainment of objectives by the educational cooperative enterprise. Both the consortium and the accountability concept share two primary responsibilities: (1) the responsibility of the cooperative arrangement to provide programs that effectively develop the human potential of a wide variety of educational personnel; and (2) the responsibility of the cooperative arrangement to utilize efficiently the variety of resources that are entrusted to it by the supporting society. These responsibilities lead to an emphasis on performance at all levels. In essence, this emphasis requires operational knowledge of the relationships between input and output and between resources and results. Such knowledge can be obtained only through deliberate, systematic, and consistent procedures for consortium program planning,

development evaluation, implementation, and refinement. Maximization of accelerated educational reform can result only through vigorous pursuit of effective performance-based consortium accountability (Houston and Howsam (1972)[Ch. 5. Schmieder and Holowenzak]; Patterson, 1971; Luke and Mial, 1971; Rosner, 1972).

The preparation of teachers should be increasingly a joint endeavor involving a variety of professional and lay groups. As an example, institutions such as universities, public schools, industries, regional educational agencies, student groups, parent and lay public groups should be in some way involved in the planning, implementation, and on-going evaluation of teacher education programs. The optimum functioning of a consortium is ultimately dependent upon the quality of interaction implied by the concept of cooperation. A consortium cannot be satisfied to coordinate old models of education when important new models are being developed (Rosner, 1972).

The matter of better management through cooperation is important, but not nearly as important as the possible contribution of consortia to the definition of role and purpose for various types of colleges and the reduction of unproductive competition between institutions. Consortia can contribute significantly to the sorting out of institutional role and purpose and can provide an excellent structure for coordinating any newly developed educational program (Houston and Howsam (1972)[Ch. 5. Schmieder and Holowenzak]; Luke and Mial, 1971).

## SUMMARY

There are distinct advantages that are derived from carefully planned cooperation among colleges and public schools: greater diversification of curriculum; greater student and faculty mobility; greater specialization, and opportunities for meeting increasing enrollments.

Across the nation, many institutions of higher education and public schools are looking toward the consortium as one means of helping to solve educational problems. Though the educational systems tend to approach cooperative arrangements fearful of their respective identities, increasing numbers are becoming convinced that large-scale cooperation is inevitable and sensible.

## Chapter 4

### FIELD-CENTEREDNESS

One of the more important changes occurring in teacher education today and an essential part of competency-based teacher education is the development of field-centered programs: that is, learning programs that conduct most of their activities on the site, using actual classrooms as laboratories for learning (Cooper, 1972). Such field activities are intended to bridge the gap between theory and practice and to avoid the situation in which college methods courses are taught as lecture courses and are separated by a quarter or more in time from any actual need to use the ideas developed in the lecture hall in a student teaching situation (Clegg, 1970).

The concept of using actual school classrooms as laboratories for learning how to teach is not new. More than half a century ago John Dewey (1904) spelled out the idea in an essay, "The Relation of Theory to Practice in Education," proposing this idea as an alternative to the then current normal school programs which he compared to apprenticeship training. While the laboratory or demonstration schools were quite common in the subsequent decades, they often became isolated physically, and intellectually from the realities of the public school environment (Russell, 1965). Typically, classrooms in local school systems were used largely for observation and practice teaching; very seldom were they the site for conducting the main body of pedagogical

instruction in the theory and methods of teaching.

Dewey (1904:20) had some real cautions about using the laboratory method too quickly and without proper introduction and orientation when he said:

Now, the teacher who is plunged prematurely into the pressing and practical problem of keeping order in the schoolroom has almost of necessity to make supreme the matter of external attention. The teacher has not yet had the training which affords psychological insight--which enables him to judge promptly (and therefore almost automatically) the kind and mode of subject-matter which the pupil needs at a given moment to keep his attention moving forward effectively and healthfully. He does know, however, that he must maintain order; that he must keep the attention of the pupils fixed upon his own questions, suggestions, instructions and remarks, and upon their "lessons."  
...The student (teacher) adjusts his actual methods of teaching, not to the principles which he is acquiring, but to what he sees succeed and fail in an empirical way from moment to moment: to what he sees other teachers doing who are more experienced and successful in keeping order than he is and to injunctions and directions given him by others. In this way the controlling habits of the teacher finally get fixed with comparatively little reference to principles in the education.

Russell (1965) stated that professional laboratory experiences might conceivably be designed to achieve two purposes: the development of teaching techniques and the understanding of principles of education upon which practice should be based. Dewey used the word "laboratory" in referring only to those direct experiences designed to achieve this second purpose, although he assumed that skill and proficiency in the work of teaching ultimately would emerge from them.

Russell (1965) continued by stating that laboratory experience should be designed to relate educational theory to educational practice.

This type of laboratory experience is not very wide-spread in its useage in teacher education programs. From the educational beginning, problems occur in the future teacher's schooling.

#### PRACTICAL EXPERIENCE DELAYED

According to Goodlad (1965), course work in the subject matter to be taught and for general educational background needs to be a large part of the teacher's instructional arsenal. A student spends more than fifteen years acquiring this subject matter which is virtually devoid of professional laboratory experiences in the sense of learning opportunities deliberately designed to encourage inquiry into and practice of the adaptation of this subject matter for students in elementary and secondary schools.

Current curriculum revision of most of the precollegiate subjects is designed in part, however, to produce inquirers into rather than mere assimilators of the discipline. Houston and Howsam (1972) argued that teachers trained in a competency-based teacher education program will be prepared to promote similar inquiry among their own students. It would appear that careful and deliberate interweaving of theory and practice in teaching should occur at the outset, in whatever is provided as the first introduction to education (Goodlad, 1965).

#### IMPORTANCE OF STUDENT-TEACHING

Conant (1963) stated that it is generally agreed that the

cooperating teacher significantly molds the attitudes and pedagogical techniques of the future teacher. Stroller (1964) in his report of different methods of supervision at Hunter College, concluded that neither the method of supervision nor the particular supervisor has as great an impact on the student teacher as does the combination of cooperating teacher and cooperating class. Student teaching is usually the climax of the preservice phase of teacher preparation, the point at which school and college personnel should assure themselves that the neophyte is a promising inquirer into and practitioner of the art of teaching (Russell, 1965).

Once a teacher trainee is engaged in actual professional practice in the classroom, the opportunities for effective inservice education become immense. The student's gains as a professional can no longer be measured by courses and credits alone. A practicing teacher becomes highly sensitive to his own needs, and this sensitivity can convert many experiences into benefit. He can benefit and profit from those activities and studies which are designed to improve his professional performance. Examples are clinics, seminars, workshops, and even courses. The essential ingredient to improvement of effectiveness in the classroom seems not to be in the planning of the educational experience but in the actual carrying out of those plans (Russell, 1965).

Russell (1965) went so far as to say that he felt "that there is much that is valuable to learn about teaching that can not be learned

except through the practice of teaching." Consequently, he felt we should look at preservice teacher education critically and think in terms of putting our money and efforts on supervised practice in the classroom, carried on throughout the year. Rivlin (1966) agreed with this plan and suggested that it could be effectively done through a combination long-term internship with concurrent course work.

#### THE LIMITATIONS OF TRADITIONAL STUDENT TEACHING

In CBTE, before a teacher candidate is recommended for a teaching certificate, he is required to demonstrate his ability to teach at a reasonable level of effectiveness without close supervision. In the past, institutions preparing teachers relied upon the judgment of the supervising teacher and the university supervisor to determine whether or not a candidate had demonstrated a level of proficiency sufficient to be recommended for a teaching credential. Within a very short period of time, often after only a minimum number of classroom observations, the supervisor had to assess the level of competence of the student teacher in achieving the following objectives:

1. The ability to manage the classroom and teach effectively in a state of independence.
2. An understanding of communications as a process basic to effective teaching.
3. An understanding of the conditions under which people learn and the skill to alter conditions to gain desired learning.
4. The ability to analyze the characteristic defenses that a teacher employs in the face of stress, and acceptable patterns of behavior to handle stress conditions in the classroom and the school.

5. An appreciation of research in teacher education and its impact on teacher behavior.
6. The ability to plan for desired changes in pupil behavior and to develop effective instruments to measure the degree of behavioral change within a framework of satisfactory evaluative criteria.
7. Skill in self-evaluation.
8. An understanding of the school, its functions, and its philosophy.
9. An understanding of the purposes of the American public school and the contemporary relationships that are maintained to assure attainment of these purposes.
10. The ability to establish and maintain desirable relationships with students, teachers, administrators, and parents.
11. The ability to direct learning satisfactorily (Harrison, 1968:180).

Harrison (1968) stated that it is difficult for the student teacher to develop and demonstrate the required competence during a few weeks of student teaching and equally difficult for the supervisors to provide him with sufficient opportunities to develop a desirable level of competence as well as make an accurate assessment of his capacity to teach. These programs were based on the assumption that the student could develop skill and derive meaning from educational theory during a relatively few weeks of professional laboratory experiences through observation of children and of teaching. Harrison (1968) suggested that ideally these clinical experiences should be organized from simple to complex so that appropriate attitudes, understandings, skills, and insights could be developed at each level of the candidate's growth. This would provide the student with an opportunity to accept increasing

responsibility and a gradual induction into teaching, during which more abstract and complex theories could be tested.

As early as 1960, a survey (Barnes, 1960) showed that more than half of the institutions contacted were making plans to inaugurate into their teacher education curriculum changes to make their programs more relevant. Finding a solution to the problem of relevance, may require some rather radical departures from the traditional approaches to teacher education. This suggests that education students should be placed in the schools at the very outset of their professional program (Lange, 1972).

Such immediate involvement in the schools would require careful supervision, accompanied by professional seminars. McPhie (1967) suggested this might be accomplished by assigning, in the morning, half of the education students to the schools, where their activities would be closely supervised by personnel from both the university and the public schools; and requiring them, in the afternoon, to attend correlated seminars conducted by members of the professional education and appropriate interdisciplinary faculties of the university. The other half of the education students would reverse the procedure by working in the schools in the afternoons and attending their seminars in the mornings. Under this plan it is not likely that the trainee would do any teaching immediately, but with careful guidance, some limited teaching experience could be introduced relatively early in such a year-long, half-day,

intern-type program.

#### A NEW PATTERN IN TEACHER EDUCATION

The new emerging competency-based field-centered program endorses the view that learning to teach requires active participation in real classrooms under the guidance of real teachers. It bases the professional development of the teacher on the firsthand inductive development of perceptions, the testing of hypotheses, and the synthesis of generalizations (Hazard, 1967). It seeks to move from the real to the vicarious in contrast to the usual reverse sequence in professional education. It recognizes that this development of professional skill in teaching is an artistic and creative process, as well as one of scientific scholarship, that demands a high level of personal involvement (Walsh, 1970). The acceptance of such conceptions has produced dramatic changes in policy-making procedures, staffing policies, programs, and courses. More importantly, changes are occurring both in the quality of young people who are making the choice of teaching (Clegg, 1970), and as preliminary evidence suggests, according to Rock (1971), in better initial teaching capabilities such as classroom management, questioning techniques, behavior modification, and long-range planning.

Research studies with field-centered experimental groups and traditionally oriented control groups at Bowling Green University (Marso, 1971) and Kansas State Teachers College (Sandefur, 1970) have yielded some encouraging results. The conclusions drawn from both

studies are similar:

1. There was a significant difference in the teaching behavior of students enrolled in the control program as measured by independent observers using the Classroom Observation Record. The experimental group received the more desirable behavior ratings.

2. There was a significant difference in the behavior of pupils of the experimental and control students as measured by independent observers using the Classroom Observation Record. The more desirable behavior ratings were given the pupils of the experimental teachers.

3. There was a significant difference in the teaching pattern of the experimental and control students as measured by independent observers using a 16-category system of interaction analysis. The experimental group was found to use significantly more indirect activity.

4. Grades earned in student teaching were significantly higher for the experimental students than for the control students.

5. On the professional education section of the National Teacher Examinations, the control students made significantly higher scores than the experimental students (Sandefur, 1970:393).

The data examined in this study provided no evidence that the possession of factual information about the professional content of teacher education altered teaching behavior. In fact, evidence to the contrary was indicated in that the students in the control group who did not go through a field-centered program learned more facts, as measured by the National Teacher Examinations, than did those of the field-centered experimental groups; yet their teaching behavior tended to be more traditional and less desirable as judged by qualified

independent observers. Consequently, the following related conclusions by Sandefur (1970:394) seemed justified:

1. The possession of factual information about professional content does not necessarily commit the teacher to actions consistent with that information.

2. Behavioral changes in prospective teachers can be more readily effected by programs of professional education that stress direct involvement of the prospective teacher in the teacher-learning process through meaningful laboratory experiences made relevant to content and theory.

3. Prospective teachers can be sensitized to the use of certain desirable teaching actions, such as the use of praise and the acceptance of students' ideas, through a planned professional program utilizing demonstration, observation, and participation.

The next section of this chapter describes how several colleges are utilizing the field-centered approach and how the centers operate. Since two rather different types of plans are being developed they are covered in separate sections as "The Field-Centered Approach" and "The Field-Oriented Approach."

#### THE FIELD-CENTERED APPROACH

The strict definition of field-center is a teaching program in which all the facilities and students are located at a "field center" location away from the college campus. Field centers may serve areas of one or more public school district.

Field centers may be located in a spare classroom(s) provided by the public school system, portable classroom(s) provided or rented

from the district, or in rented office space. Office space for the clinical professors and a media/seminar classroom appeared to be the minimum requirements in Seattle and Salt Lake. A certain minimal amount of hardware (movie projectors, filmstrip viewers, tape recorders, video equipment, etc.) was necessary but this was often obtained on loan from the school district. Software requirements (paper, kits, filmstrips, films) were extra expenses.

A pure field-centered approach program included all the content material normally found in such courses as educational psychology, testing methods of teaching, observation, and practice teaching. What made this program different from the traditional approach was that knowledge acquired was followed by immediate application periods that were used for observation, data gathering on student's learning, or supervised teaching of various kinds such as tutoring, microteaching, and small or large group instruction with students in the cooperating school. Since the entire program was conducted in (or near) the cooperating schools, it was easier to "borrow" a small group of students for demonstration teaching in the seminar room, or for one of the staff members to demonstrate a technique while students watch via closed circuit television.

Because of the additional time spent in the field, a teacher trainee was associated more closely with the public school. In all but one program investigated, the time spent in the field center was two

quarters for secondary and three quarters for elementary. Observation indicated that this field-centered and task-oriented type program provided an excellent opportunity for acquiring the needed knowledge and skills essential to the beginning teacher.

A number of students felt that an immersion of teacher trainees into the public school setting had many advantages, not the least of which was that the teacher trainee through this complete immersion more easily shook off his student identity and started to think and act as a teacher more quickly. Finding cooperating teachers who presented a forward-looking competent model to the prospective teacher was one of the problems and concerns of field-center directors.

In all but one of the field-centers investigated, students entered the field center late in the junior year or early in the senior year. Normally, no professional block courses were required as prerequisites, although some schools did require one or two professional courses, such as educational psychology and evaluation, as preparation for the field center experience.

In the field centers investigated the full time student continued to earn 15-18 credits per quarter or semester. In a few very individualized programs such as found at Weber State College and Brigham Young University, more or less than 15-18 credits might be earned. A more complete and technical description of operating field centers can be found in Appendix B, pages 208 to 213.

## THE FIELD-ORIENTED APPROACH

The definition of field-oriented is a teacher education program in which there is a close relationship between the teaching college and the public school. The students are campus-based and used many of the facilities of the college campus. At the same time the teacher trainees used the public school classroom as a laboratory to enable them to observe and practice teaching methods. Since the programs are campus-based, the public schools acting as the laboratory were found to be within reasonable commuting distance.

A field-oriented program has several advantages when the surrounding public school community is large enough to support a field-oriented program: (1) The college classrooms and facilities could be used and thus cut out "borrowing" or renting in the field; (2) Hardware and software costs are reduced since duplication is not required; (3) Staff resistance to moving away from the academic community is eliminated; (4) The student is able to consult the on-campus specialist for help and advice; and (5) the student did not have to drop his extracurricula activities such as band and athletics.

Interviewed student-teachers, in field-oriented programs, felt that one of the greatest disadvantage of the field-oriented program as opposed to the field-centered program was the lack of total involvement in the public school on the part of the majority of student-teachers.

A typical field-oriented program had the student attending classes on campus and spending blocks of time on a daily or weekly basis in the public school classroom for one or two quarters and then followed by one quarter of full time student teaching in a classroom. Because of the campus orientation it was possible for the student to spend time in the public school classroom much earlier than in a field centered program. Central Washington State College had the student observing and working as an aide as early as the freshman or sophomore years.

Because of the closer relationship between the campus and the field, all but two of the field-oriented programs surveyed had either professional course prerequisites or concurrent course requirements. In the programs surveyed, the student normally continued to earn the 15-18 hours credit per quarter or semester between the field and classwork. A more complete and technical description of operating field-oriented programs can be found in Appendix C, pages 214 to 219.

#### STUDENT SELECTION

In the field-centered and field-oriented programs, student selection was usually more detailed and formal. For example, the programs at the University of Washington and Central Washington State College called for personal information, a formal interview, and a selection procedure such as required for a regular application for employment. For example, at the University of Washington the prospective teacher

trainee, after written application, was interviewed by a selection committee from the cooperating school district which is composed of administrators, classroom teachers, second quarter trainees, and college supervisors. If the student had course deficiencies or appeared immature, he was advised to seek further training or apply to another district where he might be more acceptable. Instructors involved in the selection process stated that the students took the application procedure seriously, and classroom teachers stated that they enjoyed having a part in selecting the student teacher rather than having them "assigned" to their schools and classrooms.

#### TEACHER BENEFITS

Besides the feeling of participating in the student-teacher selection, classroom teachers stated that other benefits occurred to them. Free in-service training in classroom strategies was often offered to the cooperating teacher or "field associate." Several colleges such as the University of Washington and Western Washington State College required inservice education of the cooperating teachers or "field associates." By keeping abreast of current trends in educational techniques and curriculum, the teacher felt more professional and secure.

College instructors and cooperating teachers testified that a closer relationship was often established between college personnel and

cooperating teachers who were often referred to as university field associates. The closer relationship and the use of a more professional title helped the classroom teacher to recognize that he was a part of the higher educational team.

Since the student-teacher had more practical training by the time he came to the full-time student-teaching stage, the field associate felt more confident in taking more release time from the classroom. Student teachers usually took over the classroom full-time after the first week. Moreover, with the changed state laws that allow temporary certification procedures in Washington, this gives student-teachers a legal right to be in the classroom alone. As a result, administrators were releasing the field associates for other assignments such as inservice training, curriculum committees, educational travel, and visitation. The University of Washington found that this type of teacher reward has been so satisfying to the teacher that they have been able to discontinue the cash honorarium.

#### IMPLICATIONS OF A FIELD-CENTERED PROGRAM

Certain consequences were found when a college implements a teacher education program that is field-centered and competency-based. Teacher trainees who were involved in teaching in the public school at the same time that they were receiving instruction quickly became aware of their own deficiencies. As a result the teacher education instruction was

upgraded by constant feedback to the university instructor. If such instruction was perceived as not applicable in their own classroom setting, students quickly made that clear.

Not all instructors or even faculties accepted the challenge of the rigorous teaching and professional growth required with a field-centered program. At schools involved in both a tradition program and a field type program, the impression was gained that the instruction in even the traditional classroom had improved. This was quoted as "reason enough to get involved even partially in a field-centered program."

The use of instructional objectives is essential in a competency-based teacher education program. In the following chapter, the need and use of instructional objectives is described and clarified.

## Chapter 5

### THE USE OF OBJECTIVES IN TEACHER EDUCATION

Crucial to competency-based teacher education are explicit objectives, defined in terms of learner behavior and known to learner and to instructor alike prior to learning experiences. Instruction and evaluation of students is focused on and limited by the specified objectives. Program evaluation includes feedback on student achievement related to objectives.

At the heart of any competency-based program lie objectives--explicit statements of the criteria to be met by the learner as a sign of successful completion of the learning activities. In a competency-based teacher-education program, the objectives are explicit statements of the abilities required by an effective teacher.

The objectives specify the behaviors desired at the conclusion of the learning activity. If the learner is aware of the objectives, he can be goal-directed in his efforts, and his learning can be more efficient and more effective (Houston and Howsam, 1972 [Burns, Ch. 2, pp. 16-17]).

The rationale for competency-based teacher education forces educators to take a hard look at what their teaching is designed to accomplish and to review carefully the way they go about accomplishing it; then, based upon the teacher trainee's responses, it compels educators to modify the program to elicit more efficient learning. This process of design, field test, and redesign can only result in improved teacher training, and improved teacher performance (Arends, Masla, and Weber, 1971).

Practically and operationally, objectives serve such functions as:

1. a means of communication among professional educators;
2. a means of communication between teacher and learner;
3. a basis for making decisions about selection of appropriate instructional activities;
4. a basis for measuring or evaluating learning outcomes;
5. a means for making decisions about the proper sequence of instructional events;
6. a basis for determining the proper structure of learner groups; and
7. a means of communication between the professional educator and the lay public (Houston and Howsam, 1972; Johnson, 1972, Elam, 1971; Davis et al., 1970).

Houston and Howsam (1972:18) pointed out that:

Objectives are not utilized as extensively as one might think from reading the literature. Curriculum directors, teacher educators, psychologists, learning theorists, and others are familiar with all the technical terms. However, the vast majority of educators--after paying homage to the concept of behaviorally described learning--go blithely on their way. We, as educators, rarely utilize objectives for lesson planning, textbook writing, or any of the other dozens of situations where their use clearly is indicated.

It is unlikely that anyone in education will be able to avoid taking a position in respect to behavioral or measurable objectives.

With requirements for behavioral objectives being written into accountability legislation, they certainly cannot be ignored.

Wight (1972) and Harbeck (1972) argued that if persons opposing the use of objectives are to be heard, they will have to come up with more convincing arguments than those presented in numerous articles over the past few years. If they are to avoid being forced to use behavioral objectives, they may have to show another way to be accountable for educational outcomes.

Goodlad (1965) contended that the major purpose of behavioral objectives is to provide clarity of intent in education and precision in the measurement of outcomes. Although some humanistically oriented educators might disagree, it would be difficult to argue that this would not be of benefit to education.

#### DESIRABILITY OF OBJECTIVES

A number of issues concerning objectives are important to those attempting to implement competency-based teacher education programs.

These issues involve questions such as the following:

1. Is it desirable to base a teacher education program on objectives?
2. Is it possible to base a teacher-education program on objectives?
3. Who should make the decision about the behaviors that

teachers need?

4. What behaviors characterize effective teachers?

5. Should teachers be held accountable for meeting the behavioral criteria specified by objectives (Houston and Howsam, 1972; Feldhusen and Treffinger, 1971; and Ellis, 1972).

The first issue questions the desirability of basing a teacher-education program on objectives. There can be little argument that learning is an individualized and personalized process. Teacher-education then should be individualized and personalized. Traditionally and presently it is not.

In competency-based teacher education the learner has an opportunity to be the prime determiner of his own objectives and to perform self-evaluation in terms of those objectives, his opportunities to grow and flourish are enhanced. He sets his own personal goals, helps to select his own curriculum, and takes increasing responsibility for control of his own education. Used in this fashion, objectives can only enhance the learning process, even from the humanistic or developmental viewpoint (Barton, 1972; Johnson, 1972; Grube, 1971; Houston and Howsam, 1972).

#### PRACTICABILITY OF OBJECTIVES

If one decides that teacher-education programs should be based on objectives, he then faces the second issue: is this approach

practicable? Many attempts are being made to objectify teacher education, but little if any empirical data are available to evaluate the success of these attempts. The goals of competency-based teacher-education programs are to produce teachers who can (1) demonstrate competence in professional and technical skills; (2) devise curricula that are better organized for student learning; (3) select more appropriate methods and materials for instruction; (4) evaluate more precisely the results of student learning; and (5) efficiently modify student behavior. If research findings eventually confirm the effectiveness of competency-based education in reaching these goals, the practicability of a training program based on objectives will be confirmed--at least for those who accept the validity of these goals. In short, the issue of the practicability of a teacher-education program based on objectives will be settled only in the years to come, as empirical data are gathered and made available for critical analysis (Klaus, 1971; Johnson, 1972; Harbeck, 1972, Houston and Howsam, 1972; and Gronlund, 1970).

#### SOURCE OF OBJECTIVES

Houston and Howsam [Burns, Ch. 2]. (1972) ask, who is to decide what behaviors are needed by teachers? Undoubtedly, there will be many ways of determining objectives as there are programs. Ultimately, the effectiveness of these programs in meeting their goals may provide some sort of empirical answer to this question. For the present, this issue

must be discussed on theoretical grounds.

Wight (1972); Cooper, Jones and Weber (1973); Grube (1971); Frantz and McConeghy (1972); and Burke (1972) stated that in a very real sense, it can be argued that everyone should be involved in the specification of objectives. That is, contributions to program development should come from all who have any potential for input. Among the potential contributors are teachers in public institutions, administrators, service personnel, students at all levels (preschool through university), and resource persons in communities. In practice, of course, the power to set objectives tends to rest with those who make other decisions in education. The decision-making base for educational matters has been too narrow; the organized profession, students, and community groups generally have been excluded. Many competency-based programs now are making an attempt to broaden this decision-making base. Other programs have community and student representatives involved in all facets of planning, production, and implementation.

#### TEACHER BEHAVIOR AND OBJECTIVES

Houston and Howsam [Burns, Ch. 2] (1972) ask the question, what behaviors characterize effective teachers? He continued by saying that attempts have been made to define teaching to isolate the necessary skills, or to describe teachers in terms of specific behaviors. The results have not been very definitive. For example, teachers must be

kind, pleasant, patient, alert, able to deal with people, verbal, and so forth. Yet these personal qualities tell only part of the story. Teachers must possess professional skills relating to establishment of set, provision for reinforcement, preparation of evaluation instruments, selection of instructional materials, operation of A-V equipment, and so on. The teacher not only must demonstrate these skills in isolation, but also must integrate them into a smoothly functional teaching performance. Random observations of teachers on the job quickly show that there is no single effective method or style of instruction. Teachers, like learners, demonstrate a wide range of abilities and talents. The individual teaching performance is unique (Gould, 1972; Howsam, 1972; Burdin and Regan, 1971).

Very little attention has been paid to the problem of gearing teacher preparation to the learner population. For example, few teachers have been trained in the understandings and skills needed to determine whether a learner is visually or auditorially oriented, and to provide the optimal learning environment for each. Even less attention has been given to the fact that some students learn best with highly structured assignments, while others are more self-directive. With the accumulation of research data, it may become possible to differentiate and specify these types of teaching behaviors (Howsam, 1972).

Considering all of the variables that enter into the concepts

of "teaching" and "teacher," one can hardly be surprised that no single set of behaviors yet has been prescribed and labeled as "objectives for the effective teacher-education program." An ideal teacher-preparation program would be varied. Such variability can be approached in many ways. The trainee might be required to demonstrate some specified list of basic knowledge or skills, as well as a certain number selected from a set of optional knowledge or skills. To the degree that common elements can be identified in the behavior of all effective teachers, then to that degree it is appropriate to require the trainee to meet certain specified objectives. Until such time, if ever, that these common elements can be identified, it would appear best to keep teacher education flexible. A program in which the trainee is free to set his own objectives certainly is conceivable at the present state of the art (Howsam, 1972; Plowman, 1971; Dell, 1972; and Moxley, 1972).

Even more important than what teachers know, what they can do, and the consequences of their actions are their affective behaviors. Many attitudes, interests, and appreciations enter into the total gestalt of the teacher. The trainee's self-concept, his concept of others, the values he assigns to teaching, the extent to which he is open- or closed-minded--all of these factors have a significant effect on his eventual performance as a teacher. The problem of designing suitable affective objectives is a major one; few promising approaches to its solution are in sight (Houston and Howsam, 1972; Cassel, 1972; Woodruff and Kapfer, 1972).

Closely related to this issue is the problem of timing for competency requirements. The prospective teacher can demonstrate only rudimentary performance during his training. In the rapidly changing world of today, extended training and retraining will be required during a teacher's career. (Houston and Howsam, [Burns, Ch. 2:23], 1972) contended that:

It seems clear that no teacher-education program can equip the trainee to meet all possible situations that he may encounter on the job. Instead, the objectives of the preservice program should focus on those professional-technical skills that may be called basic tools for teaching: strategies for solving educational problems, strategies for curriculum planning, strategies for management of single individuals and of groups, evaluation skills, sensitivity to interpersonal relationships, and an understanding of the nature of human learning. His competency in demonstrating these basic skills may appropriately be assessed before he is certified as a competent teacher. Evaluation of his competence in more specific skills might more appropriately be made at various points during his inservice career.

#### TEACHERS ACCOUNTABILITY FOR MEETING BEHAVIORAL OBJECTIVES

Anderson and Cooper (1973) contended that the graduates of a competency-based program should emerge with a given set of behaviors relative to teaching. If these objectives have been chosen as representing minimal standards for effective teaching, then each graduate leaves the program with a demonstrated ability to know and to do those things that are believed necessary for effective teaching. Failure to meet these objectives certainly seems reasonable grounds for denying certification as a competent teacher.

In any typical classroom, learning is a function of many variables in addition to teacher performance. These variables include the learners, the physical environment, the nature and availability of instructional materials, the objectives of the learning activity, the subject-matter content or topics, the grade level, the extent of administrative support, the system constraints, and the teaching methods being used. It would be unreasonable, for example, to hold a teacher accountable for student learning if he has not been provided with appropriate learning materials or a suitable learning environment. If a teacher is to be held accountable for the learning of his students, some allowance must be made for the level of competency demonstrated by the students before he began teaching them. Every teacher--no matter how skilled or effective--has experience situations where one student or one class, for unknown reasons, failed to exhibit the expected learning (Anderson and Cooper, 1973; Bowles, 1973; Johnson, 1972; Connolly and Hoaglund, 1972).

The concept of accountability must be approached with caution when dealing with the performance of a particular group of learners as a measure of the competence of a specific teacher. On the other hand, graduates from competency-based programs should be expected to produce at least as much learning in students as do graduates from traditional program. In short, if competency-based education is to be consistent with its own principles, its graduates must be held accountable for

their general effectiveness as a group. (See Appendix D , page 220 for diagram for Developing Individualized Instructional System and Appendix D, page 221 for diagram for Implementation of an Individualized Instructional System).

If competency-based programs are to be responsible for producing specific behaviors in their graduates--and in turn assuring that these behaviors will be effective in the student-learning environment--close and cooperative efforts with school systems will be needed to provide extensive field experiences as part of the teacher-education program. Such field experiences will need to go beyond the traditional concepts of student teaching. Certification could be withheld until the trainee has demonstrated clearly, in a macroteaching situation, his ability to produce behavioral changes in students (Houston and Howsam, 1972).

#### CHARACTERISTICS OF OBJECTIVES

According to Mager (1962); Kibler, Barker and Miles (1970) the kinds of educational objectives most useful in the preparation of instructional materials are those which describe and delimit the expected behavior of the student following learning. Three components are involved. First, the objective must indicate what the student is to do in the sense of performance that can be observed. Frequently, doing really consists of several behaviors and all of these must be identified and described.

The second component of a useful objective is that it must specify upon what the behavior is to be performed. The objective must specify the possible range of problems and the tools that will be provided for use in arriving at a solution. Is an essay to be prepared with or without a dictionary? Can a slide rule or logarithmic table be used? How much of a sample will be provided for chemical analysis?

The third feature of an acceptably stated objective is that it must indicate how adequate performance is to be defined. Establishing criteria for academic accomplishments can be very difficult. Klaus (1971) remarked that many teachers seem to feel they confidently can grade an essay or evaluate a student's knowledge of history but that it is impossible for them to communicate their standards to someone else. As Mager (1962) pointed out, teachers who contend they are teaching skills which are intangible and cannot be evaluated put themselves in the awkward position of making it impossible for them to demonstrate that they are teaching anything at all. The speed of performance sometimes is as important as its accuracy and completeness; typically, the criterion component of an objective will include several dimensions if the terminal performance aimed for is at all complex.

Several other characteristics of instructional objectives have been recognized as important by the developers of instructional materials. One of these reflects the vast difference between 'doing' and 'knowing about.' It is perhaps easy to recognize that the skill

needed to ride a bicycle is enhanced very little by knowledge about the workings of a gyroscope. On the other hand, students frequently are expected to improve their composition skills by increasing their knowledge of great literature, and to make better decisions as citizens because they know about history. In selecting and describing objectives, it is extremely important to separate the means of instruction from the ends (Klaus, 1971; Packard, 1972).

#### THE EXPLICITNESS OF OBJECTIVES

The scope of each objective has serious implications for the design of instruction. Many early efforts involving programmed instruction, for example, began with a detailed list of each and every behavior the student was expected to evidence at the end of instruction. The objectives for a course in government may have embodied a long list of significant names and dates. These highly molecular objectives soon proved to be both unwieldy and misleading. By being forced to identify objectives, teachers soon recognized that much of conventional course content was quite arbitrary. Because some specific examples or facts were particularly useful in illustrating a general principle or fundamental concept did not mean these details should themselves be objectives of instruction.

As programmed instruction evolved, objectives became broader but no less explicit. Molar objectives, which depended on sampling

desired skills, replaced the thorough enumeration of all that was to be learned (Klaus, 1971; Cooper, Jones, and Weber, 1973).

The way in which objectives were stated also changed according to Klaus (1971). Continuing, he stated that at first, instructional objectives were prepared in the form of a statement. Many writers suggest preparing objectives this way and this format was used by Bloom and his associates in developing taxonomies of educational objectives which provide extensive numbers of examples of how loose instructional aims can be made explicit. It quickly was recognized, however, that this approach left considerable room for interpretive errors when preparing questions to assess whether or not the objective had been attained. A simple solution was to express the objective directly in the form of test items. This left no room for doubt as to the behavior to be taught, the conditions under which the behavior was to occur and how the adequacy of performance was to be determined. Objectives stated in this form not only made clear what was to be taught but what distinguished satisfactory from unsatisfactory performance as well.

#### OBJECTIVES AND INSTRUCTIONAL AIMS

Clear objectives are an essential component of any teaching, but the need for them is amplified by programming techniques which aim at full mastery of anything and everything taught.

Klaus (1971) stated that this view often made early programs prepared by behavioral scientists unacceptable to educators. The programmer frequently took it upon himself to derive instructional objectives for subject matters in which he had no particular competency. For this reason, many early programs taught what they were designed to teach exceedingly well, but they happened to teach irrelevant, incomplete and often erroneous information. Teachers had considerable difficulty preparing objectives for programmers to use.

Most proponents of specific instructional objectives were adamant in their insistence on the need to state objectives in terms of observable behaviors. When a teacher expressed a goal of instruction as 'appreciation of art' or 'a grasp of economic theory,' the programmer demanded greater concreteness and specificity. Inferred behaviors were not allowed. This requirement has continued to be a weakness in the programmer's approach. He views these kinds of objectives as vague because the teacher has not indicated the explicit outcome expected of instruction (Klaus, 1971; Resnick, 1972).

It is quite possible that many programs have deleted truly important aims from instruction because their attainment cannot be measured. One frequently seen example according to Klaus (1971), related to how definitions are to be learned. Teachers often encourage their students to learn to express definitions or statements of principles in their own words. They are aware that this leads to

difficulties in judging the accuracy of a response but prefer it to the rote memorization which all too often is a product of the tight control of an instructional program.

Many of the concepts used to create instructional objectives have been derived from research on training according to Glaser and Klaus (1962). There are characteristics of education, however, which preclude the indiscriminate utilization of findings from training research. One way in which training can be differentiated from education is that the precise goals of training usually are well defined while those of education purposefully are not; training is oriented toward a specific occupation but education is felt to be relevant to all vocational and leisure pursuits. Another, suggested by Glaser and Klaus (1962) is that uniformity is an aim of training but diversity in performance is an expected and desirable outcome of education. In these respects, the expected outcomes of education cannot be derived from occupational requirements. They must be determined by efforts to outguess the probable needs of the individual and the society he will live in at some future time.

Klaus (1971) pointed out that the personalization of instruction can add a surprising amount of flexibility to curriculum planning with very little effort by permitting depth of interest to vary as well as direction. More must be done to increase the pertinence of instruction.

The problem of what to teach is of great concern in curriculum planning. The objectives of instruction need to express the aims, standards, and priorities of a nation's people. The unique problems which must be faced by educational planners often seem insurmountable. Therefore, educational planning must begin with explicit knowledge as to precisely what the educational system is to accomplish.

#### PROBLEMS IN WRITING OBJECTIVES

A problem usually arises in the need to train a professional staff that will create and write objectives. Several approaches can be used for staff training. Houston and Howsam (1972) suggested that the use of readings is not very successful. A desirable approach involves the use of one or more modules on the development of behavioral objectives (staff members are required to complete these modules). According to Houston and Howsam (1972) this approach sets an example of individualized and competency-based instruction; it provides an introduction to modular design of instructional activities.

Because the writing of objectives is to some degree a creative process, some individuals are more creative than others at this task. A select group of competent individuals may be chosen to rewrite the initial contributions. The rewritten objectives then are returned to their authors for review and criticism before a final list is developed. As with other skills, performance in writing objectives

tends to improve with practice. Unless an individual has had the opportunity to write many objectives, his first attempts are likely to fall short of perfection (Houston and Howsam, 1972; Cooper, Devault et al., 1973; Johnson, 1972; Dell, 1972).

If the staff must carry a heavy teaching load, time for the development of objectives is hard to find. In this case the teaching load should be cut and the development of objectives spread out over a longer time. Or a staff member with skill in writing objectives may be freed of other duties in order to work with the rest of the staff on this task. (Houston and Howsam, 1972).

#### CONSTRAINTS IN DEVELOPING OBJECTIVES

Constraints often pose problems in the development of objectives. These constraints include the lack of appropriate instructional materials, variations in the behavior of trainees entering the program, insufficient time, and rules and regulations of the university. Feedback is important; on the basis of feedback, additional objectives can be prepared or the original objectives can be modified to be more realistic. Problems may arise from university rules such as credit-hour requirements, grading practices, and requirements for final examinations. Constraints in the materials and facilities available often pose problems for the objective developer. The most desirable TBO might require the trainee to demonstrate his ability to handle

actual problems arising in a classroom setting. If the actual field-experience situation is not readily available for such purposes, an alternative behavior of a less suitable nature may be selected as an enabling objective to further requirements. Those who write objectives must have knowledge, at the time of writing, of the constraints that can be identified (Houston and Howsam, 1972).

#### PROGRESS IN DEVELOPMENT OF OBJECTIVES

In general, it is difficult to assess the current progress of competency-based teacher education, and this is particularly true in relation to the development of objectives. Many experimental projects, designs, and feasibility studies have been completed or are underway.

From the programs completed and those underway, it has become clear that objectives can be specified for teacher education. It is less obvious at this time whether such objectives are good, complete, or functional. More time must elapse for effective feedback from graduates of the programs, who will evaluate their training as a result of actual job experience. Such feedback undoubtedly will lead to the respecification of some objectives. It seems clear that competency-based teacher education cannot definitely be judged a success until this feedback is evaluated--a process that will require at least five more years (Houston and Howsam, 1972:31).

Competency-based programs are not the only sources of progress in the development of teacher-education objectives. For example, those involved in the educational-technology movement make important contributions to our general knowledge, understanding, and skill in applying the concept of objectives to the design and use of materials, media, and programs.

## SUMMARY

Competency-based teacher education today is an innovation in teacher education. The programs differ from state to state, and from research project to model program. Such diversity is healthy; eventually this diversity will produce a better understanding of the performances needed by teachers, the performances that should be regarded as optional for teachers, the prediction of teacher performance, the measurement and evaluation of teacher performance, and the specific objectives that are appropriate for preservice and inservice accountability.

Mistakes and failures are inevitable. Some errors will result when proposed ideas fail in practice. Other errors will result from poor judgment, poor timing, inadequate financial support, lack of administrative backing, and so on. Competency-based programs, however, will not be a panacea for all the ills of education. No change will satisfy all critics.

At present, the movement is caught between contradictory demands for reduced expenditures on the one hand and for expanded research and development on the other. Some critics call for control of dehumanizing technology in education, while others complain that technological advances are not being exploited and applied. Similarly, some decry the use of objectives as dehumanizing tools for robotization; others demand that standards of accountability and efficiency be

applied to education through the use of behavioral objectives.

Educators must state goals clearly, even though we cannot reach all of them. But it is important that we make progress toward the most attainable goals. It appears safe to suggest that objectives can be used as a basis for teacher-education programs, and that the problems associated with their use can be solved in practical ways. (See Appendix F, page 222 and Appendix G, page 223 for comparison of Competency-Based and Traditional Teacher Education Programs.

Clearly, objective-based techniques for classroom instruction and evaluation of instructional programs are in rather early formative evaluation stages. There is a need for further refinement of procedures and application of these procedures to programs in various subject matter areas. There is also a need for additional summative evaluation to compare the effectiveness of programs that incorporate systematic objectives-based procedures with those that do not. The value of objectives-based procedures, like the methods and materials in any instructional program, must ultimately be judged by their effects on learner performance.

In the final analysis, competency-based teacher education will produce proof of its own worth or will recede to the obscurity of failure. Its own principles make it accountable in very specific terms for the products of its efforts.

## DEFINITIONS

For the purposes of this chapter, the following definitions are applicable:

Goal - A goal is a written statement of a broad aim without description of the specific behaviors to be produced.

Objective - An objective is a written statement of specific behaviors to be exhibited by the learner.

Terminal Behavior Objective - A terminal behavior objective specifies behaviors to be exhibited by the learner at the conclusion of the learning activity.

Instructional Objective - An instructional objective (also called an enabling objective) specifies an intermediate behavior that the learner must acquire on his way to acquisition of a terminal behavior.

Exploratory Objective - An exploratory objective does not specify a behavior, but rather describes an event happening, or situation that is to be experienced by the learner.

Cognitive Objective - A cognitive objective specifies behavior that will demonstrate the learner's knowledge, understanding, processing abilities, or ability to use a strategy.

Affective Objective - An affective objective specifies behavior that will demonstrate the learner's possession of a certain attitude toward, appreciation for, or interest in some idea, object, or event.

Psychomotor Objective - A psychomotor objective specifies learner behavior that involves motor activities or movements, with or without objects or tools (Houston and Howsam, 1972:25-26).

## Chapter 6

### INDIVIDUALIZATION

Individualized instruction has long been a goal of American education. Ideally, individualized instruction has an arrangement that makes it possible at all times for each student to be engaged in learning those things that are most appropriate for himself as an individual. This ideal may, of course, never be reached. The best we can do is move towards the ideal (Esbensen, 1968; Cardarelli, 1972; Blake and McPherson, 1969).

Just what is individualized instruction? It is an attempt to design instruction to fit the needs of the individual student. Mager, in his foreward to Esbensen's (1968) book, said that individualized instruction is not the same thing as "teaching students individually." Mager stressed that a system is individualized when the characteristics of each student play a major part in the selection of objectives, materials, procedures, and time. It is individualized when decisions about objectives and how to achieve them are based on the individual student.

Esbensen, (1968); Burns, (1971) stated that the following are characteristics of an instructional system which is highly attentive to the needs of the individual student:

1. The instructional objectives are stated in writing.

2. The content objectives are given to the student.
3. All students are not expected to achieve the same objectives.
4. All students do not use the same instructional materials.
5. All students are not expected to follow the same procedure while in the classroom.
6. All students do not work on the same subject for the same amount of time.
7. Students do not spend most of their classroom time doing what everyone else is doing.

Esbensen (1968) also remarked that if we are to come closest to selecting the most appropriate materials, procedures, time, and objectives, the student himself must do a large part of the selecting. How closely the following points are achieved indicates how well the system is individualized.

1. The student should have a part in deciding the objectives he will be expected to achieve.
2. The student will help to decide which materials he will use in trying to achieve an objective.
3. The student will decide which procedures to be followed in achieving an objective.
4. The student will decide how much time to devote to an activity.

According to Esbensen, (1968), then, one determines the degree

of individualization by asking which instructional decisions have been made and by whom they have been made. In a highly individualized system, the teacher, the school, and the community make most of the decisions about what the student is expected to achieve, and the student makes most of the decisions about how he will achieve.

According to Weisgerber (1973), traditional teaching has viewed the class or group as an entity. Each student is presumed to have relatively equal learning needs, abilities, and responses. It is teacher-paced and scheduled to meet the convenience of the school and the teacher. Students taught by traditional methods are generally given the same assignments, regardless of individual capabilities or progress.

Frase (1972) contended that individualization recognizes that there is no standard student, that each is an individual who learns in his own way and in his own time. The individualized instruction approach to learning seeks to motivate the student by helping him find his own areas of need and by giving him instructional assignments based on those needs. Since individualized instruction is student-oriented, it requires a diagnosis of the student's development to determine the kinds of learning experience he requires. After these needs are properly identified, instruction can be largely student-directed and student-administered and, within the limitations imposed by the school's broader time requirements, learning can be adjusted to the learner's needs and capabilities (Burke, 1972).

Individualized learning does not mean that students get by with doing less work or that each student must work individually. It means that the teacher identifies, on the basis of the student's learning needs, each student's instructional level and plans with him the activities to best reach the goals and objectives for that student. The subject areas remain the same, but the teacher may ask for different levels of thinking from each student (Hunter, 1970).

Lindvall and Bolvin (1970) contended that individualized instruction does not mean the student works alone at all times. It does not mean that the teacher relinquishes his responsibility to machines or to teaching material. While the student works alone more than in traditional classrooms, the teacher has to diagnose his progress frequently and offer him, as well as small groups or the entire class, supplemental instruction where there is a common need. Students cannot learn effectively through individualized instruction simply by being told to proceed at their own pace through the study of instructional material. It is the teachers role to guide students in how to become effective learners in an individualized instruction program.

#### HOW TO INDIVIDUALIZE INSTRUCTION

According to De Vault and Jung, (1972); Bishop, (1971); Miller, (1973), the role of the school is one of developing and providing appropriate alternative environments for learners and assisting learners

in self understanding and in utilizing the environment to enhance self. Individualization requires the environment be rich in the variety of learning options. These options include variations in content goals, in sequences and in organizational patterns. The options also include a variety of instructional modes, which may range from computer-assisted activities to seminar or large group lectures. Films, reading activities, practice exercises, and problem-solving projects may all represent alternative instructional modes from which learners may choose.

Edling (1970) suggested that implementation of optimum individualization, even after we have identified clearly what we can individualize, is a complex task. Implementation of individualization programs requires more than just diagnosis and differential prescription of instructional treatment. Assuming that a learner knows much about himself, we can, according to Edling (1970), implement individualization by allowing the learner to make decisions about his own learning. In addition, it is advisable to have the learner develop greater ability to make wise decisions about his own learning, even for things which another person could know about him.

Lindvall and Bolvin (1970) stressed that helping learners how to make good decisions about themselves requires an individualized and personalized education system. Individualization is not enough; by itself, it may be more effective than a traditional curriculum, but its potential stated Edling, (1970) will not be realized fully, unless

personalization is an essential part of the individualized curricular program.

Personalization requires that special concern be given to the role of the teacher. The teacher may be expected to be less a source of information than has been true in less individualized school curriculums. Edling, (1970); Cardarelli, (1972); and De Vault and Jung, (1972) stated that assisting learners in understanding themselves as explorers of learning is a major requirement of the personalized-individualized curriculum. In this view, the teacher is a clinician, a guide, and a counselor. The teacher is also, however, an instructional specialist. The teacher is an essential part of the learning environment. Moreover, the teacher may be expected to assist the individual learners through one-to-one conferencing, in small seminar groups, or in other ways to make sense and order out of knowledge. In addition, according to Packard, (1972), the teacher serves as a model. He represents an open approach to academic content and an inquiring mind interacting with the student in a teaching-learning environment.

#### MODULES IN INDIVIDUALIZED INSTRUCTION

One method of facilitating individualized instruction in competency-based teacher education is the module or a teacher constructed individualized learning kit (Burns, 1972). These units are referred to as: LAP (Learning Activity Package), kits, packets, units, and other names. In this paper they are referred to as modules. A module is

designed primarily for self instruction. Bishop, (1971) indicated that although these units can be used independently of direct teacher supervision, the teacher still performs an integral role in the learning process in terms of overall supervision, diagnosis, remediation and prescription.

Arends, Masla and Weber, (1973) stated that the development of individualized learning material, referred to as Modules, has become an integral and functional aspect of competency-based teacher education programs. The development of learning packages can usually be categorized into two broad areas: They are the teacher-initiated and teacher-prepared materials that are developed within and for a particular school program; and there are commercially prepared materials that may be purchased and which are not designed for a specific school program. The commercially designed modules, however, may be modified by a teacher for his particular program.

Moreover, a module is a self contained set of teaching-learning materials designed for individual and independent learners. Specific learning objectives are listed for the student and stated in behavioral terms. Diversified media materials, and methods are provided for the learner; evaluation through pre-test, self-test, and post-test is included so that the learner may measure his progress toward the achievement of the objectives. Suggestions are also provided for alternative activities or supplemental study. As a result of

individualizing instruction through the use of the module, the teaching-learning act can become much more personalized for the teacher and for the student (Arends, Masla, and Weber, 1973).

Gibbins (1970) recommended that before modules or other individualized learning units can be used effectively, performance criteria must be established for each course in which the instructional units will be prepared. These criteria will permit specific performance levels to be established in order to guide the student in the prerequisite learner attributes, abilities, and achievement necessary for successful completion of the particular module. Bishop, (1971); Klaus, (1971) contended that stating objectives and expected performance in behavioral terms does not mean that these units of instruction are either mechanistic or limited as to their humanistic orientation. It simply means that precise instructional goals must be specified in certain instances. In brief form, the purpose of behavioral objectives, for a module, is to make clearly understood goals concerning a particular learning assignment; and, to make it clear to teachers and students what it is that needs to be taught and learned.

In this section the concept of the module was introduced as one way to individualize instruction in a competency-based teacher education program. In the next chapter, the contract method is developed as another way to contribute to individualization in competency-based education.

ADMINISTRATORS AND INDIVIDUALIZED  
INSTRUCTION

There is, according to Edling, (1970), almost universal acceptance of the principle that students differ, and that those differences should be accommodated by differentiated learning experiences. Moreover, most schools have stated in their objectives that it is their purpose to provide for those differences. This principle is especially true in competency-based education.

If the administrator of a university or a public school believes that programs should accommodate the requirements of learners, then it is important that procedures are adapted to initiate the individualized instruction process (Edling, 1970; Klaus, 1971). Edling (1971) stated that in making a decision to individualize instruction, the following observations must be considered: 1) There is evidence that initially, some students have difficulty in assuming responsibility for their own education. 2) Most students prefer individualized procedures, once they have had an opportunity to experience them in an effective program. 3) There is evidence that some teachers have difficulty adapting to individualized procedures. 4) Additional planning time and training is required by teachers to implement individualized procedures. 5) Pre-service and inservice is recommended to insure a continuation of the individualized program. 6) Additional instructional materials are required in most schools to implement the individualized procedures.

7) Parents and the community need to be involved in the planning and implementation of the individualized instruction that is acceptable to the particular educational community.

Lewis (1971) stressed that the development of individualized instruction can proceed only when a careful, logical, and organized plan, which is implicit and clear, has been designed and implemented. The resulting product will be a well-designed program which will serve as a concrete basis for an individualized instruction program.

#### SUMMARY

Individualizing or personalizing instruction simply focuses the emphasis of the instructional process on each individual student - his skills, abilities, interests, learning styles, motivation, goals, rate of participation, strengths, weaknesses and prognosis for moving ahead in various curriculum areas and projects. Bishop (1971) stated the teacher becomes more professional and assumes the functions of learning facilitator, guide, consultant, professional diagnostician and prescriber of learning resources, activities, evaluation procedures and total learning packages for each student. The process places more responsibility for learning on the student and makes better use of his individual interests, goals and strengths.

## Chapter 7

### CONTRACTING: A VEHICLE FOR INDIVIDUALIZING INSTRUCTION

Smith and Rieback (1971:104) emphasize that the challenge of personalized instruction has only recently become the focus of contemporary educators. That teachers have considerable control in and ought to develop greater flexibility in content and pace is only now being recognized. Add to this the not so recent acceptance that a predisposition to learn in the form of interest or anticipated satisfaction is a requisite to effective learning and retention. Is there available an easily implemented and inexpensive means by which the aforementioned considerations can be polarized on a large scale across the broad spectrum of curriculum? One such tool is the curriculum contract.

Teachers and students according to Dash (1970) face many paradoxes in their search for an education for living in the space age. Of the most profound is the demand for relevant education. This popular reaction occurs in a context of exploding student population and decreasing value of the educational dollar. Automated learning devices, flexible scheduling, numerous group teaching strategies--all have been sought by teachers to meet these pressures with varying degrees of success. In spite of these efforts, the question of how to motivate individual students to develop active learning approaches and positive attitudes toward subjects still remains.

Dash (1970), Lewis (1971), and Thompson (1969) argued that in many areas of the country the crushing stress of enrollment, plus the diminishing value of the educational dollar, has left the classroom

teacher frustrated and confused about his responsibilities. In place of self-guidance, the teacher is left with doubts about how to help students learn to become adequate persons and knowledgeable citizens. Teachers are being asked by their constituencies to examine their instructional objectives and methods to determine if their subjects are being conveyed with the maximum utility (transfer) to their students.

Reality and relevance in the classroom may be greatly influenced by individual students. The expectations of teachers and student groups vary considerably, making analysis of the problem more complex. One way to reduce the problem of ambiguous teacher expectations of student behavior is to make instructional objectives crystal clear. Dunn (1971) stated that many educators have found that the "contract system of teaching" facilitates not only the clearer understanding of objectives, but also increases the active participation of students in the learning process, a vital factor in motivated, sustained learning.

The contract helps to make learning more realistic by focusing student attention on the process by which he becomes an active learner. Students will learn in an environment which is encouraging of responsible effort. All behavior which is directed toward fulfilling instructional objectives is considered responsible and acceptable. The fact is that most students enjoy taking responsibility for personalized,

meaning-enriched learning. And these learnings are likely to be much more permanent. Learning has personal meaning for students when they are made ultimately responsible for their own growth. Many classrooms are not paying appropriate attention to this need (Sorber, 1969; Lewis, 1971).

Students can become more goal directed through use of a philosophy of individual decision making. It is possible to make the teaching-learning situation more exciting and meaningful if the mutual responsibilities of teacher and student were made clear at the initial stages of instruction, and if these responsibilities represented the world as it should operate. The philosophy of individual and shared responsibility toward mutually accepted goals is implemented with the contract system (Dash, 1970; Thomas and Ezell, 1972; Sorber, 1969).

#### WHY CONTRACTS

Contracts are just what the word implies. They represent a bargain and commitment between two sources of input, the teacher and the learner. Contracts personalize instruction on several fronts. They provide for flexibility in content based on inputs from the teacher in regard to teaching strategies, skill development, and guidance. They provide for flexibility in pace and accounting for variances in rates of learning. In addition, contracts are an avenue

for increasing student responsibility for goal development as well as achievement. Finally, experiences in planning and establishing responsible behavior patterns are offered. The thrust of contracts is two-fold progression in a curricular field and progression in assuming the characteristics of a mature, responsible person (Smith and Riebock, 1971; Warner and Akamine, 1972; Schmitz and Schmitz, 1972).

#### LANGUAGE OF CONTRACTS

When drawing upon the power of contracting strategy, the major contribution of the instructional technique is the functioning personal relationship between the parties involved--the teacher and the individual student. Meaningful and positive communication takes place as teachers and students negotiate contracts that are formal, brief, and clearly and mutually understood. Whenever feasible, this is the ideal situation for simple but explicit behavioral objectives.

The components of the individually negotiated contract, to be effective, must include the learning objective, the conditions or methods to be employed in completing it, specific responsibilities of the student, identification of the procedural steps or tasks included in the learning activity, provisions for applying and demonstrating skills or content learned, and the method that will be employed to evaluate the mutually developed contract. As contracts become

sophisticated, they should be expanded to provide learning alternatives or direction within the body of the contract (Stewart and Shank, 1973; Douglass, 1971; Chickering, 1972).

Dunn (1971) said a contract provides many opportunities for a student to learn independently and build on his potential abilities. Frustration and anxiety are minimized because the student is given:

1. An exact list of items he must learn.
2. An exact method for showing the teacher that he has mastered the required learning.
3. A clear indication of how well he must do before he will be permitted to end the contract and begin another.
4. A choice of many media learning resources on his academic level.
5. A choice of many activities through which information can be used and reinforced so that it becomes knowledge.
6. A choice of many ways he may share what he has learned with others (peers, teachers, students, etc.).

Motivation is increased because the students are actively involved in the learning process by:

1. Assessing their learning requirements.
2. Selecting what they believe are appropriate resources and equipment.
3. Choosing the activities in which they will engage to

reinforce their learning.

4. Assessing themselves.
5. Deciding when they are ready to be teacher tested.
6. Contributing to the formulation of a subsequent contract (Dunn and Dunn, 1972).\*

#### CONTRACT PREREQUISITE

Contracting as a mode of instruction is not a total replacement of conventional teaching. Teachers, by subjective and objective trial and error, should select that portion of the knowledge and skills that will be most effectively taught through contracting. Diagnostic efforts with cumulative folders, preliminary observations, and testing will indicate where students are. There is no shortage of published information about the logical sequence of knowledge and skill development for students. Moreover, teachers are educationally equipped to make judgments about what is psychologically appropriate for the age level of students entrusted to them (Dunn, 1971).

Thus, while teachers plan the content of contracts and then proceed to negotiate plans on a give-and-take basis with students, and while students occasionally are provided options to elect their own learning direction, it is definitely implied that proper sequences

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\*See Dunn and Dunn Chapter 3, pp. 86-96 on how to translate instructional objectives into behavioral objectives and Chapter 4, pp. 119-147 on how to develop contract activity packages.

are followed for the long-range benefit of students. The important fact is that contracting permits a teacher to escape the confining role too often dictated by the textbook. Interruptions and deviations from logical learning sequences can be tolerated by contracting operations. Contracts can depart entirely from anything that resembles normal school activities. Nevertheless, according to Dunn and Dunn (1972) there is a mainline of progress identified for each student. The mainline is the teacher's knowledge of curriculum, and it is either mentally defined or formalized by record keeping.

#### CONTRACT STYLES

The selection and organization of contract content reveals the essence of professional judgment. To be considered and weighed are all the individual student characteristics that a teacher is trained to recognize. Learning modes, interests, abilities of an academic nature, state of maturity and independence, and social-emotional factors all constitute input for teacher decision making. At the start, to develop contracting, all content is teacher-selected and organized. Student options are visible only in terms of negotiated due dates and certain sequences of learning activities. Later, as familiarity with the procedures of contract learning grows, and as freedoms are earned through demonstration of responsibility, students gain more options (Stewart and Shank, 1973; Smith and Riebock, 1971; Chickering, 1972).

A formal or informal assessment or pre-test provides diagnostic information for the teacher; brief but important midpoint evaluations or tests exist to give student feedback on successful progression through the contract; a final evaluation test demonstrates the minimum competencies required by the initial objectives. Short but crucial teacher-student conferences are specified in the contract by date or critical learning activity points. (See Appendix H, pages 224, 225 for Developing Contract Activity Packages: How to Begin; Appendix I, pages 226 to 228 for sample of a Grade Contract; and Appendix J, page 229 for sample of a Course Contract).

#### CONTRACT OBJECTIVES

Individualized instruction becomes a fine art in the act of student-teacher contracting. During the negotiation of contract design, mutual understanding and self-awareness appear in the process of considering objectives that recognize optimum learning mode, academic strengths and weaknesses, personality factors, and individual interest. As the student learns to enter freely into the negotiation process in determining learning objectives, new appreciation is grasped for the rights and privileges of both participants. The human chemistry at work achieves a long-sought-for balance between behavioral and general objectives. The eventual specification of objectives, whether simple or complex, determines to a large extent the effectiveness not only of the contract but, more importantly, the learning experience.

Simply stated, the objective should provide a clear definition of direction which both the student and the teacher understand (Stewart and Shank, 1973; Thomas and Ezell, 1972; Chickering, 1972; Poppen and Thompson, 1971; Elam, 1971).

#### CONTRACT RESOURCES

Contracts should be highly specific in identifying the resource materials to be used, up to and including page numbers in texts, outside readings, support references, film footage, or even audio tracks on selected tapes. Everything about the average learning contract is planned for efficiency. Instructional material should be cross-model, utilizing print, nonprint and live contacts. The balance between these options is planned for the individual student, keeping his or her particular optimum learning mode in mind.

The contract procedure of instruction is often criticized because of the lack of opportunity for peer interaction in the classroom. Teachers who are contracting properly recognize this danger and build in required contact with peer groups for discussion or tutoring purposes. If the teacher cannot plan to be an observer of this grouping process, a student observer can be trained to do so. Teachers may, if desired, plan the membership of the group to maximize the outcomes for academic, social or emotional purposes (Dunn and Dunn, 1972; Chickering, 1972).

## CONTRACT WORKING CONDITIONS

Dunn and Dunn (1972) asserted that allowing a student to negotiate his or her working conditions during a contract provides high visibility, especially with regard to the quality of study habits. Working conditions should be designed to stipulate the hours per day to be spent on the contract and the actual places where the work will occur. Students at first see this part of contracting as "Mickey Mouse," but quickly discover the immediate results of pre-planning their activities. It not only improves the quality of learning, but also opens opportunities for unfettered activities once their contracts are efficiently attacked. Sites for study may include the classroom, resource center, library, the hallway or lounge areas, with the teacher and student negotiating the best possible environmental balance for the benefit of the student.

## DURATION OF CONTRACTS

Schmitz and Schmitz (1972) stated that the first contract should be of short duration, perhaps no longer than two weeks. Both students and teachers quickly become aware of their success and shortcomings in working with time limits.

As each new contract is negotiated on an individual basis, students gain confidence and insight into their own potentials and willingly make self-assessments that simply do not occur in any other mode of instruction. A few students remain, of their own choice, on

contracts of short duration. Other students explore the options for contracts lasting for longer periods of time as they search for the limits of their growth in personal time management (Dunn and Dunn, 1972).

#### CONTRACT CONFERENCES

Teacher-student conferences are so critical to successful contracting that the process must be reinforced by repetition. A minimum of two conferences is required. First, the student should negotiate each contract individually with the teacher. Second, each contract is concluded by an evaluative conference. Although the teacher assesses contract progress through impersonal midpoint evaluations or tests at crucial points, there is no substitute for brief, private conferences. Experience with individual students will quickly dictate how often each student requires this sort of contact in order to be motivated, reinforced and helped. With longer contracts, the all-too-human bent to procrastinate has to be anticipated and dealt with through conferences. The complicated and demanding task of scheduling and keeping conference dates is an arduous part of contracting. Teacher-student acquaintance grows toward a mutual understanding that two human beings are working together with a common goal, the student's success (Dunn, 1971; Chickering, 1972; Sorber, 1969).

#### CONTRACT EVALUATION

The use of pre-test, built-in tests, and final tests have been

mentioned previously. The test may be of a written nature, oral discussions with the teacher, or informal subjective teacher judgments. Edling (1970) points out that built-in tests are not designed primarily as checkpoints, but rather to demonstrate to the student that he or she is learning. Final evaluations or tests are indicators of competency or lack of it. Lack of competency will require a student to repeat portions of the contract using somewhat altered content, resources and methods. The word competency is deliberately used in place of the word mastery. It is defined as the minimal ability required to progress. It is left to the individual teacher to specify what constitutes minimal ability, so long as the teacher does so in advance of and prior to the student's contact with the contract. It is conceivable that minimal competency levels could be adjusted to the expectations for each student, with the expectations being slightly on the high side for motivating.

#### CONTRACT DROPOUTS

According to Stewart and Shank (1973:30):

Practitioners of modular scheduling and continuous progress instruction have made clear for us the fact that some students do not benefit from these forms of instruction. What is odd is that more of us do not anticipate this occurrence. There is no one best way of learning. Contracting is no exception, and anyone attempting to innovate along the suggested lines is forewarned.

All available resource people who have had contact with the student should meet prior to an attempt at contracting to evaluate each individual's chance for success with this instructional strategy. While the identified potential drop-outs from contracting should periodically have an opportunity to try the process, it is probably best that a side-by-side opportunity for conventional instruction be available to them, without stigma or penalty (Stewart and Shank, 1973).

#### CONTRACT DESIGN

Sorber (1969); Stewart and Shank (1973) stressed that the only caution about contract design is that all too often teachers or administrators become obsessed with designing a thing of beauty which will automatically generate three excellent carbons. If the contract is simple enough, it can be written on the back of one of the student's gum wrappers. The design of the contract is intended for communicating an expectation level between the student and the teacher and should be manageable from the student's point of view.

Individualized instruction through the use of contracts make lesson planning obsolete for the modern teacher. If contracts are employed, every student will be working independently on varying phases of his own plan. It is obvious that an individual teacher could not keep an accurate accounting of what was being learned on a given day. In addition, typical lesson plans have little value or place in a

contract-centered learning environment, and a suitable substitute must be devised so that the teacher may keep a record of each student's progress and growth.

#### ---ADVANTAGE OF CONTRACTS

Warner and Akamine (1972) stated that proponents of the grade contract method of assigning course marks have argued that it is superior to traditional grading practices in at least three ways: (1) the contract method forces the teacher to state precisely what is expected of students, thus providing necessary structure and direction early in the course, (2) the contract method emphasizes individual success since each student establishes his own level of aspiration and works at his own pace, and (3) the contract method exemplifies the democratic approach to education since each student may select those assignments he personally desires to complete and is not required to attempt all course assignments.

While the contract system has a number of virtues, it is not without its weaknesses. The greatest weakness is its rigidity. The precise and careful planning which outlines the student's task and gives him direction, tends, at the same time, to make those tasks seem mechanistic and that the system allows little room for student creativity. The grade contract system, where each assignment is judged only as either satisfactory or unsatisfactory, appears to emphasize quantity of work at the expense of quality (Warner and Akamine, 1972).

## SUMMARY

In a recent research on grade contracts Poppen and Thompson (1971:422) made this observation:

Are the grade contracts of value? This research does not substantiate the value of grade contracts over traditional approaches when used with college students. There may be undetected value or value that may be obtained with further modifications. The procedure certainly does allow movement toward individualization of instruction and seems to have no real disadvantages as a grading procedure.

However, contracting is an eclectic process drawing some of the best ideas from many modes of instruction. It permits a teacher to be a professional in the truest sense of the word. The process recognizes both the frailties and untapped potentials of students as human beings. It honestly identifies the act of learning as hard work, yet tries to make the work enjoyable. Contracting is an alternative that does away with penalizing individuals for not measuring up to group standards. As a vehicle, according to Dunn and Dunn (1972), it is designed to foster individualized instruction which employs what the psychologists and learning theorists have been telling us as teachers for years. In order to foster individual and independent learning skills and at the same time generate healthy self-concepts for the students, the educational experience offered by the schools and the teachers must be designed and provided for on an individual basis. Contracting is a meaningful alternative in individualized instruction.

## Chapter 8

### THE MODULE

The instructional module has been called the heart of competency-based teacher education (CBTE) (Houston and Howsam, 1972). Certainly in CBTE the major vehicle for instruction is the 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 set of competencies (Arends, 1973). Most often it is a self-contained unit, designed for a specific purpose, and is a part of a broader, more comprehensive instructional system (Houston and Howsam, 1972). The module used in some programs focuses on limited objectives and can be completed in a short time. In other programs the module may be very broad in scope and require a week or even a month for completion (Houston and Howsam, 1972). Modules may vary widely in scope and in time commitment from program to program.

The focus in this chapter is directly on the instruction module and how it complements CBTE. As Houston and Howsam (1972) pointed out, the modular approach differs from traditional teaching in several ways. First, the total program is considered prior to specifying instructional parts. All too often in the past, each instructor developed his own course with little regard to how it fit with other learning experiences--and often it did not; gaps and overlaps abounded.

Second, modules emphasize the learner rather than the instructor.

Student needs, not instructor expertise or the availability of materials, determine what is to be studied. In the process, instructors often find some of their lectures to be less relevant than they previously had thought.

Third, modules focus first on objectives, not activities.

Objectives are specified first, then activities are identified which appropriately facilitate achievement of objectives by learners. Instruction is focused on explicit objectives.

Fourth, modules are individualized and personalized. They are individualized in that they allow students to work at their own pace. They are personalized in that individual students may pursue varied goals and objectives. Traditional programs compare student achievements, while modular instruction compares students with predetermined objectives.

Fifth, modules include a variety of instructional modes.

Activities may range from participating in small group human relations experiences to completing an experimental study or reacting to programmed instruction. Modules do not imply a specific delivery system. Technology is employed as a catalyst to more personalized and humanized education.

Sixth, a module is a process not just a product. It is constantly in flux, continually being redeveloped and refined. This process approach to curriculum design includes built-in procedures for

testing the module's relevance in the crucible of experience, and altering it when feedback identifies a need for change.

The characteristics described here may also be found in isolation in other instructional strategies, but the integration of these characteristics into a systematic process is what makes the modular approach unique. The effectiveness of an instruction module is determined by the degree to which it helps the learner acquire and demonstrate the competency or competencies specified. In other words, the best measure of a module's worth is information regarding the accomplishment of its purpose. Therefore, the crucial question is: was the module effective and efficient in helping the learner learn? With that point in mind, the presence of certain characteristics in a module make it more likely to be effective. The instructional module proposed by the writers consists of seven elements: rationale, objectives, prerequisites, preassessment, learning alternatives, post-assessment, and remediation.

Lewis (1971) pointed out that the rationale serves two purposes: (1) to describe the purpose and importance of the objectives of the module in empirical, theoretical, and/or practical terms; and (2) to place the module and the objectives of the module within the context of the total program. Thus, the rationale explains and attempts to justify the particular competency or competencies for which the module is designed. It permits the student to more fully understand the

program's expectations and to more closely see the relevance of the particular objectives specified in terms of the roles, responsibilities, and functions of the practicing professional teacher (Arends, 1972). Further, the rationale helps the student understand how the competency he is to demonstrate in one particular module is related to other competencies which he may be expected to demonstrate prior to completing his program (ISTEP, 1972). By placing the module and the objectives of the module within both the professional role context and the program context, the designer avoids splintering of the program - a potential danger when the instructional module approach is used (Arends, 1973).

Objectives are statements of two major types (Houston and Howsam, 1972): (1) instructional objectives specify the competencies a student is to demonstrate, and (2) expressive objectives specify events the student is to experience. Objectives serve two main functions (Popham, 1973): (1) they communicate the goals, expectations, and avenues of approach to students, instructors, and counselors; and (2) they help the instructor design and evaluate his purposes, strategies, and effectiveness. Thus, objectives form the foundation on which instructional modules are built. They not only provide statement of program focus in specifying teaching competencies to be acquired by students but also suggest learning alternatives which might facilitate the achievement of those competencies (Arends, 1973).

Modules vary as to the number of objectives stated. Some

modules have a single objective, others have several objectives, and still others have many objectives. Regardless of the number, instructional objectives should describe in explicit form the learning outcomes which are expected (Houston and Howsam, 1972; Arends, 1973; Popham, 1973, ISTEP, 1972): (1) cognitive behavior in the case of knowledge objectives, (2) affective behavior in the case of affective objectives, (3) teaching behavior in the case of performance objectives, and (4) student behaviors in the case of consequence objectives. Further, an objective should be written in a way which permits one to assess with confidence whether or not that objective has been demonstrated. Objectives therefore have a dual function.

Baird (n.d.), argued for unitary objectives; that is, it should call for a single, independent performance rather than a series of related, dependent performances. Baird (n.d.) believed that doing so encourage more appropriate assessment of the objective. On the other hand, Arends (1973) contended that objectives need not be unitary but may be pluralistic so long as assessment procedures are. The crucial issue seemed to be with measurement. Whether unitary objectives do or do not promote more adequate assessment is debatable, however, the need for assessment to be unitary is clearly agreed upon (Arends, 1973; Houston and Howsam, 1972).

## MODULE COMPONENTS

Prerequisites fall into two categories (Arends, 1973): (1) general background competencies needed to start a module or cluster of modules, and (2) specific competencies which were to have been acquired in a preceding module. In general, a good practice is for the module designer to hold the required prerequisites to a minimum thus facilitating the greatest possible program flexibility. Preassessment procedures often are designed to disclose whether the necessary prerequisites have been acquired.

In order to provide adequate guidance for the student, Arends (1972) said that the prerequisites should include: (1) a statement indicating whether or not prerequisites exist, (2) a list of clearly stated competencies which are prerequisite to the success of the module, and (3) a reference to the sources for developing the prerequisite competencies.

Preassessment involves measurement which is used to determine the following (Burns, 1972):

1. Can the student demonstrate mastery of the competencies prerequisite to the learning alternatives which follow, or must he develop prerequisite competencies so that he might be at the necessary entry level?
2. Can the student already demonstrate mastery of the specified

competency, or does he need to engage in learning alternatives relevant to the objective or objectives?

3. Can the student already demonstrate certain aspects of the specified competency and, therefore, he needs to engage in learning alternatives relevant only to those aspects in which he has not demonstrated mastery?

Thus, the preassessment procedures provide the student with an opportunity to demonstrate mastery relevant to the objectives of the module prior to instruction. Therefore, the pre-assessment gives the student an opportunity to "test out" some or all of the objectives. In addition, because they are usually diagnostic in nature, the pre-assessment may indicate that the student is not "ready" for the module since he lacks certain prerequisite competencies. Therefore, the pre-assessment should (Woodruff, 1973): (1) be partially or totally optional for the student, (2) assess--in a unitary manner--all of the competencies specified in the objectives, (3) assess only those competencies specified in the objective or specified as prerequisites to the module or to entry into the program, (4) provide for diagnosis which gives the student prescriptive feedback intended to guide the student in his fulfillment of the objectives, and (5) be realistic and reasonable with regard to student and instructor time.

The term preassessment usually evokes visions of pencil-and-paper tests of a standardized variety. However, module designers should

also consider the usefulness of other forms of evaluation--formal and informal, direct and indirect, objective and perhaps even subjective. Faculty-student discussions and the observations of third parties should be viewed as attractive possibilities in certain instances. Arends (1972) stated that: given our present level of psychometric sophistication, it is better to poorly measure those competencies to which we attribute great importance than it is to precisely measure those competencies to which we attribute far less importance. This does not imply that we should not try to measure with precision. It is simply to suggest that there is still much to learn about measuring human behavior.

Learning Alternatives--sometimes referred to as instructional activities--are the tasks made available to the student with the intent that they would facilitate the student's mastery of the objective or objectives. It is not the purpose here to describe the vast number of possible activities and materials which might serve the function described above. However, a few general principles can guide in the development of learning alternatives.

1. Whenever possible, learning alternatives should provide for student self-pacing (Dunn, 1972).
2. Whenever possible, learning alternatives should be personalized; that is, they should reflect the particular needs, capabilities, attitudes, aptitudes, and learning style of the student (Dunn, 1972).

3. While activities can be very specific and narrow in scope, it is perhaps best--though not easiest--to provide students with the opportunity to select from many possible alternatives (Arends, 1973).

4. Activities should include equivalent practice; that is, an activity equated with the specified outcome. For example, if the student is to demonstrate the ability to use a half-inch videotape recorder, he must have the opportunity to practice using a half-inch videotape recorder (Cruickshank, 1971).

It is important to keep in mind that in a field-oriented competency-based program, the student is held accountable for the demonstration--not the acquisition--of the competencies specified. Thus, the learning alternatives are the various instructional options available to the student; each is designed to contribute to his acquisition of the objectives. They are not required. In addition to those experiences which are instructor-designed, the student should be free to design his own. The student's responsibility is to meet the objectives; he is not responsible for engaging in a particular set of learning activities. Consequently, the learning alternatives should provide (Houston and Howsam, 1972): (1) where feasible within the context of the situation and the objectives, a variety of alternative learning activities including the option to pursue his own alternatives, (2) experiences which are judged to result in the acquisition of the objectives specified, (3) a flowchart or narrative description of the

sequence of events which might be followed if it is thought that the objectives and/or the learning alternatives are developmental or hierarchial in nature, and (4) opportunities for equivalent practice relevant to each of the objectives.

Postassessment procedures may vary as greatly in format as do pre-assessment procedures. They may even be identical to the pre-assessment. They are essentially measuring processes which are used to determine the following:

1. Can the student now demonstrate to the criterion level the competencies relevant to the specified objective, or is it necessary for him to engage in remediation activities--a recycling through learning alternatives similar to those he has already experienced or a set of learning alternatives which represent a different approach?

2. If the student is not able to demonstrate competence, to what can this be attributed: (a) lack of student ability, motivation and/or effort, (b) inappropriate or ineffective instruction, or (c) unrealistic expectations as reflected in the objective or objectives (Burns, 1972)?

The postassessment procedures are intended to permit the student to demonstrate achievement of the objectives specified. And, in addition, the postassessment assumes a second role--that of identifying learning and instructional weaknesses and providing a basis for guidance as well as identifying competence. That is, data

from the postassessment should be useful in monitoring both student progress and module effectiveness. Therefore, the postassessment should (Johnson, 1970): (1) assess--in a unitary manner--all of the competencies specified in the objectives, (2) assess only those competencies specified in the objectives or specified as prerequisites to the module or to entry into the program, (3) where possible, be formative as well as summative, and (4) be realistic and reasonable with regard to student and instructor time.

It is usually helpful to include a description of remedial activities in the module, although some prefer not to do this. Remedial activities are learning alternatives which are intended to assist the student who has failed to demonstrate mastery of a particular competence as indicated through postassessment results. As indicated previously, remedial activities may be "more of the same" or may represent a different task. In all cases, it is the intent of remediation to be helpful and not punitive and indeed to give the student every opportunity to be successful. Generally, remedial activities are designed by the instructor and the student in a conference setting. Together they examine the student's performance relevant to the postassessment and decide what additional instruction might be most helpful.

## WHO SHOULD WRITE INSTRUCTIONAL MODULES?

Arends, Masla and Weber (1973) contended that experience has shown that good packets can be written by students and teachers even though they have had little previous writing experience or little previous experience with the topic they write on. The individual without previous experience needs to spend more time however, in the research process than does the individual who has had a rich background within the area. Moreover, the team approach can also be utilized in the production of a module. The team effort can sometimes be an asset by providing a broader experience background for content, methods and learning activities.

The module can be, in most cases, locally produced by the teacher and/or the student based upon their local curriculum and needs. The module is designed for individual instruction and is most effective where the students can use and retain their own copy of the module; and when there is available a wide variety of modules for a given area that can provide for more individual learning needs, interests, and differences.

In preparing to write a module, Arends (1972) said, it is important to:

1. Write your module as if you were the instructor of the student who will be going through your packet. Your job is to take the teacher's point of view and then organize it systematically and

put into a sequential step-by-step pattern or design some concept you want someone to learn.

2. Prepare yourself first, then the module.
3. Be thoroughly acquainted with the topic you intend to develop into a module.

#### SYSTEMATIC EVALUATION OF AN INSTRUCTIONAL MODULE

The suggestions in the first part of this chapter provide the basis for the checklist for evaluating instructional modules presented on page 150. The checklist is intended to serve as a guide to evaluate instructional modules. Those who use the checklist should feel free to modify it, to make it reflect their own needs. The checklist provides a concise, easily used system whereby all of the elements of an instructional module can be examined relevant to predetermined criteria.

Thus, the checklist serves as a guide for the development, selection, and modification of instructional modules. The effective utilization of the checklist requires the user to be familiar with the ideas presented in this chapter. In addition to the criteria described earlier in this chapter, the checklist contains one additional category, "general." The "general" criteria are two in number: (1) communicates effectively, and (2) provides for positive effect. Both of these call for subjective judgments relevant to two related issues. In making a judgment regarding the effectiveness with which the module communicates,

Table 1  
 Checklist for Evaluating  
 Instructional Modules

Element Criteria	Yes	No
<p>Rationale</p> <ol style="list-style-type: none"> <li>1. Purpose and importance described.</li> <li>2. Place within program explained.</li> </ol> <p>Objectives</p> <ol style="list-style-type: none"> <li>1. Learning outcomes specified.</li> <li>2. Learning outcomes verifiable.</li> <li>3. Learning outcomes unitary.</li> </ol> <p>Prerequisites</p> <ol style="list-style-type: none"> <li>1. Prerequisites noted.</li> <li>2. Prerequisites stated as competencies.</li> <li>3. Reference to prerequisite resources.</li> </ol> <p>Preassessment</p> <ol style="list-style-type: none"> <li>1. Procedures are optional.</li> <li>2. All specified competencies assessed.</li> <li>3. Only specified competencies assessed.</li> <li>4. Procedures are diagnostic.</li> <li>5. Time requirements are reasonable.</li> </ol> <p>Learning Alternatives</p> <ol style="list-style-type: none"> <li>1. Variety of alternatives are provided.</li> <li>2. Experiences related to learner outcomes.</li> <li>3. Flowchart or narrative provided.</li> <li>4. Opportunities for equivalent practice.</li> </ol> <p>Postassessment</p> <ol style="list-style-type: none"> <li>1. All specified competencies assessed.</li> <li>2. Only specified competencies assessed.</li> <li>3. Procedures are formative and summative.</li> <li>4. Time requirements are reasonable.</li> </ol> <p>General</p> <ol style="list-style-type: none"> <li>1. Communicates effectively</li> <li>2. Promotes positive affect.</li> </ol>		

Source: Arends, 1973, p.7.

a user of the checklist considers the following: (1) is the module free from jargon, (2) are program expectations explicit, (3) are directions clear, and (4) is it likely that most students will understand the module and its implications relevant to their role as learners? In making judgments regarding the affective impact the module might make on the learner, the following issues might be addressed: (1) is the student likely to see himself as having options, (2) is he likely to view expectations as being reasonable, and (3) is he likely to see the importance and relevance of the competencies specified?

Further, according to Arends (1973) application of the checklist provides a basis for deciding whether or not the criteria are met. Utilization of the checklist should not be seen as providing an adequate analysis of the content included or of the appropriateness of the module in terms of its aims or objectives, except as these fit within the total program as conceptualized. A careful application of the criteria in the rationale, however, may uncover any discrepancy between program goals and program philosophy. Likewise, a module which fails to meet a large portion of the criteria may violate aspects of the instructional philosophy implicit in competency-based instruction.

#### SUMMARY

The instructional module is being increasingly used in competency-based teacher education program. It is a set of experiences intended to

facilitate the learner's demonstration of objectives which are specified in a design phase as part of an overall program. While modules may be written in many formats, the writers suggest that the module contain at least six elements: rationale, objectives, prerequisites, preassessment, learning alternatives, and postassessment. As module writing becomes more sophisticated, a seventh element, remediation might be included.

Rationale includes a clear statement of the rationale for the module's objectives, outlines the major assumptions upon which the module is based and identifies the relationship of this module to the program as a whole.

Objective or set of closely related objectives, each of which is stated in clear, unambiguous terms which stipulate what the learner is to demonstrate upon successful completion of the module.

Prerequisites stipulate the minimum background and specific competencies needed to start a module.

Preassessment measures the extent to which the learner already has mastered prerequisites to the module and his potential competence in meeting the objectives of the module itself. On the basis of results, the learner may undertake part, all, or none of the instructional alternatives. Preassessment may require demonstration of competencies by successful completion of written or oral tests, reaction to simulated episodes, or simply questions which elicit participant interest or needs. The module designer is not limited to one mode of assessment.

Learning alternatives specify instructional activities for attaining module competence. Every module should include at least two means for achieving the objective. In addition to those identified by the module developers, learners may also identify alternate procedures for meeting objectives. A key assumption is that the emphasis is placed on achieving objectives, not on students participating in activities.

Postassessment like preassessment, is related to module objectives. Completion of a module is signalled by successful demonstration of competence on the post-assessment.

Modules may be written by faculty and students. Evaluation of an instruction module needs to be done in a systematic, checklist approach to determine if all of the relevant criteria are included. With proper preparation and evaluation the written instructional modules can be a real asset to competency-based instruction.

In this chapter, assessment and evaluation was briefly mentioned. However, the type of assessment and evaluation used in the competency-based teacher education program is unusual and important enough that the following chapter has been devoted to the subject.

## Chapter 9

### ASSESSMENT AND EVALUATION IN CBTE

The emphasis in competency-based teacher education on objectives, accountability, and personalization implies specific criteria, careful evaluation, change based on feedback, and relevant programs for a modern era (Houston, Howsam, 1972:1)

Evaluating involves determining what success students have had in achieving the objectives established for them and how successful the instruction has been. The task of evaluating is the final element of the teaching model that ties all the other elements together. Information for judging the worth of instruction is gathered at the same time readiness is determined, often using the same strategies. Clarification of objectives requires the specification of performances expected to become measures for evaluating pupil progress. If the student can clearly see where he is headed and how his progress will be determined, and if his instructor exhibits a genuine interest in his success, his motivation for learning can be expected to intensify (Burns, 1972; Payatte, 1972).

Moreover, competency-based teacher education focuses unusual attention on evaluation. If such programs are to be effective in realizing their objectives, it is essential that modern systems technology be employed in their management and evaluation. Evaluation must begin with a clear understanding of what is to result from the teacher education program; detailed plans must be made to achieve these

objectives; and then such plans are put into effect with constant evaluation and revision being employed to find even better means for achieving the objectives. Such a program, arranged in behavioral terms, can be checked out at any given point and time, and provisions for prompt and objective feedback will enable it to become self-correcting. Such increase attention to evaluation calls for much in-service staff training as well as the collection and use of an increasing number of specialists who usually have been outside of teacher education, such as program systems analysts, computer programmers, media specialists, systems technicians, counselors and accountants.

Houston, Howsam and Jones (n.d.) stated that in designing and testing a performance-based teacher education program, evaluation serves three purposes: improve program effectiveness, improve program organization and management, and monitor student performance. Evaluation is not something which occurs at the end of the project but is integral to continued development. Evaluation improves programs, management, and students through successive program refinements and approximations of goals sought. The systemic approach according to Bauch (1969) requires a continual process of development, testing, and refining. The first approximation of a desirable teacher education program may be based on previous experience or a conceptual model; evaluation alters that design by making it more precise, refined, definitive, and valid for stated objectives.

Measurement is an integral part of evaluation; however evaluation adds the qualitative dimension, the contextual edge to the process. According to Houston (1972) one might measure the width of a door, but evaluate the adequacy of that width for its location, traffic flow, and use. In teacher education, one can measure the performance of a teacher using observation scales, rating devices, or other measurement tools. Evaluation compares those measurements with objectives which imply societal criteria, change in pupil behavior, and hunches by evaluators concerning adequate teaching styles.

In a complex endeavor such as measuring and evaluating human behavior, the temptation is to consider factors which are readily quantified and easily accessible. Too often evaluation processes are employed which have little potential for success, but provide activity which supposedly demonstrates progress. The important dimensions are usually not the easiest to evaluate (Inglis, 1972).

#### IMPROVING THE EFFECTIVENESS OF THE EDUCATIONAL PROGRAM

Increasing program effectiveness implies refining (1) objectives, and (2) the instructional procedures which facilitate student achievement of those objectives. Both assessment and evaluation questions for each of these are treated in the following paragraphs.

Program objectives or competencies, when explicitly stated and used to organize the curriculum, distinguish a competency-based

program. Activities are designed so students can achieve these objectives and evaluation procedures related directly to them. Objectives can be assessed in terms of;

1. The technical adequacy of their construction (behavioral statement, criteria, conditions);
2. whether objectives are student oriented; and
3. the clarity with which they convey to the reader their intent (Houston, 1972).

For each of these areas checklists can ascertain the adequacy of the statement. This assessment, however, does not indicate the quality of the expected performance nor the adequacy of the objective in improving teacher effectiveness. For these, evaluation is employed since values permeate the process. Houston (1972) stated that evaluation of objectives considers questions such as:

1. Would the total set of program objectives logically lead to a teacher model as described in the theoretical description?
2. Does each objective contribute to the overall model?
3. Is each objective consistent with democratic principles?
4. Is each objective worthy of achievement given the goal of educating a teacher and the time and resource constraints likely to apply?
5. Do program objectives cumulatively meet minimum legal requirements; i.e., certification?

6. Do graduates of the program act differently in predictable ways from other teachers?

7. Is the teacher more effective who can demonstrate a specified competency than one who cannot?

Instructional resources and procedures are actualized to facilitate the achievement of program objectives by students. Modules, activities, and programmatic sequences can be assessed in terms of the length of time required by students to complete them, clarity of description of content and processes, and description of procedures students follow in the program (Inglis, 1972). For a model of a Module Evaluation Questionnaire see Appendix K, pages 230 to 237.

Some aspects of teacher performances which can be assessed include knowledge of:

1. Content being taught and of teaching processes;
2. communication patterns in the classroom;
3. teacher products such as lesson plans, analyses of student interest, achievement, or program thrusts; and
4. results of teacher actions, such as change in pupil behavior or achievement, pupil products, or professional non-pupil activities (curriculum committee reports and recommendations, change in attitude or knowledge by other teachers, administrators, parents, or non-professional persons).

Houston (1972:92) stressed that:

Some of these are assessed using a nominal scale in which change is described without reference to a particular scale direction. These are typically descriptive, identifying by name a particular phenomenon or action. The Flanders Interaction Scale, for example, is a relatively precise nominal scale in which the observer classifies verbal communication every three seconds in one of ten categories.

Other scales are ordinal in nature; the units of measure are ordered either quantitatively or qualitatively. Each successive unit is assumed to be greater than the preceding one.

The Flanders Interaction Scale is an assessment of teacher performance. Evaluation of these adds the concept of value. Houston and Howsam (1972) asked, does any combination of Flanders categories produce more effective instruction? Research indicates that they do. The comparison of observed and recorded phenomena against some effectiveness measure is one form of evaluation. So it is with the teacher-student talk ratio. If some set of ratios is perceived either intuitively, empirically, or theoretically to be more effective than others, then the process becomes evaluation. The criteria of worth, however, should be more explicit when evaluating performance.

Evaluation of activities, modules, or processes includes areas such as those listed below (Burns, 1972).

1. Does this instructional procedure facilitate student achievement of stipulated objectives?

2. Is the total set of instructional procedures both necessary and sufficient for the student to achieve stipulated objectives?
3. Are alternative activities relevant to objective attainment?
4. Do alternative activities appeal to a range of student learning styles?
5. Are instructional activities efficient in terms of student time, resource allocation, staff time, sequencing, and locations where they are to be completed?
6. Are all instructional activities and procedures consistent with the theoretical model advocated in the teacher education program?
7. When considering available and required resources (staff, physical facilities, and materials), is each activity worth engaging in?

#### IMPROVING PROGRAM ORGANIZATION AND MANAGEMENT

In addition to evaluating objectives and instructional alternatives to achieve them, the program designer evaluates the procedures and processes employed in program development. In assessing developmental efforts, one can measure the (Burns, 1972; Houston, 1972):

1. Time required to develop various program aspects;
2. cost of materials to implement that program;
3. number of staff required for certain functions; and

#### 4. space requirements for implementation.

Evaluation of these measurements considers the importance of each in relation to its contribution to the developmental effort. Some may require extensive resources but be crucial in the enterprise; others may be less demanding but their priority low when developmental goals are considered. In this phase of evaluation the evaluation is in terms of efficiency and adequacy of procedures for developing that program. Some program development procedures to be evaluated include:

1. Do management procedures facilitate curriculum development?
2. Are limited staff resources being deployed in critical

areas?

Evaluation is particularly crucial in the systemic approach to program development. It provides the data base for management decisions which leads to more effective generation of the CBTE program (Inglis, 1972; Burns, 1972; Houston, n.d.)

### IMPROVING STUDENT PERFORMANCE

The focus of the previous sections has been upon programmatic developments, while this section considers questions and procedures by which student achievement is compared with program expectations. Many of the questions raised relative to program improvement can be redirected to the learner.

Houston (1972) has identified four aspects of teacher assessment:

1) aptitudes and attitudes, 2) technical skills, 3) decision-making ability, and 4) capacity for professional growth.

The first, aptitudes and attitudes, is evaluated early in a prospective teacher's program. The individual's aptitude for learning what he will be teaching (content) and teaching skills could actually become part of the decision-making process in selecting prospective teachers. Testing aptitude for teaching skills, for example, might be accomplished by having the candidate teach the same lesson a number of times, with some lessons followed by personal assessment and others critiqued by an observer. The evaluator would seek answers to questions such as these: How does the person respond to critiquing? How realistic is his evaluation of his own performance? Did his instruction improve with successive trials? In what ways did he modify instruction following critiquing? Decisions based on these assessments are typically tempered by the amount of quality of information available, consequences of the decision, and reversibility of the decision.

The second aspect, measuring teaching skills, taps the most elemental teaching skills. Ability to establish instructional set for a lesson, implement basic plans, obtain closure, and communicate with children using questioning techniques are suggestive of the technical skills which can be assessed.

Pyatte (1972) a third area of prospective teacher evaluation

taps the integration of the various technical skills and their application with a specific group of children. This might be accomplished through simulations where an individual is provided written data and asked to respond. This tests their ability to plan, to structure knowledge, and their general decision-making behavior. Visual stimuli in simulations provide a procedure for measuring perceptual behavior (when shown slides of classrooms, what inferences do they make, how do they react, to what extent are they able to read non-verbal cues)? With both written and visual simulations, the object is to test perception of the situation and reactions to it. Microteaching extends the individual's involvement and provides another procedure for testing decision-making skills and integration of teaching skills.

The fourth level assesses teacher competence over an extended period to note stability of performances, adaptability to changing conditions and the growth curve. In essence, this on-the-job assessment can distinguish professional teachers from craftsmen (Pyatte, 1972; Houston, 1972)

Inglis (1972) pointed out that relative to the objectives and competencies of a teacher preparation program, a student's progress may be evaluated on dimensions such as these:

1. When optional objectives are available, is he selecting those most relevant to him as a teacher and as a person?

2. Do the selected set of competencies logically lead to an integrated preparation program?

3. Does he set objectives for himself beyond those established in the program?

When instructional procedures are considered in relation to individual participants, questions such as these are relevant:

1. Is the range of instructional alternatives he has engaged in wide enough when considering his future role as a teacher and the theoretical model of the preparation program?

2. Does he explore beyond program activities; if so, in what areas?

When questions are focused on personal development, aspects such as these are considered (Houston and Howsam, 1972):

1. Is the individual progressing at an acceptable rate when considering personal characteristics, progress of other students, and extenuating circumstances?

2. What evidence indicates that he is committed to being a professional teacher?

3. Does this prospective teacher emphasize his positive personal attributes?

4. Does he employ previously demonstrated competencies when working on subsequent program elements?

5. What evidence indicates that he is progressing in his

use of various competencies through implementation stages (from awareness to interest, appraisal, trial, adoption, and finally integration)?

6. What attitudes does he exhibit toward teaching as a profession and himself as a teacher?

Questions such as those posed above provide the student and his advisor with information which is useful in reformulating his program and providing a basis for comparing actual progress with some standard.

#### END-OF-PROGRAM ASSESSMENT

Veldman (1971) noted that every graduate of a teacher-education program remembers the deafening click of the closing door as he faced his first class of pupils. At that noisy moment, the teacher perceives numerous inadequacies in himself. Even in doorless and wall-less future schools, there will be a need for continuing monitoring of alumni as a means of determining teaching expertise. This form of end-product assessment for teachers asks the question, can this beginning teacher prove his effectiveness in the real world of teaching?

The question of who should determine teacher competency is one that causes much concern in competency-based programs. This is where the concept of team assessment becomes an important factor. The team in competency-based education consists of college (or other teacher-

center) faculty, school administrators, school faculty, school pupils, and the students themselves. Each of these team members should have some input into the end-of program assessment of prospective teachers.

End-of-program assessment in traditional programs is totally on the shoulders of college personnel. There is input from the cooperating teacher in a student-teacher or intern program, but the grades and recommendations come from the college. If a student does not seem to have the capabilities during or after a program, faculty members often pass the student with a C or D and hope that no school district will hire the student as a teacher. In a "CBTE" preparation program, this would not happen--the student would not be certified unless he could demonstrate the minimal competencies.

The types of competencies give some indication of who might assess competence. Certainly, cognitive objectives could be assessed with written instruments or interviews. However, performance objectives and consequence objectives must be demonstrated in teaching situations. In role-playing activities, the college faculty member might assess competence. However in school situations, teachers, administrators, and pupils, as well as college personnel, should pass judgment. If school personnel are to be team members, they must share the accountability factor of guaranteeing that beginning teachers are indeed "safe."

Feedback on programs from alumni or employers of alumni

provides a most important form of total program assessment. However, too few institutions now use this type of feedback as a source of formative evaluation for their programs. This end-product assessment may appear to be a totally summative form, providing information only on the effectiveness of past programs. However, as the concept of the teacher center continues to expand, formative assessment at this level could well provide teachers with personalized prescription for inservice competency-based programs (Houston and Howsam, 1972; Veldman, 1971).

#### ONGOING ASSESSMENT

Far too little has been done to provide prospective teachers with feedback from their pupils on both their effectiveness and interpersonal relationships. Yet such information is invaluable in aiding a student to modify his behavior to bring about more effective learning situations (Veldman, 1970).

Assessment of performance or consequence objectives is not always simple; yet it is possible. Observation of a classroom situation for appropriate teaching competencies may be a challenge; yet the work of Flanders and others has demonstrated that classroom interactions can indeed be noted reliably.

On-going program assessment also calls for careful scrutiny of the difficulties that students are having as they progress through

competency-based programs. Students have difficulties. The educational background of most students does not emphasize the skill of setting deadlines for themselves. It is not uncommon for a student, unconvinced of the need for self-direction, to complain that he wants a professor--"After all, I paid for him!". Aiding students to accept the task and challenge of self-directedness could be one of the roles of the counselor in a competency-based program.

Similarly, face validity of instructional materials is necessary for student commitment to any program. In any teacher-education program, students express differential degrees of satisfaction or dissatisfaction with instructional materials, objectives, and professors. To a great extent, the value of the program to the students is determined by the confidence that they have in each of these factors (Veldman, 1970; Houston and Howsam, 1972).

Problems of face validity may arise with some new instructional procedures generated in personalized programs. In such programs, it is assumed that the student must know himself if he is to be able to aid his pupils in their learning. "Learning about self" is not a goal of most traditional teacher-education programs. Therefore, few teacher educators have used techniques such as human-relations training, T-groups, encounter groups, and other sensitizing experiences. Yet, under the direction of skilled leaders, these techniques are invaluable in learning about self and personal impact on others. Unfortunately,

public reaction toward such instructional procedures has been less than enthusiastic (Houston and Howsam, 1972).

The use of programmed materials and computer-assisted instruction also raises issues of face validity. Such devices certainly can be invaluable.

#### EVALUATION AND GRADING SYSTEMS

The use of criterion-referenced assessments raises another issue in C.B. instruction. Few issues are more thorny. However, this is not because grading is a problem inherent to C.B. instruction. Rather, the problem arises from the development within an established system of instruction of another system that proceeds from a radically different set of assumptions (Burns, 1972).

Traditional grading systems are norm referenced, although this principle rarely is applied fully. The assumption is that the competitive process is a motivating force. Comparisons, are usually made with others in the instructional group. No attempt is made to assess the whole range of competencies or even to define them explicitly. One further characteristic of the traditional system is its reliance on rigid time constraints.

The assumptions of the traditional system clearly differ markedly from those of C.B. instruction. The latter is criterion referenced. This is to say that it establishes the expected kinds

and levels of performance and make explicit the indicators that will be used to determine whether and when the competence has been demonstrated. The different use of time is exemplified by being allowed to try again. A different assumption about competition also is indicated. Under C.B. instruction, the learner is not competing directly with others. Rather he is testing himself against a performance task or challenge. He is expected to meet the challenge (Lewis, 1971).

It is apparent that the traditional grading system cannot serve the purpose of competency-based instruction. In view of many, only a record that indicates attainment of the competency can be justified. Even failures to complete cannot properly be recorded, because time is an open variable. Transcripts under the competency-based system become records of competencies mastered to the expected level.

However, as an institution goes about resolving the grading issue, one thing seems clear. Incompatible data cannot properly be fed into a records system. Subjects feeding into a master system must proceed from similar assumptions (Masla and Arends, 1973).

The message should be clear to all who attempt to introduce C. B. instruction into institutions where traditional grading and reporting practices exist. New systems, alternate systems, or special accommodations that are compatible with competency-based instruction should be negotiated in advance. An understanding and reasonable accommodation may be the most expedient approach; alternative and

parallel systems or revisions in the master system will take longer.

## Chapter 10

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

#### SUMMARY

During the past decade public attention has increasingly focused on the schools and their difficulties in providing adequate education for all segments of the nation's population. The responsibility to fulfill this mandate ultimately falls upon the teachers. It is they who are expected to help develop an adequate foundation for learning which will be of use to students throughout their lives.

In an attempt to improve education and assist teachers to meet society's rapidly changing needs, educators are engaged in a continual search for alternative means to improve teacher competence. The concept of competency-based teacher education emerged in the latter part of the "sixties" as one alternative way to prepare teachers.

The accepted procedures of competency-based and conventional education systems differ considerably. Conventional education relies heavily on the teacher or text to dispense knowledge geared toward the average students, with few provisions made for the slower or faster students. In competency-based education the responsibility is often placed on the student to initiate the learning by using the teacher as a resource person. In addition, a competency-based education system is not dependent on the concept of class advancement; any student may select goals more or less sophisticated than those of his peer social group.

The basic difference between these two educational systems is evident in the amount of choices allowed students with respect to goals and instructional and evaluation procedures, the amount of information given students concerning the instructional goals, and the sensitivity of the system to individual differences. In the decades ahead, teachers will be held increasingly accountable for their behavior. The movement toward behavioral accountability has arisen partly from the conviction that desired educational outcomes can be specified and measured with reasonable precision, and partly from the increase in parent-community concern and involvement in the direction and operation of local public education. The teaching profession, while working steadily toward public recognition of its professional status, has found that it must deal realistically with the issue of accountability.

A number of states have begun to explore the possibility of competency-based teacher education based on performance as well as on education and knowledge. Generally, traditional certification of teachers is granted upon the completion of a state-approved teacher education program or upon the completion of certain courses. This procedure does not specify explicitly what competencies have been mastered. It is believed that performance objectives can provide minimal specifications for the development of teacher competence. The writers contend that competency-based teacher education programs can

aid in bridging the gap between theory and practice and to provide more competent teachers. Moreover, the change toward competency-based teacher education is not easy, and tremendous inertia must be overcome to change the traditional teacher education curricula. Change will not occur spontaneously.

The foundation of competency-based teacher education lies primarily in: 1) That 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, 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 the 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 teacher education is consistent with democratic principles. 8) That it permits effective integration of theory and practice. 9) That it provides better bases for designing research about teaching performance. These advantages would seem sufficient to warrant and insure a strong and viable movement toward competency-based teacher education programs.

In addition, competency-based teacher education is a potentially superior strategy for developing the teacher knowledge, skills, and attitudes necessary to facilitate student learning. It stresses careful definition of objectives and it focuses instructional effort through continuous feedback. CBTE has at least five essential elements: 1) teaching competencies to be demonstrated are specified in behavioral terms, and made public; 2) assessment criteria are competency based, specify mastery level, 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.

The 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. In addition, the related and desirable characteristics include a field setting, a broadened base of decision making the emphasis on consortium arrangements, the use of protocol and training materials, student participation through an ongoing preservice and inservice training.

Competency-based teacher education also offers new ways of educational planning, of organizing and structuring teacher education.

These may be regarded as vehicles of change. By virtue of the emphasis on field activities, it provides a bridge between preservice and inservice teacher education. Through modularization, individualization, and counseling, students are encouraged to learn in their own modes and to develop in their own styles. Competency-based education helps students to become independent learners capable of making decisions about themselves and their future.

Competency-based education demands a clarity of purpose. It obliges educators to focus on their purpose and rethink their goals in order to meet the pressures and needs of school and society. The program develops in all participants a potential for new and increased responsibility and accountability.

Because all programs include field experiences consortium arrangements are essential; however the degree and the manner of involvement vary. Programs with well organized field centers work cooperatively with the public schools in identifying purposes, objectives, and instructional strategies.

The competency-based approach to teacher education is usually initiated through: 1) a powerful administrator who supports the program; 2) a nucleus of faculty volunteers who are willing to undergo orientation and retraining, and to commit extra time to program development; and 3) school districts, which share their facilities, materials, and personnel with the colleges. All are motivated to try competency-

based teacher education in order to combine theory and practice, use innovative practices and current technology, and keep up with rapidly changing times.

Additionally, the adoption of competency-based teacher education will not simplify the lives of those responsible for the preparation of teachers. Nor will it simplify the lives of students planning to become teachers. It is fair to say that a decision on the part of a staff within a school of education to adopt competency-based teacher education would markedly alter their professional lives. Moreover, it would markedly affect the lives of students, and the lives of colleagues in the public schools. Undoubtedly adopting a competency-based teacher education program will create anxiety and upset. To the extent that the people and institutions involved are adaptable, however, there is hope for success.

This paper has identified a number of advantages of competency-based teacher education. Among the most promising are its attention to individual abilities and needs; its focus on objectives; its emphasis upon the sharing process by which these objectives are formulated and used as the basis of evaluation; its efficiency, enhanced by the use of feedback; and its student and program accountability features. These advantages would seem sufficient to warrant and ensure a strong and viable movement to strengthen teacher preparation through competency-based teacher education.

The writers believe that this study would benefit from deeper, more penetrating analysis which would enhance the prospects of competency-based teacher education and demonstrate its usefulness. An in-depth examination of each of the topics would be useful to add to this preliminary research on competency-based education.

### CONCLUSIONS

Based upon this study, the following were concluded:

1. In spite of the changes that have been made in traditional education, the gap between what is and what it must be is widening.
2. In traditional education too much time is spent in the lecture hall and not enough time in the public school classroom.
3. Field-oriented, competency-based teacher education appears to be one of the best alternatives at the present time to the traditional teacher training program.
4. Many competency-based teacher education (CBTE) programs have been implemented without a clear set of criteria for the goals of the program.
5. The lack of clearly stated program goals has made the development of performance objectives and the writing of performance tasks difficult if not impossible.
6. An institution that decides to develop a field-oriented CBTE program must be committed to the permanence of a field-oriented program rather than a classroom-oriented program.

7. The most successful CBTE programs were developed through the use of consortia (cooperative) type arrangements.
8. The most on-going CBTE programs have active consortia which provide input and feedback for evaluation.
9. The selection of the project director is crucial to the development and continuation of a CBTE program.
10. The development of an on-going inservice training program is necessary in providing maximum effectiveness of campus personnel and field associates in the public school.
11. Teacher trainees involved in a field type clinical program are much more enthusiastic about teaching than are the students in a traditional teacher education program.
12. A field-oriented CBTE program can best be operated when the local school population is large enough to provide the setting for the institution's teacher trainees.
13. Field-centers need to be established in other locations when the local school is not large enough to support the teacher trainee clinical program of the college.
14. The development of a CBTE program that is able to function within state guidelines, available physical facilities, funds, and with existing or procurable field-university personnel increases the possibility of program success.

15. Teacher trainees in field settings develop a professional attitude and approach to teaching more readily than in the traditional program.

16. Too great a distance to the field center may impair the cooperation of the campus faculty with the field personnel in providing leadership and help.

17. An institution that develops a successful field clinical program must provide additional or re-allocate funds for the program.

18. A great deal of time, energy, commitment, frankness, and faith is required of the administration and faculty that adopts a CBTE field type program.

19. Successful CBTE programs can only be developed where active support from the college administration is present.

20. CBTE programs have developed with less trauma where the change has been a developmental process rather than the traditional research model or a total conversion model.

21. CBTE programs will be successful only where a majority of the faculty are willing to assume changing and different roles from the existing one.

22. For success, the faculty must have the ability and willingness to establish satisfactory working relationships with other agencies in the field to provide adequate resources for the clinical aspect of the program.

23. For success, the campus faculty must work more openly, cooperatively, and in coordination with the public school.

24. Professors connected with the field program have felt a real insecurity because of the lack of a system that compensates them for tenure, promotion, merit pay, etc. in their new role in the program.

25. The lack of proper interrelation of field center activities in determining faculty load has created misunderstandings with the university administration.

26. The lack of release time for the faculty to develop materials for the new program has been a hindrance to success in many programs.

27. Where adequate planning and developmental time has been provided for university and field personnel the new programs have progressed more smoothly and rapidly.

28. Where a detailed evaluation system which determined the degree to which the program was meeting its objectives was present and used, a regenerative viable program resulted.

29. Procedures for program modification suggested by the evaluation, are most effective when presented through the consortium committee.

## RECOMMENDATIONS

Based upon this study, the following are recommended:

1. The Department of Secondary Education at Montana State University should proceed immediately with the development of a field-oriented and a field-centered program generally following the guidelines presented in this paper.
2. The Department of Secondary Education, in consultation with the dean and director of student teaching, should explore several potential field oriented and field-centered sites that could be utilized in a competency-based teacher education program.
3. The Department of Secondary Education should form a consortium committee to develop the assumptions and goals necessary for initiating a CBTE program. This committee should include personnel from the school of education, other academic departments, State Department of Education, field administrators, field teachers, future and present teacher trainees, and members from the community. If one large committee is formed, it should include representatives from the field-center site and the field-oriented site.
4. A program director and a field-center director should be selected. A single person might fill both positions, initially.
5. The professional staff, in consultation with the consortium committee should develop the performance objectives and performance tasks for the competency-based program.

6. A continuous program of inservice training for the campus and for the field associates should be developed and initiated by the campus staff.

7. The campus staff and the consortium committee should develop an ongoing evaluation of the competency-based program to determine the degree to which program goals are being realized.

8. The consortium should develop procedures for the selection of teacher trainees who will enter the field program.

9. The campus staff should develop a modular program for campus and for field use. Students should also have the contract as an alternate learning method.

10. The development of the field-center and field-oriented programs should not be considered experimental but as an alternate to the traditional classroom approach.

11. A budget should be developed which includes additional funds to initiate the program.

12. The administration needs to develop a viable formula for determining faculty loads so that courses, credit hours, etc., are not the only governing factors.

13. The administration needs to develop a system of compensation for tenure, promotion, pay, etc., which is broad and flexible enough to include the new roles and expectations for professors in the field program.

14. The administration needs to provide release time for the faculty to plan and develop materials for the new program.

15. The department should develop a continuous two-way communication system with off-campus field personnel.

16. The faculty must become involved in research dealing with competency-based teacher education.

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APPENDICES

## A BRIEF PROGRAM DESCRIPTION OF CONSORTIUM MODELS

Although the competency-based movement is relatively young, several existing programs can provide new insights into the services provided by several consortiums.

University of Georgia, Athens, Georgia.

The University of Georgia, working with the State Department of Education and a local school system, is designing an innovative and self-regenerative competency-based inservice Teacher Center. This center--utilizing various resources within the community and producing needed materials--will conduct continuous feedback studies for the development of an exemplary center that is feasible and practical for implementation at local levels throughout the state.

Teachers College, Columbia University, New York

The Columbia University Teacher Center is developing a network of school and teacher-education programs that will work together to offer both preservice and inservice training. This network will utilize competency-oriented instructional systems. In addition, a learning-resource center and a resource-management team will help user school districts to assess and to meet local needs.

University of Wisconsin, Madison, Wisconsin

The University of Wisconsin Teacher Center is building upon the work of the Wisconsin Elementary Teacher Education Project, which produced specifications and feasibility studies for competency-based, individualized, inservice teacher education. In addition to providing facilities for this training, the center will establish a learning-resource center, provide technical assistance to local school districts throughout the state, and provide a center that will serve the State Department of Public Instruction as a pilot for other centers that are to be developed throughout the state.

Southern Consortium

A group of ten colleges have combined forces in order to share ideas and resources in the development of competency-based training programs at each of the member institutions and to develop sufficient experience and strength for giving developmental assistance to other small colleges that desire to install similar programs. Inherent in this effort is the view that each participating college is both a resource and a center for reform. Effectiveness continually is increased by a renewing process of program improvement and a strengthening of linkages with other agencies. By working together, the colleges in this consortium strengthen themselves and one another. This consortium forms a plausible model of a competency-based partnership

that other small institutions should consider if they desire to pool resources in order to produce more effective teacher-education programs.

Consortium model: Oakland Unified School District

The Berkely, San Francisco, and Oakland Unified School Districts will work together to establish a Bay Area Teacher Center, which will be designed (1) to identify the educational needs of children and those needs that can be addressed through the training of educational personnel; (2) to identify the resources that now exist and can be used to meet those training needs; and (3) to conduct training activities that most effectively will put resources together with needs.

The Bay Area Teacher Center will be a facilitating agency that will (1) provide coordination for all teacher-training activities now being conducted--from whatever source and by whatever person or agency--in order to achieve greater impact, cost effectiveness, and improvement; (2) achieve more effective deployment of existing training efforts; and (3) develop new training programs or products or processes to meet current needs. All pertinent groups are being involved in planning. Stress is being given to an assessment of the educational programs of the three districts, the directions they wish to take, and the ways that training can fit into systematically planned efforts to achieve new goals. The center also plans to encourage nearby institutions of

higher learning in the development of more responsive training programs for the three districts.

#### The Teacher Centers Consortia

The "teacher center" may well be the most important "consortium model" to be involved in the widespread testing and installation of competency-based teacher-education systems. Although teacher centers have a great many forms and functions, most leaders in the teacher-performance movement contend that the center, if particularly directed at dissemination of proven products and practices, provides one of the best possible mechanisms for rapid and effective introduction of competency-based programs into those local and state educational systems that desire them.

## FIELD-CENTERED EXAMPLES

The following outlines are examples of field-centered teacher education programs that are in use at various colleges and universities.

The outlines contain:

- a. The year the student normally enters the program;
- b. The professional education prerequisites;
- c. How much time is spent off-campus at the field-center;
- d. When the student may enter the program;
- e. How the cooperating teacher is selected;
- f. The number of credits earned in the field;
- g. The schedule of formal classwork or assignments; and
- h. Benefits and/or requirements of the cooperating teacher.

Western Washington State College

- a. The student is normally a senior.
- b. No professional education prerequisites.
- c. Two quarters in the field-center for both elementary and secondary.
- d. May enter the program in any quarter.
- e. Assigned to cooperating teacher after student has spent approximately two weeks visiting classrooms and make a teacher selection request.
- f. Student earns 32-36 hours of credit during the two quarters.

## Appendix B

- g. Students work on competencies through packages and seminar assignments throughout the total experience.
- h. Cooperating teacher is offered \$48 plus 3, three-hour credit seminars (free). At least six hours of seminar are required to remain a cooperating teacher. Last quarter in classroom the student-teacher is certified by the state and may take over the classroom completely leaving the teacher free to do other professional growth activities in consultation with the administrator.

University of Washington

- a. The student is a degree graduate.
- b. No professional education prerequisites.
- c. One public school year at the field center.
- d. Must enter in the beginning of the school year.
- e. Assigned to a teaching team by the district superintendent.
- f. Student earns 36 quarter hours of credit and is paid as teacher aid.
- g. Students attend a weekly seminar.
- h. The benefits to the cooperating teacher are not known.

Note: This fifth-year intern program was discontinued because of lack of government funds, however, the school district involved was so enthusiastic that they have proposed a mill levy in an attempt to reinstate the program at school district expense.

Central Washington State College

- a. Student should be in sophomore year or above.
- b. No professional education prerequisites.
- c. Two quarters in field, one quarter on campus after at least one quarter in field.

## Appendix B

- d. May enter program in any quarter.
- e. Assigned to cooperating teacher by field supervisor.
- f. Student earns 32 credits during two field quarters.
- g. Students attend weekly seminars and "extension" courses offered by local and college personnel.
- h. Cooperating teacher is paid \$48.

Eastern Washington State College

- a. Student is usually senior.
- b. Required to have education psychology and evaluation courses.
- c. Two quarters in field center.
- d. May enter in any quarter.
- e. Must interview public school teacher team to obtain placement.
- f. Student earns 30-32 credits during two quarters.
- g. Methods courses are taught in field-center concurrently during first quarter by college staff.
- h. Cooperating teacher paid regular state stipend of \$48.

Weber State College

- a. The student is normally a junior or senior.
- b. No professional education prerequisites.
- c. The time necessary to fulfill the performance requirements is spent in the field center\*. Normally two-three quarters.
- d. May start any quarter.
- e. Cooperating teachers assigned through the field center coordinating office.
- f. Secondary students receive 32-33 quarter credits.
- g. A series of competency-based packages (WILKETS) are used. No formal class meetings.
- h. Cooperating teachers receive a cash stipend.

\*The Weber State program is classified as field-centered even though it is campus located since a separate field center has been established separate from the regular Department of Education.

Brigham Young University

- a. The student is usually in the last semester of the junior year or first semester of the senior year.
- b. Campout\* and several field experiences such as visit to special education center.
- c. One semester normally spent in field center.
- d. May start either semester.

\*A three day camp trip--required attendance for all teacher trainees and staff members to be associated in the I-STEP program for--that semester. Designed as a concentrated stress and sensitivity experience.

- e. Assigned to cooperating teacher by the field center director.
- f. Receive 16-18 semester hours credit.
- g. Go through I-STEP syllabus and attend seminars in addition to classroom experience.
- h. Cooperating teachers receive cash stipend.

State University College at Brockport (New York).

A novel field-centered program involving three different levels of preparation is under development at S.U.C.B. The program involves one year of professional field experience.

Under the professional year program, fourteen college juniors and seniors, four liberal arts graduates (teaching interns), and an administrative intern were added to the staff. As with the other three schools in the program, a clinical professor was assigned to the school by the college to work full time with the principals in coordinating the program. In addition, a full-time helping teacher was assigned by the city school district to work with the teaching interns. Content professors provided related instruction to the trainees in the school buildings.

In the school, the participating juniors were viewed as assistant teachers by the regular staff. Assigned to teaching teams in the nongraded program, they worked with individuals, small groups, or an entire class of students, depending on the demands of the program, and were given added responsibilities as their skills increased. The clinical professor was present for continuous supervision, and content professors supplied related instruction on a scheduled basis. In this way, the previously discrete offerings of on-campus education courses and in-the-field practicum were blended into a continuous integrated series of experiences in the program. The juniors were in the school for the full year, thereby assuring total immersion into the life of the school rather than the eight-week toe dipping of the traditional teacher education programs. Continuous supervision was provided by the college instead of the sporadic visits of supervisors, who may spend more time in travel than in the classroom. Most juniors lived in the city and were able to take advantage of the opportunities afforded by the program to acquaint them with the total life of the community.

## Appendix B

In addition to the fourteen college juniors and seniors assigned to the school, four teaching interns were also assigned to full-time positions in regular classrooms in the school where vacancies existed. The teaching intern, a liberal arts graduate accepted for the program by both the college and the school district, is interviewed, screened, and placed in the school system in the same way as are beginning teachers. To supervise and support the four interns, the city school district supplied a full-time helping teacher, whose only responsibility was to work with them and their pupils. In effect, a team of five members worked with four groups of children. The helping teacher was an outstanding classroom teacher, who was paid his regular salary, plus a differential for increased responsibility. The interns, in addition to being graduate students at the college, were paid \$5,000 a year and received all benefits accorded the teaching staff.

During the summer preceding the school year, the interns completed twelve hours of professional work. During the school year, they received six hours' credit for their internship and six hours for related course work. They completed their requirements with a twelve-hour program the following summer, upon the successful completion of which they received permanent certification and a master's degree. Those remaining in Rochester were placed on the second step of the salary schedule. During the second year, the interns continued to have contact with both the college and the helping teacher, in addition to the normal supervision given a probationary teacher.

Under the Brockport-Rochester program, the salaries of the four interns and the helping teacher approximate the salaries of four beginning teachers. Since the team of five is responsible for the education of approximately one hundred children, extra cost to the school district is nearly eliminated. The only important costs are those borne by the college as part of its normal instructional budget in providing graduate education.

In all schools involved in the program, an administrative intern was assigned full time to assist the building principal, thereby making it possible for him to devote more time to the teacher education and instructional program of the school. This experience was complemented by weekly seminars with the administration professor.

Source: "Major Breakthrough in Teacher Education Achieved," Journal of Teacher Education, Fall 1971, pp. 294-76.

## EXAMPLES OF FIELD-ORIENTED PROGRAMS

The following outlines are examples of field-oriented teacher education programs in several colleges and universities. The outlines contain:

- a. The year the student normally enters the program;
- b. The professional education prerequisites;
- c. The amount of time spent in the program;
- d. When the student may enter the program;
- e. The manner in which the student is placed in the cooperating school;
- f. The number of credits earned in the field;
- g. The arrangement of the time schedule; and,
- h. Benefits and/or requirements of the cooperating teacher.

University of Washington

- a. The student is normally a senior.
- b. Educational Psychology and Evaluation courses are required.
- c. Elementary students spend three quarters in the field program.
  - (1) One quarter mornings in public school--afternoons on campus.
  - (2) One quarter mornings on campus--afternoons in public school.
  - (3) One quarter full time in public school.

Secondary students spend two quarters in the field program.

## Appendix C

- (1) One quarter mornings in public school--afternoons on campus.
  - (2) One quarter full time in public school.
- d. The student may enter the program in any quarter.
  - e. The student must be interviewed by a consortium committee which includes cooperating teachers, administrators, college supervision, and second quarter "interns". The applicant may or may not be accepted into the district. If not, he must find a district which will accept him.
  - f. Normally 16 credits are earned per quarter.
  - g. Formal classes are taken in the afternoon or morning on campus. Assignments may be made which require work in the cooperating classroom. Courses are only partly competency-based.
  - h. Cooperating teacher (called "field associate") receive no stipend. Must take seminar to be field associate but receives up to 9 (free) graduate credit. Last quarter in classroom a student-teacher is certified by state. This leaves teacher free to do professional activities in consultation with administrator.

Central Washington State College

- a. The student must be sophomore or above.
- b. No educational prerequisite but must have "September experience." This full time experience begins with teacher orientation week in August in the public school and continues until college starts the latter part of September.
- c. No time is spent totally off-campus since student teaching is also done in the local school under this program.

- d. Student must enter with September experience and continue through fall quarter. The second and third quarter may be any other quarter, even several years later. (The student may go to a field center for his student teaching quarter.)
- e. Assigned to cooperating teacher and school through student teaching office.
- f. Normally 16 hours per quarter plus 4 quarter hours for September experience.
- g. Following the September experience the student is assigned a 2-3 hour block each morning in the public school (one quarter for secondary; two quarters for elementary). Regular classes are attended in the afternoon. Will have assignments that require activities in the cooperating classroom.

#### Northwestern University

The students begin the work in the fall quarter of the freshman year with individual and group meetings with a tutorial professor. Tutorial professors are full-time faculty members in the School of Education, some holding joint appointments in academic departments and each working with a group of ten to twelve students organized as a tutorial. These professors, in consultation with the clinical professors and the classroom teachers in cooperating school systems, help students plan their academic programs as well as the professional work. The major task of the tutorial professor is to link the academic course work in liberal arts to the realities of the student's classroom teaching experiences. Implicit in this work are questions of curriculum, evaluation, teaching methods, research skills, and a thorough understanding of the means and end of education. Instead of assuming that all students have the same strengths, interests, and abilities to deal with such questions, the tutorial professor guides each student into individually tailored programs of preparation. Orientation and academic advisement constitute the major functions of the tutorial professor during that quarter. During the winter quarter, the professor meets with his students on a regular basis in tutorials scheduled for a two-hour block of time one day each week. This time may be used for discussions of readings, field trips, lectures, panel discussions, reports, or guest speakers. Although each tutorial covers

about the same materials, each group may vary in its approach and format; the responsibility for the day-to-day operation of the program rests primarily on the tutorial professors. As the students move into their field assignments during the winter and spring quarters, the tutorial professors work closely with the clinical professors. Clinical professors are master teachers from school systems who hold appointments to the faculties of both an elementary or high school and the university. They divide their time between classroom teaching and supervising the clinical work of the students enrolled in the program. The contractual relation is between the university and the local district. Since the university reimburses the employing district for part of the teacher's time, this arrangement does not disturb the teacher-school board contractual relation as to salary, tenure, and retirement benefits.

The faculty appointment is contingent upon the teacher's continued classroom teaching role in the district. The clinical professors are voting members of the faculty, serve on appropriate faculty committees, and have all the rights, privileges, and obligations of regular faculty appointments. Well grounded in their teaching fields, they have broad experience in preparing, presenting, and evaluating teaching materials and techniques. The clinical professors link the practice and theory of teaching to the academic preparation of the student. Continual classroom teaching maintains and validates their skills as practitioners.

During the sophomore year, students work with cooperating teachers in elementary or junior high school classrooms under the direction of a clinical professor who is teaching at the same level or in the same subject area. Beginning in the junior and continuing through the senior year, students preparing for junior high or secondary school teaching are assigned to a clinical professor in the appropriate teaching field; those preparing for teaching in grades K-6 continue work with a clinical professor in elementary teaching. Students in this program, then, have either a two- or three-year continuing relationship with an individual clinical professor.

At the beginning of both the junior and senior year, the student works full time with a classroom teacher in the grade level or subject field elected for subsequent teacher certification. In this period of two or three weeks, he becomes familiar with the planning and implementation of teaching units and is totally involved in the teacher's role. A student is assigned to the same school both years.

## Appendix C

The classrooms of the home base schools are laboratories for the students' research, observation, and practice in the art and science of teaching. The extent and scope of the practice-teaching assignment will vary among the students; in effect, however, practice teaching is done over a two-year period. The tutorial professor, clinical professor, and supervising classroom teacher jointly evaluate each student's growth and development as a teacher and tailor the tutorial and clinical work accordingly. The students work on independent studies in the senior tutorials and employ their maturing research skills in field assignments. The tutorial professors, in consultation with the clinical professors and the classroom teachers, evaluate the work of their senior students and recommend their certification as qualified teachers.

Source: "The Tutorial and Clinical Program for Teacher Education," Journal of Teacher Education, Fall, 1967, pp. 269-276).

University of Wisconsin - Madison

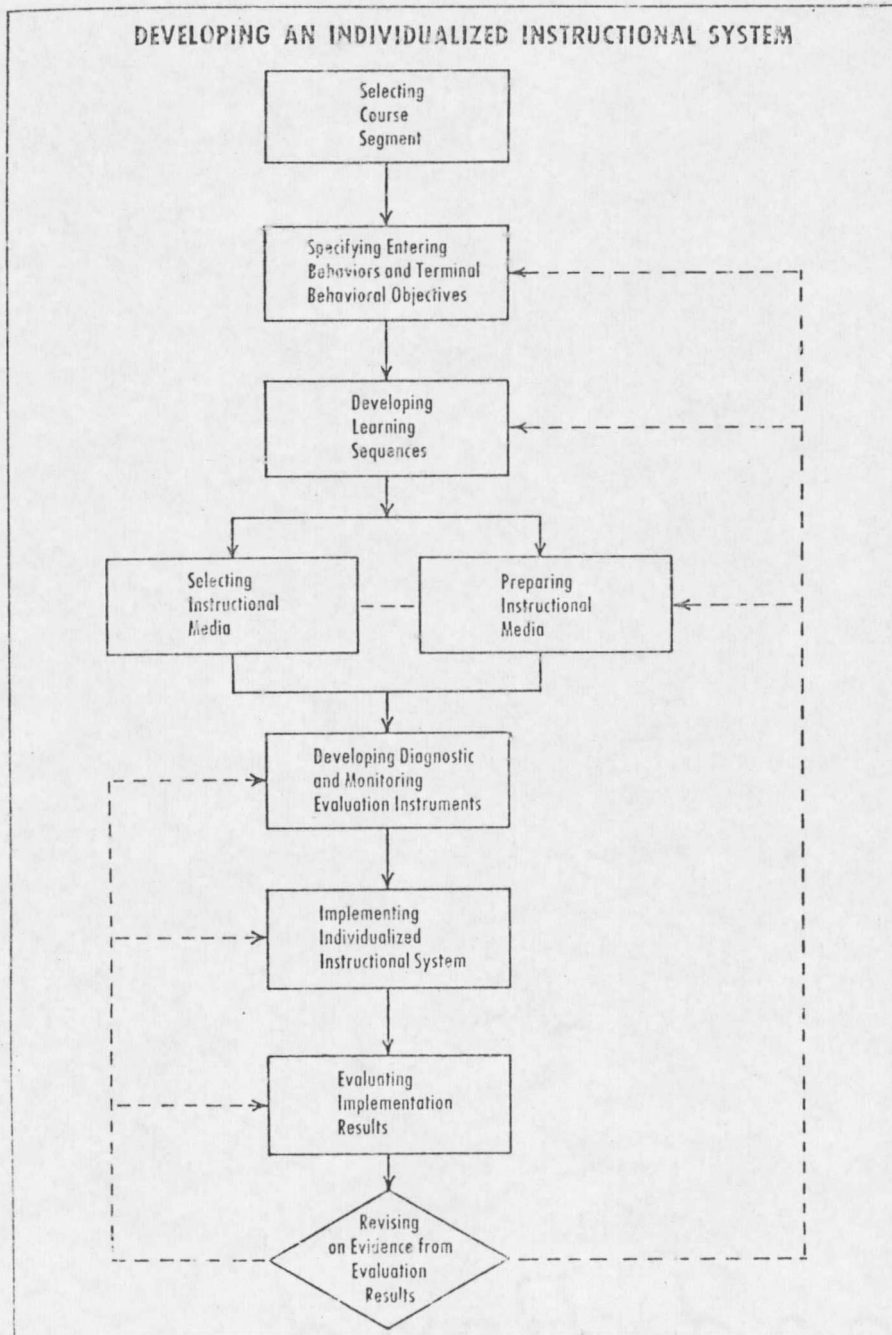
An unusual modular course approach has been under development at the University of Wisconsin - Madison. This program takes place during one professional semester during the late junior year or senior year. The fifteen week semester is divided into 3 five-week sections. In this modular approach, the typical one-semester educational course is compressed into three weeks of 3 hour morning instruction. An additional hour is spent in general seminar daily. Immediately following is a two-week full morning laboratory experience in the public school with 1-2 hours of weekly seminars on the subject topic held in the cooperating school building. Credits earned vary with the course content.

Source: "Relevance and Accountability in Teacher Education Program," Journal of Teacher Education, Winter 1972, pp. 446-452.

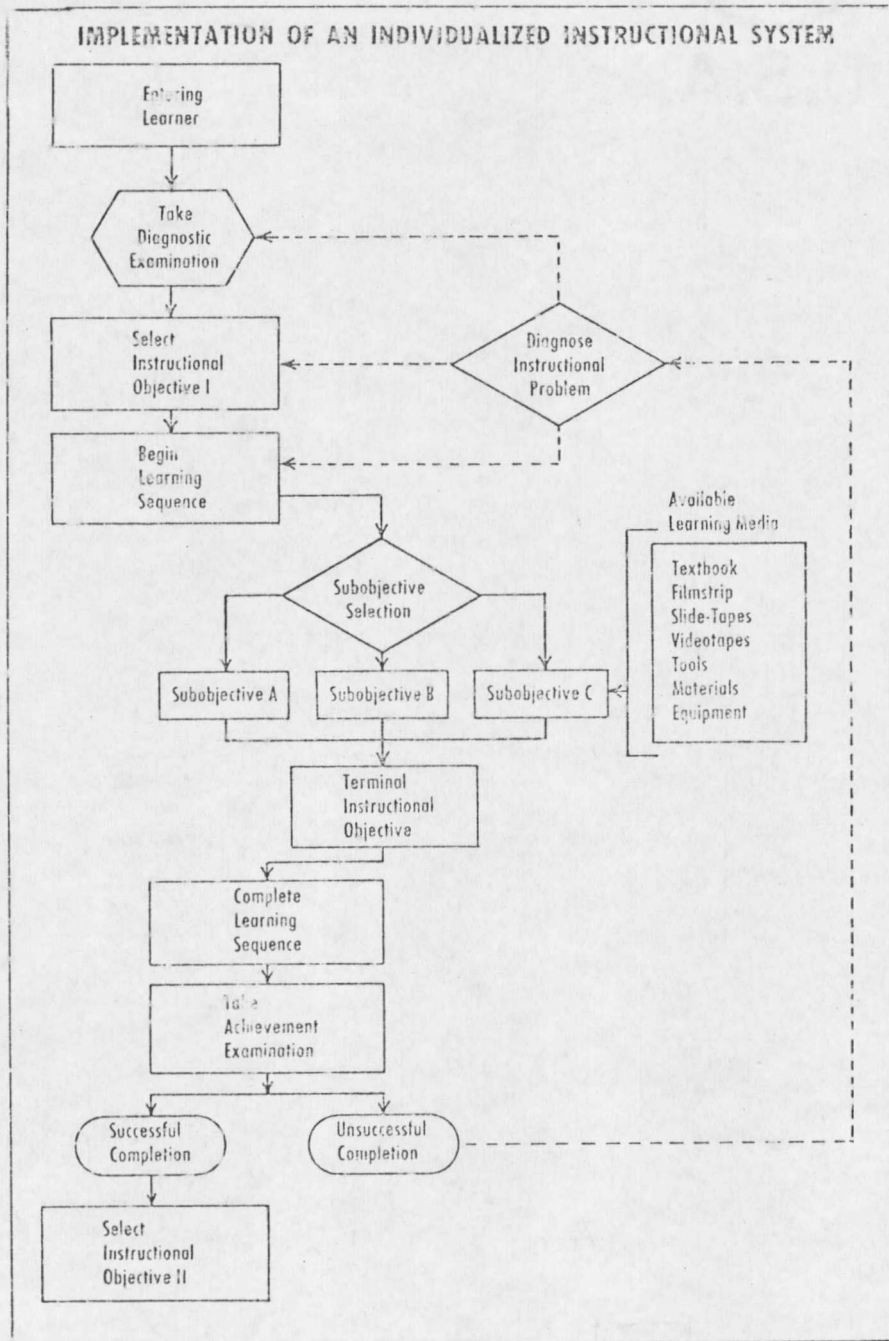
University of Southern California

The program attempts to change the student from an observing to a participator in educational courses such as education psychology and social foundations covering such areas as: teacher behavior, classroom socialization, child development, etc. The mechanics are as follows: The students are required to set aside the hours of 9-12 on Monday through Thursday morning for an entire semester. The first three weeks of the term are spent on the campus attending class. After this three week period the students leave the campus and spend the next three weeks teaching and tutoring in one of the two public school districts chosen for the program. The students then return to the campus for another three week block of campus classroom work, then it is back to the public schools again for three more weeks. The final two weeks are spent on campus. For as long as is necessary the field experiences of the students are reviewed in class after the students return from their stay in the public schools. Thus the week following both three week teaching and tutoring blocks is devoted primarily to open-ended discussion of the student's actual experiences. Roughly, the students spend seventy-two hours in the schools and ninety-six on campus. The students receive nine units of credit for their work and complete an important segment of their credential program.

Source: "An Integrated Approach to Foundation Courses in Teacher Education," Education, September/October, 1971, pp. 96-100.)



Source: Audio Visual Instruction, February 1972, p. 21.



Source: Audiovisual Instruction, February 1972, p. 22.

Source:

Educational Technology, November 1972, p. 16.

### *A Comparison of Competency-Based and Conventional Systems of Instruction*

#### COMPETENCY-BASED

1. Who sets the goals and objectives of instruction?
2. Who decides on the means and procedures of instruction?
3. What is learned?
4. Who decides on the evaluation procedures?
5. When does evaluation take place?
6. When does the student move on to the next set of learning goals and objectives?

Both the teacher and student are usually involved. When the teacher sets the goals and objectives the student is told what they are and often is allowed some choice of objective or goal.

Students often have a choice of alternative routes, experiences and materials to use in pursuing a given goal or objective. The student controls the amount of time spent on the goal or objective.

Students usually learn how to do something.

The teacher ensures that the evaluation procedures are consistent with the objectives. Often the student has a choice of ways to demonstrate that he can perform as expected.

When the student indicates he is ready.

When the student has mastered the last set of objectives and goals. The student continues working on a set of goals or objectives until mastery is achieved.

#### CONVENTIONAL

The teacher usually sets the goals and objectives. Often they are not clearly defined. Students are usually not told what they are. Students usually do not have a choice.

The teacher usually controls the situation and presents all students with the same materials and experiences for the same amount of time.

Students may learn about something.

The teacher usually gives a test of his or her own design. Students often don't know what is expected of them. Testing procedures tend to be paper-and-pencil tests.

When the teacher is through teaching a unit of instruction.

When the last unit has been taught and the evaluation of students is completed. Students may have "failed" or "passed" the last unit at various levels of proficiency. Nevertheless, all students move on to new content.

## LOOKING AT CHANGE IN TEACHER EDUCATION

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Sometimes it becomes easier to describe change using a sociological device called "ideal typing." In this technique, change is viewed as dynamic, the current scene being difficult to describe accurately at any particular instant in time. It is useful, therefore, to describe two sets of circumstances, as though they hypothetically existed (the elements of each set "ideally" fitting together), with the understanding that the current scene is somewhere between these two sets of "ideal types." In the following outline these two sets are labeled "From" and "To."

From:	To:
Preparation conceived as a college responsibility	Preparation accepted as a mutual responsibility of colleges, school organizations, and professional associations
Program decisions made by a college faculty	Program decisions made by all who are affected
The locus of preparation viewed as being on the college campus	The locus of preparation viewed as being in the schools and their communities
Preparation programs seen as a set of common experiences for all students	Programs seen as a set of common objectives with various and unique experiences
Preparation viewed as a function of the early part of one's career	Preparation seen as continuing throughout one's career
Professional career development seen as single-purposed and orderly	Career development seen as multi-purposed and emerging
Competence seen as a set of credentials	Competence seen as the ability to perform
Communication about preparation in a language of courses and credits	Communication in a language of objectives and subsequent performance
Preparation viewed as impersonal and a responsibility of institutions	Preparation viewed as personal and as a responsibility of individuals and colleagues
Preparation experiences seen as orderly, objective, and logical	Preparation experiences seen as capable of being ordered, subjective as well as objective, psychological as well as rational
Feedback on preparation experiences given at the end of the semester in the form of grades	Feedback given after each experience in a language of objectives and performance
Preparation designed for working in line and staff organizational arrangements	Preparation designed for working in collegial or grid organizational arrangements
The teacher seen as accountable to his principal	The teacher seen as accountable to and for his students (clients)
The role of the teacher viewed as passive and subordinate	The role of the teacher viewed as active and coordinate
Voluntary professional associations viewed as being interested only in welfare and fringe benefits	Professional associations viewed as being interested in welfare and in the quality of professional practice
Preparation viewed as screening—ways to exclude people from becoming	Preparation viewed as helping—ways to include people, to help them become

### Developing Contract Activity Packages: How to Begin

The following procedures detail the entire sequential process involved in contract development. The first time a teacher develops a curriculum or independent contract, the process may seem long or tedious. For this reason, a small group of teachers who work with students on a similar learning level should cooperate in constructing their initial contracts. Subsequent contracts require fewer hours of effort, and soon the teacher will find that contract development is no more difficult than lesson plan writing. Contracts are far more effective, however, and will reward both teacher and student with increased productivity of the teaching-learning process. Moreover, teachers and entire schools will find a massive teaching resource file of contracts available for individualizing instruction at all levels soon after the process begins.

#### Basic Steps in Contract Development

1. Analyze the contract topic to be developed.
2. Divide the topic into major subcategories and identify the important concepts and facts that should be learned.
3. Using the subcategories as a base, construct instructional objectives for the concepts and facts that should be learned.
4. Rewrite the instructional objectives in behavioral terms so that the student will know how he will be tested on each instructional objective.
5. Construct test items for each of the instructional objectives developed.
6. Identify which instructional objectives must be mastered by all students, should be mastered if possible, would be an asset to the students and would be considered ancillary or enrichment learnings. Combine all of the behavioral objectives into one list, placing the "most" important objectives first, those which "should" be mastered second and so on, placing the enrichment concepts last.
7. Determine where the cutting-off place will be for the slower students, the "average" and the more advanced youngster.
8. Locate resource materials through which the behavioral objectives of the contract may be learned. Itemize the accumulated resources into a list of "contract learning alternatives."
9. Develop a list of "contract activity alternatives" from which pupils may select a series of projects or assignments to use and apply the information they have learned.
10. Develop a related list of "contract reporting alternatives" through which pupils may share and reinforce their acquired learnings.

11. Design a pretest using the test items previously prepared.
12. Establish and explain "standards of performance" to the students.
13. Give the pretest to students. Record objectives needed by each student.
14. Have each student keep his own record of objectives.
15. Assign students to small-group or individual instruction based on pretest results.
16. A self-test may be used to further refine groupings. The self-test may be used for regrouping. It may provide evaluation for a student's personal progress; it may be used as a measure of pupil performance.
17. Instruct individuals and small groups of pupils in their areas of weakness.
18. Teacher's planning begins again with Step 1 for the new unit of work to follow.
19. Give the pretest for the next unit of instruction.
20. Conduct a posttest on the unit being taught. (The posttest can be exactly the same as the pretest.)
21. Record objectives not yet mastered by individual students.
22. Make provisions for re-exposure to media resource alternatives or reteaching these objectives immediately.
23. Evaluate the number of objectives mastered. Determine:
  - (a) whether the student is capable of learning through contracts;
  - (b) whether he should be assigned the next one and (c) the appropriate length of the next contract to be assigned to this student.

Source: Dunn and Dunn, 1972:129-130.

Educational Psychology 000 Grade ContractGrade A

1. Score at least 85% on the midterm and final exams.
2. Complete an "A" level case study report.
3. Do a before and after sociometric analysis of your case study child's class and report the results.
4. Do the student problem survey with your case study child's teacher.
5. Attend classes and quiz sections a minimum of twenty-three times (roll taken).
6. Participate in classes and quiz sections.
7. Conduct a home visit and an outside observation experience with your child.
8. Turn in daily observation notes at the end of the quarter.
9. Observe your child at least seven times during the quarter.

Grade B

1. Score at least 75% on the midterm and final exams.
2. Complete a "B" level case study report.
3. Do a before and after sociometric analysis of your case study child's class and report the results.
4. Do the student problem survey with your case study child's teacher.
5. Attend class and quiz sections a minimum of twenty-three times (roll taken).
6. Participate in classes and quiz sections.
7. Conduct a home visit and an outside observation experience with your child.
8. Turn in daily observation notes at the end of the quarter.
9. Observe your child at least seven times during the quarter.

Grade C

1. Score at least 65% on the midterm and final exams.
2. Complete a "C" level case study report.
3. Do a before and after sociometric analysis of your case study child's class and report the results.
4. Do the student problem survey with your case study child's teacher.
5. Attend classes and quiz sections a minimum of twenty-three times (roll taken).
6. Participate in classes and quiz sections.
7. Conduct either a home visit or an outside observation experience with your child.

8. Turn in daily observation notes at the end of the quarter.
9. Observe case study child at least six times during quarter.

Grade D

1. Score at least 55% on the midterm and final exams.
2. Observe case study child at least six times during the quarter.
3. Turn in daily observation notes at end of the quarter.
4. Attend classes and quiz sections a minimum of twenty-three times (roll taken).
5. Conduct either a home visit or an outside observation experience with your child.

Grade F

1. Nothing for nothing.

\*An Independent Project of your design may be substituted with instructor approval for any or all of the above requirements.

Grade Contract

I have read the attached description of the requirements for the grades A, B, C, D, and F and on the basis of these requirements I, \_\_\_\_\_ wish to contract for grade of \_\_\_\_\_. If I fail to fulfill the requirements for my chosen grade, I will accept the grade for which I have qualified. I understand that I have the option to renegotiate this contract during the week following midterm examinations.

Date \_\_\_\_\_ Student \_\_\_\_\_  
Renegotiation \_\_\_\_\_ Instructor \_\_\_\_\_

Individualized Contract Terms

- 1.
- 2.
- 3.
- 4.

INDEPENDENT STUDY

Course number \_\_\_\_\_ Term \_\_\_\_\_ Student \_\_\_\_\_  
Independent study can be done in lieu of any class requirement, such as a term paper, assigned project, or examination. The scope and depth of the study depends upon the requirements it is replacing. The process of proposing independent study can be accomplished by filling out the following outline.

1. What do you want to find out?
2. How are you going to do it (resources and procedures)?

3. How do you plan to evaluate and report your learning?
4. What grade requirement(s) does this study replace?

USE THE BACK OF THIS SHEET IF ADDITIONAL  
SPACE IS NEEDED

I certify that this study is a new learning experience for me. \_\_\_\_\_

\_\_\_\_\_

Deadline for submission of proposal \_\_\_\_\_

Deadline for resubmission \_\_\_\_\_

Instructor's approval \_\_\_\_\_

Source: Poppen and Thompson (1971:423).

Name \_\_\_\_\_ Date \_\_\_\_\_

Section \_\_\_\_\_ Quarter \_\_\_\_\_

Education 371 Course Contract

I hereby submit my intention to achieve excellence\* at the following level in this course. \_\_\_\_\_ Level I-C Activities required for acceptable completion of this level are: (1) regular attendance and active class participation (four or more unexcused absences constitutes failing of this section), (2) preparation of an outside reading, and the leadership of the class in a five- to ten-minute discussion of the article, (3) an observation and written report of an adolescent which achieves C level or better quality, (4) the planning, participation and evaluation of a group demonstration at C level or better quality, (5) one written reaction paper on a topic of interest at C level or better, (6) the two mid-term exams at C average level or better and (7) no work in any category below a grade of D.

\* General conditions for excellent work in this course are as follows:

1. Written work must be neat, well-organized, coherent, error free, and presented on time. Hopefully, too, it will be interesting.
2. Participation, while taking many forms, must show thought and preparation. Quality commentary as judged by students and instructor is more important than quantity.
3. Specific guidelines for each assignment are given in your syllabus.

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I understand that the decision as to the quality of my written and oral work rests with my instructor except as indicated in the group demonstration where my class will also participate in the evaluation. Further, that merely completing all of the requirements of this level does not guarantee that I will achieve the grade indicated in my choice unless I achieve excellence in these tasks. I also understand that I may alter my contract upward until after the first mid-term.

Signed \_\_\_\_\_

Source: Dash, 1970:232.

## MODULE EVALUATION QUESTIONNAIRE\*

This questionnaire is designed to evaluate the weaknesses and strengths of modules. You are being asked to respond as honestly as possible to the statements. Your responses will be used to develop a better module.

Please do not make any marks on the provided questionnaire. Make all marks on the two provided answer sheets. Please use a pencil when responding on the answer sheets.

On Answer Sheet I, fill in the provided spaces. Include any comments you may want to make concerning the module. "Blacken-in" under the proper letter on the Optical Scanning Score Sheet the response that best reflects your feelings. Use spaces 1 to 30 for this purpose.

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Source: \*Developed by Andrew S. Jackson, Teacher Center, University of Houston, Houston, Texas.

ANSWER SHEET I

Title of Module \_\_\_\_\_

Person in charge of Module \_\_\_\_\_ Date \_\_\_\_\_

-----  
ADDITIONAL REMARKS

I. GENERAL INFORMATION:

1. What is your sex?
  - A. Female
  - B. Male
  
2. What is the level you are preparing to teach at this time?
  - A. Elementary
  - B. Secondary
  - C. All Level
  - D. I am not sure at this time
  - E. Other, please name in provided space labeled "Additional Remarks."
  
3. Without considering the hours to complete the module, over what period of time did you take to complete the module? Consider from the time you initially started to the time when you completed the postassessment.
  - A. One day or less
  - B. More than one day, but less than two days
  - C. More than two days, but less than three days
  - D. More than three days, but less than four days
  - E. Four days or more
  
4. In all, approximately how many hours did it take you to successfully complete the module?
  - A. Less than one hour
  - B. More than one hour, but less than three hours
  - C. More than three hours, but less than five hours
  - D. More than five hours, but less than seven hours
  - E. More than seven hours

II. PROSPECTUS:

The prospectus is designed to give the learner a general overview of the module. The prospectus consists of three basic parts: 1) rationale, 2) terminal objectives, and 3) prerequisites.



12. Based on the module's general objectives, I had a clear understanding of the steps necessary to complete the module.

Strongly	<u>  A  </u>	<u>  B  </u>	<u>  C  </u>	<u>  D  </u>	<u>  E  </u>	Strongly
Agree			Not Sure			Disagree

13. I had a clear understanding of what was expected of me.

Strongly	<u>  A  </u>	<u>  B  </u>	<u>  C  </u>	<u>  D  </u>	<u>  E  </u>	Strongly
Agree			Not Sure			Disagree

14. When I needed additional help, I had difficulty finding the people on the instructional staff who could help me.

Strongly	<u>  A  </u>	<u>  B  </u>	<u>  C  </u>	<u>  D  </u>	<u>  E  </u>	Strongly
Agree			Not Sure			Disagree

15. The specific instructions concerning the location of instructional media (film strips, books, articles, etc.) were vague or inaccurate.

Strongly	<u>  A  </u>	<u>  B  </u>	<u>  C  </u>	<u>  D  </u>	<u>  E  </u>	Strongly
Agree			Not Sure			Disagree

16. Based on the preassessment activity, I decided to attempt the postassessment activity.

A. Yes

B. No

### III. PREASSESSMENT:

The preassessment is designed to determine your areas of weakness and strength in relation to the terminal objectives.

17. The preassessment activity aided me understanding where I needed to focus my efforts.

Strongly	<u>  A  </u>	<u>  B  </u>	<u>  C  </u>	<u>  D  </u>	<u>  E  </u>	Strongly
Agree			Not Sure			Disagree





30. In terms of other courses or module, I would rate this module as:
- A. One of the best
  - B. Better than average
  - C. Average
  - D. Below average
  - E. One of the worst



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D378  
 Si75 Sipkens, John Folkert  
 cop.2 Competency-based teacher  
 education and its charac-  
 teristics

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