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ABSTRACT

There are eight areas which require attention in planning for state implementation of performance-based teacher education (PBTE): (a) initiation action, (b) goal statement formulation, (c) state role identification, (d) certification pattern design, (e) delivery system structure, (f) support mechanism organization, (g) regulation changes specification, and (h) management plan development (including evaluation). The official generating force for the development of a plan for PBTE can come from legislatures, chief state school officers, or state education agencies. Legislated PBTE is least desirable because of the inflexibility of law. Goal statements should be conceptually broad while providing a rationale for PBTE through a statement of expected outcomes. The decision regarding the amount of control to be exercised by the state is critical, because it will determine the amount and type of experimentation teacher preparation institutions will engage in. There are several models of the state function ranging from very tight control to very flexible guidance. Certification patterns are critical because of their implications for subsequent steps in the planning process. PBTE delivery systems must be devised for both pre- and in-service teacher education. Support mechanisms should be coordinated by a Competency Management Center. The management plan for PBTE implementation should be comprehensive, specific, and long-range. (HMD)

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PLANNING FOR COMPETENCY-BASED TEACHER EDUCATION AT THE STATE LEVEL

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CONTENTS

Introduction 1

Initiation Action 3

Goal Statement 3

State Role 4

Issues 4
Models 11

Certification Pattern Design 25

Delivery System Structure 27

Preservice. 27
Inservice 30

Support Mechanisms 32

Regulation Change Specification 43

Management Plan Development 43

References 45

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Introduction

The development of a state approach to competency-based teacher education (CBTE) requires careful planning and appropriate resource allocations in order to successfully implement the plan. Some states have moved too quickly without a planned and thorough study of the issues and potential problems and hence were unable to either avoid or deal with these effectively. This has created a great deal of opposition and may lead to the demise of these state efforts before full implementation.

Competency-based teacher education is still relatively new and untested. Any state plan for the development of CBTE should, therefore, provide for successive steps which allow appropriate evaluation prior to implementation of subsequent activities. This would not only provide more data to make informed decisions concerning alternatives, but also tends to alleviate undue criticism thus enhancing the successful implementation of an entire plan. Strong criticism of development procedures could prevent implementation, and it is not until a plan is operational that it will have an opportunity to prove itself or display its inappropriateness.

The purpose of a CBTE plan is to investigate the hypothesis that the identification and assessment of competencies provides an improved system for teacher preparation. The approach appears promising at this time, promising enough to initiate programs, but more information is needed before an evaluation can be made. (For CBTE definitions see "Competency-Based Teacher Education and Certification Definitions: Synthesis and Schema," Robert A. Roth, Michigan Department of Education).

The states currently involved in CBTE have taken a variety of approaches that represent a wide range of philosophies. CBTE can be the basis for the reorganization of the entire teacher education-certification process.

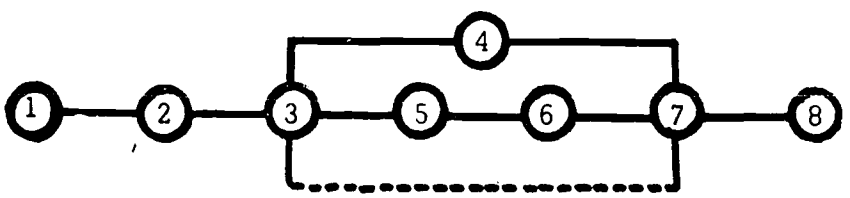
In view of this potential impact, it is necessary in the planning process to begin by examining the approach from a broad perspective. On the other hand, due to the complexity of issues and the need for detailed planning, specific aspects also require study.

A review of the literature and various state approaches revealed eight basic areas which require attention in planning for state implementation of CBTE. The eight areas are as follows:

1. initiation action
2. goal statement formulation
3. state role (centralization-decentralization) identification
4. certification pattern design
5. delivery system structure
6. support mechanism organization
7. regulation changes specification
8. management plan development including evaluation

Some of these areas may be addressed at various points in the sequence, and new directions may be pursued after additional evidence accumulates. Decision-making on some issues may be delayed until further work has been completed, and temporary steps may be taken to facilitate further activity in an attempt to gain a better view of the entire system. The temporary decisions are then either maintained or altered to better suit the needs of the population which is to benefit. Some states may need to make regulation changes in order to proceed. The above eight steps may be rearranged to fit a given situation.

The most likely sequence of these major events is depicted by the following schematic:



(figure 1)

Note that the certification pattern (4) may be designed anytime after a decision on the basic approach (3) has been made but prior to proposals for regulation changes (7). In addition, the basic approach (3) may be altered after information is available from operation of delivery systems and support mechanisms.

This raises an interesting point about the eight areas. They may either be considered as steps in the design of a plan, thereby representing verbal commitments, or as operating stages in the development of a system. It is in the latter case where information is generated from the delivery system and support mechanism to influence changes in the basic approach or state role.

As each of these areas is described, much of the above will acquire more meaning, however, an example at this point may provide some clarification. A state may select a centralized role with the proposed adoption of specific teacher competencies required of all teacher education institutions, together with periodic state assessment of a sample of teacher graduates, independent of the preparing institution. Proposed changes in state regulations would be formulated consistent with this approach. After implementing competency-based programs, however, it may be determined that adoption of generic competencies without independent state assessment would be a more appropriate scheme. The basic approach, in effect, has been altered.

Initiation Action

To begin moving toward CBTE at the state level some initiation action must be taken by a state agency. This may be in terms of a policy adopted by the State Board of Education or the appropriation of funds for program development. Some may go as far as mandating CBTE programs as the initiating action!

Whatever the particular move there must be some official generating force to begin the development of a plan for study or implementation of the competency concept. The source of this action has come from a variety of areas, including legislatures, chief state school officers, and state education agencies. It has been pointed out that legislative action has proved to be the least desirable because generally the specificity of the law results in a lack of options and generates considerable resistance.

Goal Statement

State education personnel with considerable experience in the implementation of CBTE have stated that perhaps the most significant activity a state must undertake is the creation of a mission statement, the goal of the

program. The goal statement is conceptually broad, but it provides a reason for developing or exploring the CBTE approach by stating the expected outcomes of the program.

The goal statement also establishes the parameters of the program. It specifies that teacher education is the concern, and perhaps even whether or not liberal arts, general education, or only professional education components are to be dealt with. It clarifies whether teacher education and/or teacher certification are involved, and corresponding to this, if the focus will be preservice and/or inservice efforts. Some states, for example, are developing CBTE at both the preservice and inservice levels, the goal statement must provide for this. It also determines whether teachers, administrators, and pupil services personnel will all be included or just some of these. The goal statement must be broad enough to encompass the entire gamut of proposed outcomes, yet specific enough to define the necessary objectives and limit efforts to only those activities which are pertinent.

Once a goal statement has been developed, it provides for the formulation of more narrowly defined objectives. The objectives are thus more likely to be measurable, provided they are written specifically enough and measures of the expected outcomes are available. The objectives, in turn, provide the basis for the development of the management plan.

State Role

Issues

The role of the state in the implementation of CBTE has been one of the most widely discussed areas and establishes the framework for the entire process. It deals with the degree of state control in terms of centralization of the decision-making process and options provided by the system.

Previously it was mentioned that the competency approach has been used as a vehicle for the reform of the entire teacher education-certification process. The potential impact is therefore significant, and it is thus necessary to view the planning process from a broad perspective. It is at this point in the process where this point becomes strikingly clear.

The distinctions among the various competency-based approaches or models are basically in terms of the issues which underlie them, and to a much lesser extent the manner in which they are implemented. The

implementation merely reflects the position taken on the issues, with modifications made in terms of practical concerns. Prior to selecting and elaborating on the models, therefore, it is necessary to identify the essential issues.

Education vs. certification

Initially it may be of value to recognize the traditional distinction between the process of teacher education and that of certification. Basically, teacher education serves a preparatory function, whereas certification selects those who are eligible for employment and provides them with a license. Certification traditionally has been a screening device through establishment of minimum standards, and it has been assumed that the state is the best agency to carry out this function.

It is interesting to note that there has been a great deal more resistance to competency-based certification than to competency-based teacher education. At a conference of the Regional Interstate Project held in Denver in the summer of 1972, the consensus appeared to support this distinction. Sandra Feldman, Assistant to the President of the New York City UFT, stated, "We look favorably on Performance-Based Teacher Education. We oppose, however, a change-over to Performance-Based Certification at this time."[1] David Darland, representing the National Educational Education Association, commented, "to establish one prototype of teacher education as the sole route to legal licensure is pure folly, . . . To base advanced credentialling or renewing certifications on such a singular notion is ever more upsetting." But, "Already some developmental approaches to performance-based teacher education appear promising, if not highly successful."[2]

The difference between certification and teacher education, however, varies significantly depending upon the particular certification model. Since there are many ways in which competency-based certification can be structured, criticisms should be centered around how the issues pertain to a given structure or definition of competency-based certification. For example, if one views certification (particularly the performance type) to include a state testing procedure, then the distinction is clear and the meaning of the skepticism is more apparent. In this paradigm the preparing institutions are responsible for developing competencies in their teacher candidates and the state certifies a candidate's competency by testing him before issuing a license. Many difficulties associated with such a licensing procedure have been pointed out. One can argue, for example, that no empirical base exists on which to construct a valid testing technique,

particularly in view of varied teaching contexts. The problem is not the same with competency-based teacher education because there is a diversity of programs and flexibility to constantly develop and change the performance standards. Competency-based certification, it is argued, mandates only one way of teaching, seems more of a finality, and is less responsive to change.

In the approved program approach the distinction between certification and teacher education becomes less clear. The approved program approach is a system in which the state education agency approves teacher education programs on the basis of established criteria. The graduates of these programs are then automatically issued teaching certificates by the state. When utilizing an approved program approach to certification in conjunction with performance-based criteria, as is frequently the case, the distinction may become even more nebulous. Supporting competency-based teacher education then becomes a tenuous position.

It seems that the approved program approach to competency-based certification would be less susceptible to criticism than the state examination approach. In addition, it is the more common certification system currently in use and it provides a certain degree of freedom to explore new directions such as the competency-based model. In view of these factors, the proposed models for competency-based education-certification to follow will mostly be within the context of the approved program approach.

Centralization-decentralization

In selecting a particular model, a number of important issues need to be considered. An essential question is what the role of the state should be in the certification process. There are at least two opposing viewpoints concerning the state's function. On the one hand there are those who see the state as an administrative and regulatory body. "The belief is that the state must improve its guardianship of the public interest by setting ever higher standards and developing more efficient systems of management."[3]

This view of the state's role in certification is the predominant one currently in practice. It is a centralized approach with uniformity and standardization being the emphasis. Even an approved program approach could fit into this scheme if regulations concerning program content are specified. A competency-based certification system structured on the above tenets would specify teacher competencies and performance criteria for certification at the state level.

The opposing extreme viewpoint on certification emphasizes a decentralized system with more local control and a broader base for decision making and social change. In this strategy, "the state must promote change rather than mandate it and accept diversity as more responsive to the state's needs than mandated single standards."[4]

The competency approach could easily fit into this philosophy also be allowing teacher education programs or other professional agencies to develop their own particular sets of competencies. In fact, Ted Andrews, with the New York State Department of Education, has pointed out that in some places the competency movement "has been adopted as an attempt to reform the educational system by changing the focus of authority and thereby the way in which decisions are made."[5] One result of this is that a variety of standards appear, replacing the single set of state standards.

The implementation of a specific viewpoint of a state's role results in a number of ramifications inherent in the particular position. These consequences are, in effect, the underlying issues which impinge upon the decision to select a particular state role and therefore should be carefully considered.

In the centralized view of the state's role a set of competencies and performance criteria would be established at the state level. These standards may be developed by a state agency or through state-wide inputs, the merits of which will be discussed at a later point. This uniform set of state-wide standards can be utilized in an approved program approach.

Curricular freedom

The approved program approach has been evaluated by some educators as being restrictive. It has been pointed out by Lierheimer, former director of teacher education and certification in New York State, that the college's approved program must follow exactly the courses prescribed for state certification. Such a curricular requirement does not provide the freedom which colleges must have if they are also to be held responsible for the qualifications of the teachers they prepare."[6] This statement is made particularly pertinent to a competency-based program by substituting "performance criteria" for "courses" in his comment. Thus, lack of curricular freedom may result from a centralized state role with statewide competencies and performance criteria.

Curricular freedom extends beyond the right to decide on a particular set of courses. The freedom to experiment with innovative curricula also appears to be precluded by a rigid set of state competencies and performance criteria. The right of colleges to experiment becomes an important issue in the selection of a competency-based certification model.

Flexibility and creativity

The project, Improving State Leadership in Education, reported that critics of certification structures in general complain that "The ridigity of state requirements discourages flexibility and creativity in teacher preparation programs."[7] Further, "Ideally, the approved program approach would allow institutions to experiment and develop creative programs of teacher preparation and encourage innovation in teacher education within the framework of generally agreed upon goals."[8] An important part of this last statement is the word "generally." Generally agreed upon goals may still provide the necessary freedom that Lierheimer is concerned about.

It would seem that the centralized view of the state's role with a standard set of specific competencies and performance criteria would be contrary to the intent of the approved program approach. Yet, competency-based certification appears to depend "almost entirely upon an effective system for program approval."[9] An approved program approach without highly specific competencies is an alternative.

Curricular freedom, the right to experiment, flexibility, innovation and creativity in programs are issues related to the state's role that directly affect the teacher preparation institution. Other issues relate to the individual and the restrictions imposed by a specific set of competencies and performance criteria existing as state standards for certification.

Individual freedom

Fred McDonald, with Educational Testing Service, relates that "The specifics of teaching competency will differ markedly depending on how we decide about the freedom each person will be given to choose the goals and means for his personal development and his life style."[10] At one extreme the teacher's services are sought, requiring social skills, but at the other end he is an expert strategist requiring technical skills. A specific set of state standards may only permit one of these philosophies to prevail, as options may be impractical or even contradictory. Yet, one may argue that without state control contradictory standards could exist.

McDonald also raises a related issue. "Should we not consider whether a teacher has the freedom to define the nature of his service to students? Does he have the freedom to decide what will be required of him?"[11] Decisions on these questions clearly have implications for standardization of competencies and the role of the state.

An overriding concern with the competency approach is that students will be boxed-in, forced to conform to a particular mold. It is argued by some that certification must provide for flexibility in personality, method and philosophy (open classrooms, traditional, etc.). A specific set of standards at the state level does not provide for this flexibility. The decentralized state role does, as it allows diversity in programs, competencies, and performance criteria.

Varied program philosophies

The AACTE, in Evaluative Criteria for Accrediting Teacher Education, A Source Book on Selected Issues, asserts that "there are and should continue to be several philosophies of teacher education."[12] Will a centralized state role and specified competencies preclude varied philosophies of teacher education? Each state must examine its particular structure to determine whether or not this would occur.

Competencies

Several other questions must be considered in relation to the development of a set of competencies at the state level. Can such competencies readily be changed? Can a standard set of competencies by developed to fit all teaching situations, or must a number of sets of criteria be designed? In relation to the affective domain, some educators believe that "the competencies that are easier to describe and to evaluate are likely to dominate. The skills of teaching and the behaviors of a teacher which are difficult to learn and to evaluate often focus on the human aspects of teacher-pupil contacts."[13] Can these competencies be established in the affective domain on a state-wide basis, or are they situation specific and thus call for multiple standards developed at local levels? Will decentralization make the problem any easier to solve?

The arguments suggesting a need for an empirical base for competency-based certification but not teacher education were presented earlier. These arguments pertain to a certification system with a uniform set of standards at the state level, the centralized view of the state's role.

At a recent meeting of the American Federation of Teachers, the following statement was issued in a report.

> If state agencies begin to require the mastery of specific competencies as a prerequisite for certification, two dangers would exist. The first would be that pointed out earlier: non-validated knowledge and skill competencies as well as personal characteristics unrelated to true teaching effectiveness may be required, leading to certification standards perhaps even more non-relevant than those now existing. Second, pressure groups may be able to legislate requirements that attempt to define teachers and teacher behaviors into unacceptable patterns. A candidate could be required to fit the mold or not be certified.[14]

Perhaps general guidelines or a variety of standards developed by local groups or institutions would be less susceptible to these dangers. On the other hand, these groups may be just as likely to commit these errors.

In reference to establishing a minimum set of competencies at the state level, Andrews surmises that

> Evaluating the competencies demands a frame of reference, at its heart a set of values: I worry about states establishing value systems, thus the frame of reference must be diversified and most likely localized . . . . . .
> . . . . . .
> Since we have a diverse population with varied philosophies, I believe a state should promote a certification system that expects diversity and challenges all to meet the highest level of accomplishment.[15]

Those who favor a uniform set of quality standards throughout the state, however, would seek the more centralized decision making state role. Inequities among programs would thus be eliminated and employers would be assured that all certified personnel possess at least a minimum set of competencies.

In analyzing the models in terms of the issues, an important question should always remain in sight. In most cases it will not be a matter of whether or not a condition exists, but to what extent it exists. For example, to state that curricular freedom does or does not exist is merely an opinion that does not focus on the issue. The real issue is whether or not there is sufficient curricular freedom to satisfy those involved. Carrying the example to the other extreme, there may be circumstances that permit cirricular freedom (or other conditions) to exist to such an extent that it destroys another essential or desirable element of a certification structure. The models must be scrutinized to determined if conditions are sufficiently provided for, but not overindulged.

Models

A wide range of approaches to the state's role are available to a given state for implementation of CBTE, and the entire spectrum can best be analyzed through a diagram of a continuum of these approaches (figure 2).* At one end we have a very open system with considerable flexibility, whereas at the other end we have a highly structured and centralized approach. Easily identifiable state positions have been labeled on the diagram and will be described in the following pages, but it is important to remember that a continuum implies varying degrees of program types in-between those identified.

Informational model

At one extreme end, the decentralized state role, we find an "informational" model as an approach to CBTE. This system values local decision-making and hence local control with the state playing a more decentralized role. The central theme in this approach is that the state's role is not to make judgments but to maintain records and facilitate decision making on the part of others in the system.

Decentralization is emphasized in this approach with local school teams conducting the evaluation of the competence of potential teachers. The function of the state is to monitor the local evaluation but not impose state standards. Although evaluation systems would be approved by the state there would be no uniform techniques for verification of classroom performance. The state office would maintain a data bank on all teaching personnel in the state.

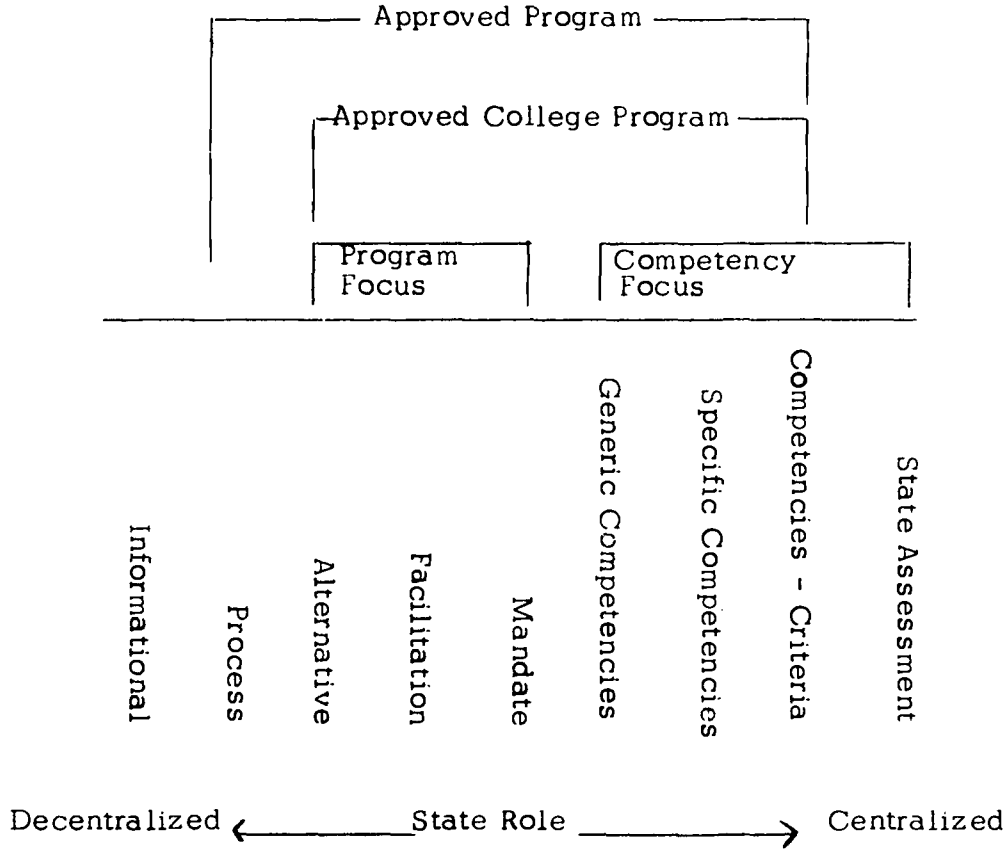
The local district is provided with the information, and it is at this level where decisions are made as to whether or not the individual's competency fits the particular situation. The underlying assumption is that values and competencies are situation specific and hence require local evaluation. Currently there are no states utilizing this informational model.

Process model

An open-ended approach which requires some type of state approval may be called the "process model." In this system the state does not determine the content of the teacher education program. Competencies and performance criteria are not established at the state level. The

*Ted Andrews with the New York State Department of Education has added the "approved program" and "approved college program" categories to the continuum.

STATE APPROACHES



(figure 2)

primary role of the state is to define the process for development of teacher education programs, stating who is to be involved and the nature of the involvement. In this model the state again plays a decentralized role with local control and a broader base for decision making.

case studies-process model

Some states are now operating a competency-based certification system consistent with this model. The state of Washington is a primary example and was the first state to adopt competency-based certification, and now has an operational program. A new set of standards for approval of teacher preparation programs became effective in Washington in September 1971.[16] Under these standards, preparation programs are to be developed and implemented by a consortium of agencies. Each agency designates its own representative(s) and clarifies with that (those) representatives(s) his (their) authority in acting in behalf of the agency. The agencies in the consortium are colleges and universities, school organizations and professional associations.

The consortium is charged with describing roles to be assumed by the person to be granted a specific certificate, and to identify and state the rationale for the competencies required of persons who plan to perform the described roles. The certificates will be issued by the state through an approved consortium program. These standards are themselves process and performance standards.

Clearly, this state has moved toward a decentralized structure with more local control, a broader base for decision making, and diversity of standards. Performance standards are more readily changed with feedback, and probably less resistance would be encountered in the state. This model values optimum freedom for the preparing institution in terms of curricular decisions, flexibility, and creativity. In terms of the individual there is the possibility, depending on the program, for freedom to define goals, flexibility in personality, method and philosophy. Reflecting this viewpoint, William Drummond, a former associate in the Washington State Department of Education, urged that "state departments of education, therefore, should foster creativity and intellectual freedom and promote programs of teacher education which support and cherish uniqueness and individualism."[17]

The Washington model, therefore, also rejects the regulatory role of a state department of education. Wendell Allen, as Washington's Assistant Superintendent of Public Instruction, concluded

> To emphasize this regulatory role is to protect the status quo. When the rule is the thing, change must come before there can be a new rule. There is danger in this circumstance that the major energies of the agency will be spent on administrative rather than leadership functions.[18]

An essential point to note is the prevalence of multiple standards, lack of uniformity, less legal need for an empirical base, and no single set of standards. Should all of the above factors be deemed advisable, then a particular state might select this model.

New York has envisioned a very similar type of program. Four process standards have been established to be utilized for the development of pilot projects. The standards require the establishment of a policy board made up of representatives of teachers, school districts, colleges, and teacher education students. This group considers the objectives of the schools involved, the competencies teachers need to be successful in that environment, as well as those qualities desirable for all teachers, and acceptable evidence for attainment of competencies. The policy board then will establish individualized programs for the preparation of teachers to meet these criteria. Note the decentralized role and the belief that performance criteria are mostly situation specific.

Vermont has expanded the decision making base to local school districts. A local school district may develop a program for the inservice training and professional advancement of its staff and may apply to the State Department of Education for approval to recommend issuance and renewal of all certificates at the local level. The appropriate certificate will be issued by the State Department of Education.

The local district must submit evidence that the teachers, school board, and administrative personnel have participated in the planning and development of the program. The local program must include provision for job description, task analysis and performance criteria for all educational personnel. An approved program approach, however, is in effect for preservice teacher preparation programs.

Washington, New York, and Vermont are case studies that fall into the process model. Local decision making characterizes these attempts, assuming what is acceptable in one situation may be unacceptable in another. These states provide examples of a decentralized state role.

Alternative program model

Moving along the continuum the next model identified is the "alternative program" approach which does not require as broad a decision-making base as the process model. In this system the state provides that

institutions may develop competency-based teacher education programs. Alternative structures are available to the teacher preparation institutions, but all programs are approved by the state. Many states are operating under this approach, some merely because existing regulations provide for experimental programs. The issues underlying this approach are essentially the same as for the next model.

Facilitation model

A model closely related to the previous approach is the "facilitation model." As in the alternative program model, the institutions are free to select their program structure, and the college approved program approach is utilized. The essential difference is that the state actively supports competency-based programs through a number of facilitating activities. Policy statements, materials, and consultative assistance are examples of such support. The main theme in this approach is to encourage development of programs but to maintain this on a voluntary basis due to the lack of definitive information on program effectiveness.

case study-facilitation model

Florida is currently operating a system consistent with this model and state role. Their program approval regulations are somewhat process in nature indicating prescribed activities, but they are content standards as well, identifying course areas necessary for certification. There are alternatives to the content regulations which provide for competency-based programs. A publication from Florida's Department of Education states

> An institution may, instead, specify the competencies which its graduates will be expected to demonstrate, identify the procedures by which those competencies will be measured, and develop a program which leads to those competencies. Once such a program is approved, its graduates will receive regular teaching certificates with no penalties. Institutions are now being encouraged to develop competency-based programs.[19]

In this model control is in the colleges, but direction is provided by the State. The colleges develop their own competencies but these are consistent with State course requirements. There is additional direction and stimulus provided by the State, however, which facilitates development of such programs. The State is compiling a catalog of teaching competencies which will eventually be validated through research. These competencies, or performance criteria, will be provided to the colleges to facilitate their program development. These particular criteria, however,

will not necessarily be mandated and certainly all will not be required of a given institution. Other faciltating procedures by the State are the assembling of training materials based on competencies and staff development for teacher trainers. The emphasis is on facilitation, and decision making is somewhat diffused but the role of the state is stronger than in previous models.

Mandate model

Another closely related approach on the continuum is the "mandate" model. In this case, all of the previous model's components apply, except that the teacher preparation institution must develop competency-based teacher education programs. Some of the options have now been closed, but only in terms of program structure. Implicit in this system is a deep commitment to CBTE and faith in its value.

It is important to note, however, that this model does not represent a closed system. Restrictions have been established in terms of the operational framework of the preparation programs, but a variety of options are open in terms of the nature and types of competencies, the delivery systems, assessment techniques, management procedures, etc.

As one views the efforts by the various states across the country, a general rule appears to emerge. The greater the state mandate, the greater the opposition has been from various groups within the state. When CBTE has been offered as an alternative, less opposition has been generated.

An interesting point that relates to state approval of a competency-based teacher education program whether it is an alternative or mandated approach, is that little has been done to develop accreditation criteria for competency-based programs. Since this approach has a number of unique program components, new standards may have to be defined. If CBTE is mandated, certainly this is an issue to be faced very early in the implementation procedure.

Moving further to the right on the continuum the remaining models might be grouped under a heading of centralized control by the state department although this is not strictly interpreted as such.

Generic competencies model

A general approach to competency-based teacher education-certification is to establish required competencies at the state level. This state-adopted competency approach supports a strong state role and a uniform

set of standards. It gurantees that each certificated individual has at least a minimum set of competencies. These criteria could be utilized as a state test or part of an approved program, depending upon which direction is desired. It should be noted that most states are developing performance education by approving programs, not by setting state competencies.

The manner in which these competencies are stated significantly affects the impact they will have on teacher education programs and the role of the state. The competencies can be stated in generic (broad) terms which then serve as guidelines for further specification by teacher preparation institutions. This "generic competencies" model increases centralized authority yet does provide a certain degree of participation on the part of the colleges or consortia.

Earlier a model was described which mandated CBTE programs. It was pointed out that implicit in the model was a commitment to CBTE and faith in its value. The generic model, however, is the first of a series of models which begin to place faith not only in CBTE, but also in a given set of competencies which all teachers are required to possess. This indeed is a greater leap of faith and requires a considerable degree of commitment.

case study-generic competencies model

Pennsylvania has printed Generic Teaching Competencies: An Interim Inventory. It should be noted that in their document the term generic refers to competencies common to teaching in all areas, subjects, and levels. There are, however, broad statements of competence consistent with the definition of generic used here. These competencies serve only as a guide and have not been adopted by the State. Examples are as follows:

a) the teacher will use methods of teaching which are defensible in terms of psychological and social learning theories.

b) the teacher will employ a variety of techniques, materials, and methods which will actively involve each student in the learning situation.

c) the teacher will maintain an educational environment conducive to developing positive attitudes toward learning.[20]

Specific competencies model

Further movement along the continuum reveals a second competency approach but of a more prescriptive nature. The "specific competencies" model has been referred to in the literature as a "prescriptive model." In this system the state provides very specific competencies which are utilized by the colleges or preparation units as program objectives. This is a more dominant state role but still within the approved program approach with an emphasis on the regulatory function of a state education agency. Uniformity in certification with a single set of standards is the essential feature. Some of the Utah standards fall under this category, and New Jersey is working toward such a system.

Several examples of specific competencies can be provided, and it would be informative to continue with one of the areas identified in the Pennsylvania document. A "variety of techniques" can be broken down into specific skills such as able to introduce a lesson, give a lecture, employ oral questioning, use supportive techniques, summarize a lesson, conduct a field trip, or present information with analogies. Each of these would be a specific competency.

Competencies criteria model

A model which at times is indistinguishable from the previous one is characterized not only by state adoption of specific competencies but the criterion levels for these as well. Criterion levels specify the evidence that will be accepted that a competency has been demonstrated. It may be expressed as frequency of occurrence, degree of achievement, or other qualitative indicators. This additional factor again increases the degree of state control and decreases the decision-making power by preparation institutions. This approach has been labeled as the "competencies-criteria" model, and this model together with the specific competencies model can collectively be called prescriptive models.

To clarify this model examples of competencies and criteria consistent with previous examples would be helpful. A key point is to ask what evidence will be accepted that the competency has been demonstrated. One competency and its criteria would be as follows:

> The teacher candidate will demonstrate ability to give a lecture by stating objectives clearly, using an audible voice, varying the pace, establishing eye contact, and summarizing key points.

Variations on the above would be to combine the competency with each criterion, hence writing five distinct competencies. An even more precise statement would indicate the time interval or number of times a skill is to be demonstrated, such as: take attendance within three minutes, or ask three synthesis level questions during a lecture.

case study-specific competencies, competencies criteria models

Utah[21] recently adopted at the state level a set of performance criteria for instructional media, some of which approximate the specific competencies model type of criteria and some of which contain evaluative criteria. Prerequisites to a Basic Media Endorsement are a bachelor's degree and a teaching certificate. An examination for proficiency conducted by a recommending institution (with an approved certification program) is then administered. The recommending institution is free to determine how the competency will be demonstrated or ascertained, but a candidate may request an opportunity to demonstrate a competency whenever he feels he is ready. Competencies may be demonstrated one at a time. Candidates who perform satisfactorily will be considered as having met the endorsement requirement regardless of the route taken to obtain the competency.

Proficiency must be demonstrated in five areas. Some examples of performance standards are as follows:

-Using media selection tools of his choice, the candidate will:

a) Identify the tools he has selected and include a rationale for the choice of each.

-The candidate will explain what one would do to select new subject headings for materials which are not considered in Sears List of Subject Headings.

-The candidate will demonstrate proficiency in mounting pictures by producing one acceptable example of the following:

a) Dry mount on a hard surface, using dry mounting tissue
b) Dry mount, using dry mounting cloth
c) Rubber cement mount
d) Laminate with thermo copy machine, adhesive acetate, or heat press

A comparison

The competencies adopted at a state level can be derived in a number of ways, regardless of their degree of specificity. This issue will be discussed shortly. An essential difference, therefore, between the generic model as compared to the prescriptive models (specific competencies and competencies-criteria models) is the level of specificity of the competencies. How does this difference relate to the issues, and how do these models compare with the open end of the continuum in terms of the issues?

In the process model, teacher preparation instututions have maximum curricular freedom. The generic model allows the institutions the opportunity to develop the specific competencies and criteria while the prescriptive models do not provide for this. A comparison of performance criteria with traditional course list standards may be of value at this point. A course in tests and measurement is a familiar requirement in the course list system. The guidelines model would require competencies that are somewhat more specific than a course title, such as ability to evaluate student performance and ability to develop tests. The prescriptive models, however, would list a number of specific performances such as ability to formulate essay (multiple choice, etc.) test items and analyze tests for validity. Also, the evidence accepted that the performance had been achieved may be provided. Continuing our comparison, if used in a course list system a prescriptive model would list the things that should be taught in a tests and measurement course rather than leaving this to the college.

Andrews has stated that "a required set of performance criteria could be just as moribund as rigid course requirements have been in the past."[22] It appears that the more specific the criteria the less freedom that exists. Recall that the approved program approach works within the framework of generally agreed upon goals. The possibilities for creativity through innovative programs can be achieved in the design of means to achieve the objectives, but not through alternative objectives. Two basic questions are at hand. First, is curricular freedom seen as being of value; and second, does a prescribed set of specific competencies significantly limit this freedom? A related question is whether or not the generic model offers a great deal more freedom than the prescriptive models.

A concern similar to the question of freedom is diversity. The process model allows, and even encourages, diversity among programs. Those in favor of diversity argue that there are varied philosophies of education requiring different teaching models. Any set of competencies is based on a theory of teaching and the teaching-learning process. Although not always articulated, the purposes of teaching are inherent in the competencies.

In the process model several teaching philosophies exist simultaneously with validation and development being on-going processes. A set of specific competencies, however, relies on one teaching model and also establishes a particular value system. The problem here is that there is no empirical base to lead us to the correct model. Lack of an empirical base is a primary concern with competency-based certification. With a variety of program types, it can be argued, we recognize the developmental state of our knowledge-base whereas a single model seems a finality and demands empirical validation before being adopted. This accounts for the support of competency-based teacher education instead of certification.

Another point made by those favoring diversity is that competencies are situation specific. There are numerous contexts for teaching, both in terms of environment and educational philosophy. This requires different sets of competencies, at least in terms of the general situations (not for every school, etc.). There may not be enough in common to establish at least a minimum core of competencies at the state level. Washington, Vermont, and New York appear to believe in this as evidenced by their process models.

All of the above factors suggest multiple standards and diversity of programs. The initial question is whether these are valid concerns. The other position argues for more standardization and quality assurance. Inequities among programs are diminished. Certainly, the prescriptive models adhere to the latter viewpoint. The generic model does provide a certain degree of variability in that each institution can define the specific competencies to fit its needs. The prescriptive models insist on a single standard, the generic model offers some degree of multiple standards although not extensively when compared to the process model.

A frequent criticism of competency-based programs is the problem of writing competencies in the affective domain. This problem becomes amplified as we move across the continuum toward the prescriptive models. As an example, the generic model might require competence in developing teacher-student rapport. Each teacher preparation institution would be provided the freedom to determine not only how this might be developed but how it might be judged to exist. The prescriptive models, however, would specify the competencies necessary to achieve this, such as "uses student names," or "smiles or acknowledges student responses by nodding." The question is whether or not such criteria can be written on a statewide level. Ignoring the affective domain and concentrating on the cognitive and psychomotor alone would not be a viable alternative.

The reader may recall the issues raised concerning the rights of the individual as suggested by McDonald. Are there opportunities for flexibility in personality, method, and philosophy? What about the right of the individual to define his own goals. Rackley and Miller representing the Pennsylvania State Department of Education, stated that

> Individual differences are not taken into account in blanket certification standards. We are convinced that the improvement of teacher preparation must take place at the point of initial preparation . . . with attention directed to individual needs within the context of general certification requirements.[23]

The process models provide for individual flexibility and there are functioning programs which operate on these premises. The prescriptive models preclude much of this, at least in terms of the specific competencies required by the state. The individual does not have the freedom to define his own goals, but he may have the opportunity to select his own method of achieving the objectives. Again, those favoring a uniform set of standards would find individual selection of goals to be undesirable and detrimental to certification.

The generic model may provide a certain degree of individual choice but within the boundaries defined at the state level. The general objective must be accomplished, but the specifics can vary with the individual. The manner in which one wishes to develop teacher-student rapport or plan for a lesson can vary significantly from another individual's method. The basic question is not just one of uniform standards versus flexibility, but the degree of each that is desirable.

State assessment model

The final approach identified on the continuum is the "state assessment" model. In this paradigm specific competencies and criteria are established at the state level, but the assessment of an individual's competence is done by the state. There are several ways in which a state testing procedure can be implemented, some of which will be described. A cogent argument against this approach is that there exists no empirical base on which to construct a valid testing technique, particularly in view of varied teaching contexts. The predictive validity of any such examination device would have to be established.

It is again important to consider how the state testing models reflect the various issues and state role. Questions about curricular freedom, individual freedom, and varied teaching philosophies should not be forgotten. The state testing approach to certification offers radically different responses to the issues when compared to the models within the approved program approach.

The informational model can easily be modified to fit a state testing procedure. A set of behaviorally stated competencies could be formulated as certification discriptors. A teacher candidate's degree of accomplishment

of each of the criteria could be indicated to form his competence profile. Minimum standards established for certification could be set by the state for each criterion or group of criteria. A system could be established (total score, weighted scores, etc.) to determine the individual's eligibility for certification. The state would still maintain its individual data bank and local districts could use the information for hiring purposes.

An important modification of the informational model is that not only are minimum levels established for certification, but the testing of the candidate to determine his achievement of each criterion is done by the state, not through an approved program approach. The control of standards and verification of accomplishment reside in the hands of the state. This would be similar to an analysis of transcripts in the course list analogy made earlier.

The modified informational model is but one variation of the state testing concept. Any outside agency or group of evaluators could be designated by the state to carry out the testing function. There is an opportunity to involve members of the profession in both development of competencies and criteria and service on evaluating boards or teams who certify individuals. Instead of a profile, vertification of minimum competence might be all that is necessary. Differentiated certification could be based on different degrees of accomplishment or even different types of criteria. Evaluating boards or teams could again be used through the entire process.

It is generally assumed that the evaluation for certification would be done in a live classroom situation. An alternative would be to establish testing centers where specific skills would be evaluated such as those found in micro-teaching. This might be particularly useful for initial certification due to the inequities in student teaching situations. Students could also be used in test centers similar to the laboratory schools. This would provide a more controlled situation and fewer variables would enter into the evaluation.

A combination of evaluation in student teaching settings and controlled laboratory situations is also an alternative. This might be built into a system where a recommendation from a preparing institution (college or consortium) in addition to testing in a center would be necessary parts of the process for certification. The variations to this testing approach are too numerous to be included in this discussion.

In the first five models described, up to and including the mandate model, competencies are developed by those involved in preparation programs. The result is a variety of independently derived competencies with little or no state control. Mechanisms and roles in the process of writing these competencies will be discussed under delivery systems.

For those models which propose state adoption of competencies, beginning with the generic model, it is appropriate at this point to raise several questions. The first, and perhaps foremost, is the question of who formulates the competencies. It is frequently pointed out that whoever writes the competencies controls the program, and this indeed is a powerful position.

One feature of many competency-based approaches is the emphasis on parity, a decentralization or sharing in the decision making process. This emphasis has been reflected in the process of writing competencies and their adoption at the state level. Some case studies may clarify this approach.

In New Jersey sixteen statewide task forces have been organized, one for each of the basic certification areas. The objective of each of these task forces is to develop a list of teaching competencies for their area which is to be adopted by the state as part of the certification requirement. Each task force consists of the following types of educators: four classroom teachers (members of professional associations), one department head or supervisor, four college staff members - two from education and two from liberal arts, one state department curriculum specialist, four in general curriculum (school administrators, deans, etc.), one measurement specialist, one director of student teaching, and one college student.

North Carolina has organized ad hoc committees under the State Advisory Council on Teacher Education to develop a comprehensive catalog of competencies and operational guidelines for the various curricula leading to certification. Utah has organized committees of educators to develop competencies for certification areas. Minnesota has also utilized task forces with wide representation to develop competencies in various certification areas. Texas and Arizona also have state level groups working on competencies.

Florida has developed a catalog of competencies by including competencies from every source available, both within and outside the state; however, these are not to be adopted by the State. Pennsylvania mandated that all preservice teacher preparation programs submit a set of competencies for their programs. These lists have been compiled into a booklet of generic competencies, which will be circulated for review and perhaps final adoption by the State.

There are several other issues which apply to state level adoption of competencies. One is the extreme difficulty in getting agreement across the state on a set of competencies. Those involved in developing statewide sets of competencies can attest to this problem. It is significant to note, however, that professional opinion, a content validity, is the only basis that currently exists for justifying a competency since research validation has not been conducted.

A second concern is whether or not a competency can be stated broad enough, yet have meaning, to apply to all teachers and to all situations. With changing roles, variance in local situations, and new research and perceptions of the effective teacher, the required competency approach has been accused of being an inherently irrelevant system.

Each model must be considered carefully in terms of the issues identified. Certainly, there are other issues to be accounted for which were not discussed here. The idea of certification levels will be dealt with later. Another important question is whether or not to use student outcomes as an indication of teaching competence. Arizona and California are exploring this approach. Concerns of a practical nature such as cost, overall feasibility in terms of management, state size, diversity, and available resources are examples of other issues. The questions raised here were more of a philosophical nature and are pertinent to decision making for planning.

The models described were identified as being along a continuum. This implies that there are many other models which can be considered, but they most likely will differ from these models in degree rather than basic type. Perhaps a system can be developed with positive elements from several of the models described here. It may also be possible that more than one model can be in operation at a given time, particularly if one accepts the notion that certain areas require or more readily fit into a state testing approach while all other areas fit one of the approved program models. The overriding concern is which model or models best serve the purposes of teacher education and certification.

Certification Pattern Design

Various certification patterns exist and have been related to or modified to accomodate the competency approach. The issue of decentralization may be responded to differently at the preservice and inservice levels depending upon the certification system desired and roles required of those involved. Some states are relating the competency approach to preservice and have initial certification only. Others (Arizona, Vermont) are concerned only with competencies for advanced certification at the inservice level. Most, however, are dealing with both.

A number of questions must first be asked. Is certification that is related to competency-based preservice preparation sufficient to guarantee minimum competence for the issuance of a license to teach? Will additional certification later in the teacher's professional career be of any value unless it can be related to meaningful indicators of competence?

A state must decide on the number and types of certificates desired, and how far into the teacher's career this will extend. Some have initiated a certificate for the preservice student teaching period so the individual is considered a member of the professional staff. Others require an intern certification period during which the teacher is closely evaluated. This intern period is of short duration, from one to three years, which may distinguish these certificates from what are frequently called provisional certificates lasting up to five or six years. Other states (Minnesota) have adopted the concept of renewal units, with recertification every five years or so.

A major criticism of limited certificates is that generally the "successful" teaching experience frequently required for the next certification level is evaluated in a perfunctory way if at all.. In one state it has been reported that no one was ever denied their permanent certificate! A competency approach to evaluation may provide the vehicle for an appropriate determination of qualification for the next certification level.

An important decision is how the certificate level competencies will differ. Will the difference be in terms of number of competencies, types of competencies, criterion levels for achieving competencies, or all of these. Can and should competencies be "sliced" minutely enough to accomodate several certification levels? Many of these concerns cannot be answered until an attempt is made at the actual defining of competencies.

One problem that occurs is the relationship between certification, employment, and tenure. Generally these are considered separate issues. But if this is the case, then evaluation for certification and tenure should be separate. If they are not, then all the problems of conditions of employment and negotiations become part of the certification process. Separating the evaluations, however, creates a cumbersome situation with greatly increased cost factors.

Should inservice evaluation be required for additional certification levels, and this process is separate from evaluation for tenure, an interesting situation may develop. A local district may find an individual unqualified for their district, yet the teacher may have been judged qualified for higher (even permanent) certification. This may be rationalized by pointing out that certification standards are minimum standards and hence it is quite possible that the teacher meets minimum standards but not the higher competence needed to teach in the district. The reverse situation would be more interesting but not likely to occur.

Although the above explanation appears to be a logical one, in reality there still may be problems. Administrators may feel that their position has been weakened, and it would be most difficult to judge a teacher as unqualified where he has just been judged qualified for a lifetime certificate.

The costs, and particularly the logistics, of separate evaluations can become overwhelming. Political concerns such as who is to be involved also become significant.

Another problem related to intern periods and inservice competency evaluations is related to the teacher who is seeking an endorsement in a second area. Will another appropriate intern period be required, and will permanent certification be granted only in the area in which an inservice evaluation occurred?

Decisions about certification levels can be quite simple at the policy level, but it is the implementation phase that becomes quite complex. These decisions have very important implications for future steps in the planning process. Also, this is one area in particular that may be modified once field testing is conducted or programs become operational and provide information.

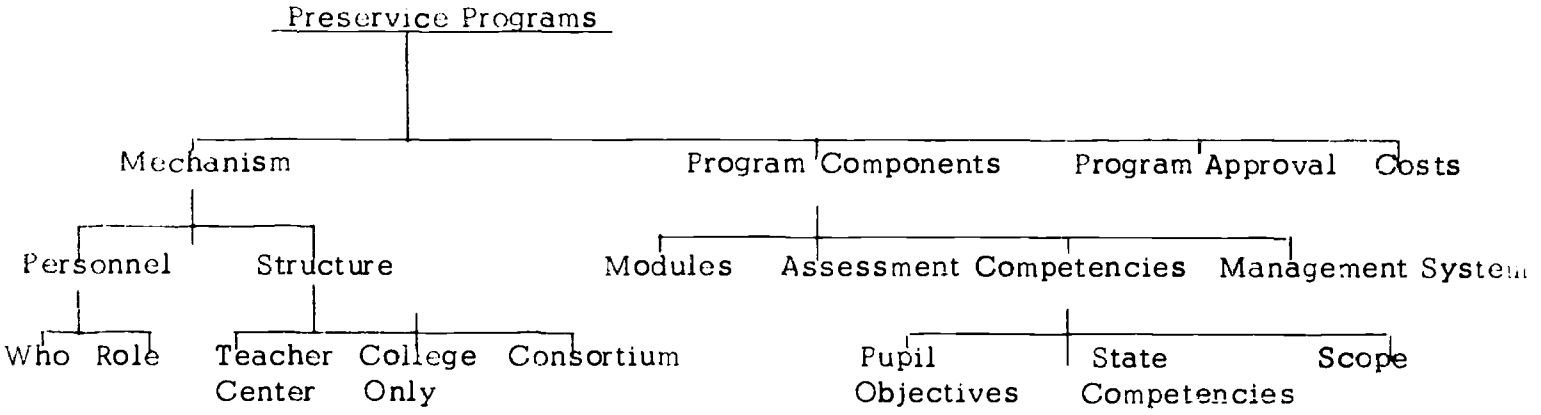
Delivery System Structure

Decisions concerning the state's role and thus the basic approach, and decisions about certification levels, both provide direction as to the means for achieving the desired goal. A system must be structured to develop the approach to CBTE and the training and certification program identified by the state.

The delivery system may involve two major components, inservice and preservice education, depending upon the certification levels or other factors desired. Only the extreme models on the continuum would not be concerned with details of neither the inservice nor preservice programs. All other models require approval of some type of program. Approaches to both preservice and inservice competency-based education will be discussed here.

Preservice

Competency-based preservice programs come in a variety of forms. The state has a number of options, the first of which is whether or not to mandate program types. The elements in competency-based program design which follow may be incorporated in state plans or may evolve through the requirement of CBTE or merely through its support. Figure three provides an overview of the areas to be considered.



(figure 3)

Mechanism

An important area for consideration when deciding what portions of the program will be required by the state is the mechanism for implementation of the preservice programs. Two aspects of this which are integral parts of the mechanism are program structure and personnel. Each has been approached in a variety of ways.

Consider the structure first. Since competency-based programs are usually much more field centered than current programs, ways of approaching this need to be devised. Some programs maintain the college as the primary organizational unit involved, but increase the field experience components within the programs.

Another approach is the development of a consortium as the organizational unit, with participation by a variety of groups. Washington's approach to the development of consortia for preservice preparation programs leading to initial regular certification has been described earlier. The emphasis in this approach is parity in decision making.

A third alternative is the teacher center concept. In this paradigm the college establishes a close working relationship with a public school with field experiences centered in the district. In this arrangement the college plays a more dominant role than in the consortium approach and inservice programs are a part of the system, but the distinctions are otherwise not always clear. Texas and Florida are involved in this approach.

In each of these organizational patterns a key component is the personnel and organizations required to participate. Various groups have been mandated to participate in the teacher preparation process, such as: local education agencies including teachers, professional associations, and administrators; college and university personnel; students; citizens; state department of education personnel, and others. The numbers of individuals from each group also need specification if this route is pursued.

If such groups are required by the state to participate then how they are to participate needs clarification. What role do they play in the program? Are they involved as members of boards and review committees, thus serving in an advisory capacity? Or do they make policy decisions? A third possibility is that they are active participants involved in activities such as competency definition and assessment of teacher candidates. Combinations of the above may be required by the state to serve different functions in preparation programs.

Program components

Another area of primary concern is the specification of CBTE program components. Will modules be required in addition to competencies? Will requirements be established in reference to assessment techniques. Florida requires programs to establish assessment techniques related to the performance criteria in performance standards. It is generally agreed that the evaluation of competencies is an area of significant weakness in CBTE. There is a great need for appropriate evaluation instruments and procedures. This is an important point to remember when mandating programs and their components.

The general approach to CBTE taken by a state as discussed earlier will have a direct bearing on the competencies. Various approaches are: to require that the state adopted specific competencies be used, that state adopted generic competencies be used as guides, or that competencies be directly related to pupil outcomes (state or institution derived).

It may also be necessary to determine the scope of the competencies required in the preparation program. In which of the following areas will competencies be required: instructional competence, knowledge (liberal arts, specialization area, general education and teaching), and personal attributes? Much of this can be specified in state program evaluation procedures.

Program approval

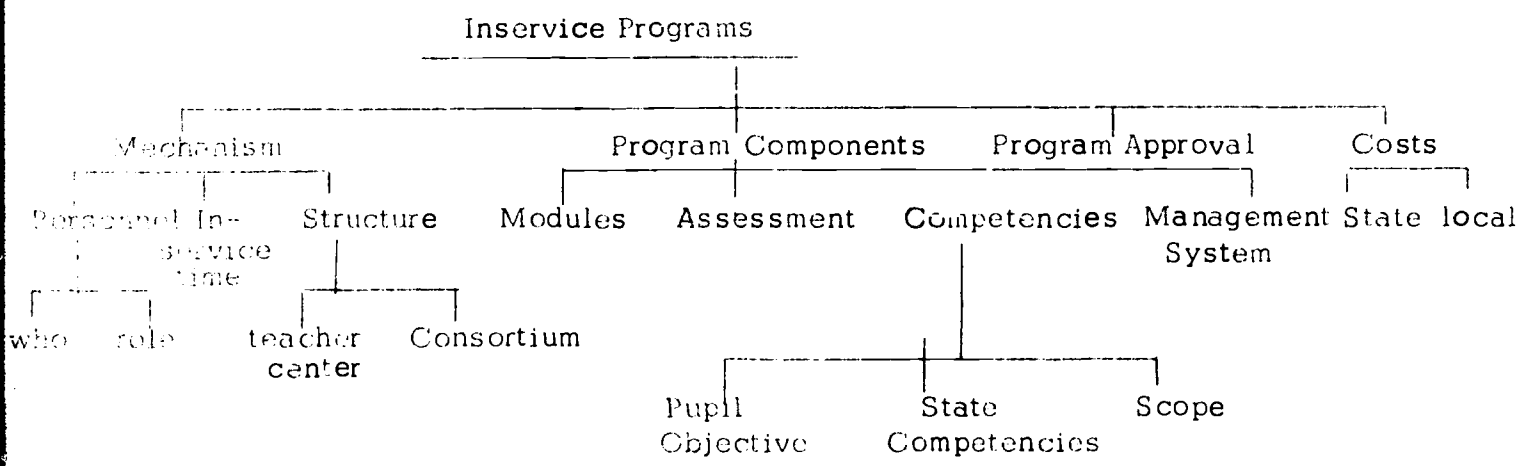
Previously it was pointed out that the CBTE programs have unique characteristics and thus require unique accrediting or program evaluation criteria. Little has been done in this area but states must address this issue early in the process, particularly if CBTE is mandated. All of the factors discussed under preservice programs may need to be incorporated in such standards. An example of how standards might be revised to accommodate CBTE is provided in "The Relationship Between Teacher Education Accreditation Criteria and the Competency Approach," by Robert A. Roth. The need for CBTE management systems is discussed there.

Costs

Finally, the costs of developing, implementing and managing CBTE programs must be studied carefully. Information on existing programs and ways of alleviating costs would be beneficial to institutions moving toward CBTE, and to the state in developing support systems (not to mention legislatures).

Inservice

Competency-based inservice programs experience many of the same problems attributed to preservice programs in the preceding discussion. Figure four provides an overview of the areas to be considered in implementing competency-based inservice programs. Only those factors significantly different from the preservice program will be described.



(figure 4)

Mechanism

Within the inservice approach one additional mechanism emerges, mandating inservice training. Some states require a specified number of days for inservice staff development, which can provide the support for a competency-based inservice evaluation-training system.

The dominant personnel and their roles may change when shifting to an inservice program. Here the role of bargaining units becomes a factor not encountered in the preservice situation. The logistics of evaluation also can become very complex as discussed earlier. In terms of structure, the teacher center can provide the setting for both preservice and inservice education, thus adhering to the principle that teacher education is a continuous process extending into the professional career of the educator.

Inservice programs can be tied into the certification process also. These programs can be cooperative school-college ventures, and may or may not lead to advanced degrees. The state of Washington, through its preservice preparation consortia, have certification programs where the degree is available but not necessary.

The University of Bridgeport's Multiple Alternatives Program is an inservice competency-based teacher education program for elementary teachers, which, for the majority enrolled, leads to a master's degree in elementary education. The program decision making is shared on a parity basis among teachers, their school representatives, and college faculty. This is an individualized program related to the professional's needs in teaching.

Program Components

Development of teacher competencies and assessment of these competencies again take on new perspectives in the inservice situation. This also has a bearing on the source of pupil objectives it required for competency definition. Responses to questions such as who is involved in defining the pupil outcomes varies significantly from the preservice situation.

Program approval

Just as accreditation criteria for preservice programs may have to be modified, inservice programs leading to certification may have to meet some type of state standards and approval. Some states have begun to develop standards for approval of inservice teacher education-certification programs.

Costs

An additional consideration is the costs and funding for programs. Costs will determine feasibility, and states will have to consider what portion of these programs are state fiscal responsibility. With inservice programs states will share in the financing of activities much more so than in preservice programs since all public schools are involved. Many state education budgets provide for state supported inservice teacher education.

Support Mechanisms

Three key areas in the development of CBTE are the identification and specification of teacher competencies, the design or adaptation of training materials or delivery systems to provide opportunities to acquire competencies, and the development of assessment techniques appropriate to the specified competencies. All of these pose significant problems to those interested in adopting the competency-based approach.

With the realization that these three components are essential objectives in the design and implementation of CBTE, it is important to note the myriad of conditions which hinder the efficient and effective accomplishment of these goals. Many barriers exist, both within and external to a particular college or university.

Among the more serious and frequently cited problems are cost factors, availability of time, and lack of information or understanding of CBTE. Many of these are interrelated. Orientation and training of staff, acquisition of materials, re-allocation of priorities and time commitments, and the long hours of costly staff time necessary for module and delivery system design are specific examples of problems inherent in CBTE program development.

A typical approach to CBTE is usually as follows:

a) orientation of faculty to the CBTE concept
b) a literature search for sources of information
c) acquisition of modules, training materials, and lists of competencies
d) consultant assistance
e) adoption, adaption, or development of competencies, modules, and training materials
f) design of instructional system
g) field testing of materials and subsequent modification

Each of the above steps poses serious problems. A recent survey of operating CBTE programs asked what would be most helpful in developing CBTE. Several representative responses were cited as follows:

> "Inservice time for professional personnel. Thank time. Travel to visit other programs. The cost of producing a module is over $1,000."

> "An analytical study of 'consequences' to reduce the proliferating competencies. If we don't synthesize, we are going to pollute the effort."

> "Time for developing and researching CBTE materials; conferring; video-tape materials; inservice education for all personnel."

Among the open comments cited was:

> "CBTE will not survive unless dissemination is better (people not hoarding) and there is financial support. Accessibility is just too difficult." [24]

It should be noted that the above processes, problems, and comments apply equally as well to inservice competency-based programs, and this areas has seen very little activity thus far. There is a significant void in the competency-based inservice area and the potential is great.

The result of all of the administrative problems referred to is that so much time and effort is spent on those developmental and management aspects that competencies of only a very basic nature proliferate the literature. Little time is left for the study of more complex facets of teacher competence. This problem is compounded by the fact that there is lack of a coordinated effort or a central organizing agency. In addition, much of what is being done in a given state may be isolated from state education agency efforts in the competency area.

This section addresses the basic problems of CBTE program design and the conditions which hinder their solution. It suggests taking the next step in studying the competency movement, that is, coordination and technical support of programs.

One is the most loudly voiced concerns is that in those states where CBTE has been strongly urged or mandated that state has not provided the necessary support for program development. In order to provide for successful implementation of a comprehensive CBTE program a system should be developed to provide the necessary resources and

support mechanisms in whatever way possible by the state. A cost analysis for CBTE program development and management would reveal areas that could be significantly reduced if a flow of information, materials, and strategies were maintained. Perhaps the prime target area would be the reduction of staff time, which appears to be the most needed and costly element.

To illustrate how a central coordinating agency can respond more effectively and efficiently to the development of CBTE, a few steps in the process of program design previously outlined will be reviewed. The comments cited earlier will also be related to these steps.

The initial orientation of faculty (step a) can be done through state developed presentations using materials, personnel, and ideas from existing CBTE programs, both within and outside the state. Statewide conferences or "pre-packaged" workshops are possible vehicles. Rather than traveling to visit other programs, essential elements of each can be synthesized and made available at the institution's request.

Literature searches and acquisition of competencies, modules, and other materials (steps b, c) are greatly simplified. Instead of identifying and writing to ten or twenty CBTE programs in the country, these resources would be available through the state education agency. All of this results in significantly reduced time and money commitment, increases accessibility, and promotes synthesis of efforts and ideas. The system also needs a built-in evaluation plan to ensure a regenerative program which continually meets the needs of the target populations.

The inservice CBTE programs probably require basically the same types of information and services as preservice programs. It should be noted, however, that public school personnel have not been playing a strong leadership role in CBTE, and a dearth of information seems to exist in reference to CBTE inservice programs. The teacher education centers, however, are making headway in this area but this is due primarily to their relationship with preservice programs. Training may be needed to a much greater extent for inservice personnel, and the support system should have the capability to provide this.

Competency Management Center

It is suggested that an organization be established as the support system and be titled the Competency Management Center (CMC) . The purpose of the CMC is to function as the central coordinating agency for all CBTE activities in the State.

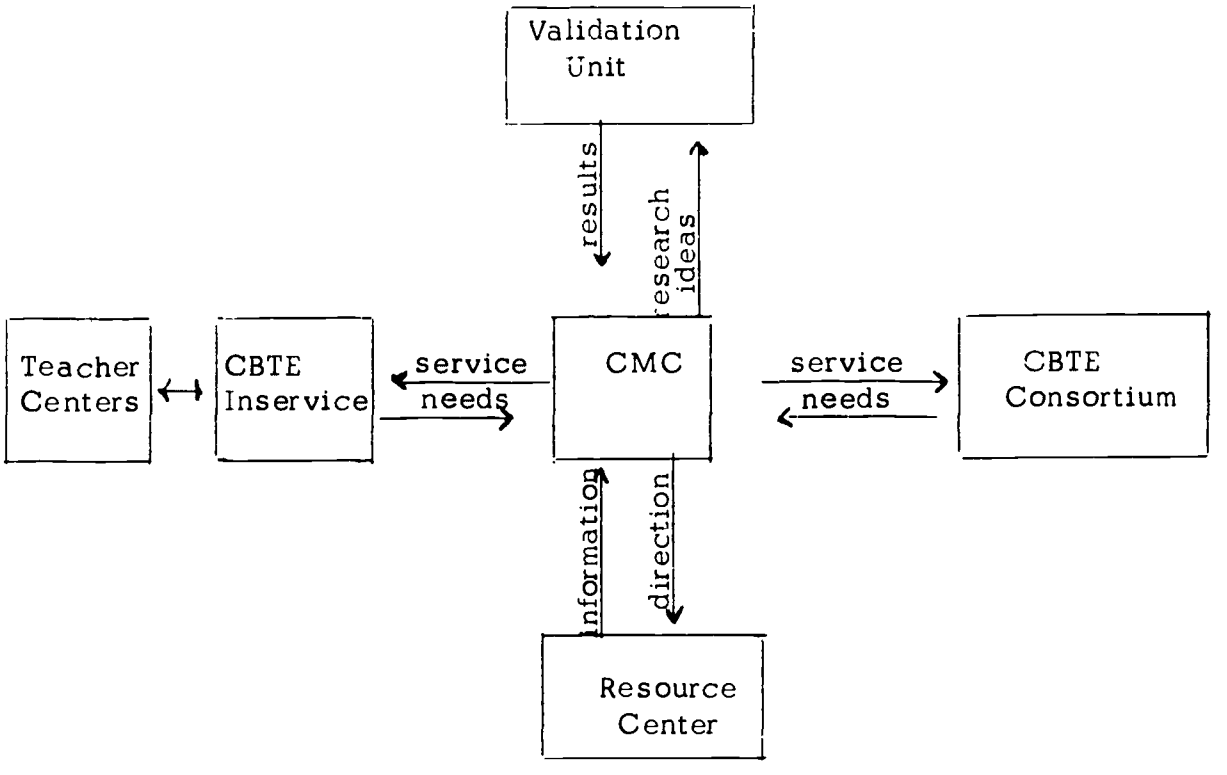
A major function of the Center is to serve as a consultant service to any college, school, or agency interested in the competency approach. This Center maintains contact with agencies in the other states. As coordinating agency for all research, materials, needs and services, it is an effective consultant agency or facilitator. The Center staff serve as consultants or develop consultant teams to assist an institution in development and evaluation of a program. Workshops and seminars on CBTE topics and problems will be coordinated and/or developed by this Center. A newsletter with appropriate items from each coordinated area is one anticipated service. The Center should have a built-in self-evaluation system.

The CMC would have a central staff and several arms which it coordinates (figure 5). The specific relationships of the Center to the areas coordinated are as follows:

1)	Validation Unit	The center identifies research areas and problems and conveys common validation needs as identified in the field. It also disseminates research results to appropriate institutions. In effect, it provides direction to the research validation efforts.
2)	CBTE Resource Center	The Center directs the Resource Center to appropriate sources of information, identifies ways of "packaging" or making materials available, and disseminates significant information. The needs of practitioners are identified and a communication system for direct access will be designed.
3)	CBTE Consortium:	This group of colleges is assembled and coordinated by the Center as a "colloquim" for discussion of common needs. The Center in turn alerts the appropriate agencies and assembles necessary resources to work on these areas. Findings would be disseminated through the consortium meetings.

4) CBTE Inservice Programs

Individuals or consultant teams are assembled to aid districts in development of competency-based inservice programs. All resources and materials from the other areas could be utilized for these purposes also. Relationships with colleges interested in this activity are to be established. The Teacher Centers are to be closely tied to and supported by the Center.



(figure 5)

The functions of each arm of the CMC will be described in the following paragraphs.

Validation Unit

The Validation Unit is the arm of the Competency Management Center which is responsible for coordinating all state resources and research efforts related to competency-based teacher education. Research topics will be identified by the Management Center on the basis of feedback from participating institutions (colleges, schools, teacher centers, etc.). The Validation Unit will formulate clearly defined research questions and develop appropriate research designs. Utilizing available resources, studies will be conducted under the auspices of the Validation Unit with the cooperation of institutions and researchers throughout the State.

One specific function would be to conduct experimental studies to validate teaching competencies. Once specific teaching competencies have been identified by groups of experts, it is necessary to relate these to an appropriate criterion of effectiveness such as student outcomes in the cognitive, affective, or psychomotor domains. Hence, the competencies will have both content validity and concurrent criterion validity.

Another closely related area of research is the validation of teacher training techniques and materials. Once competencies have been identified and shown to relate to certain student outcomes, the need is to find the best materials and means of training teachers to acquire the particular competence. Appropriate research designs and field studies would be developed and implemented by the Research Office.

As CBTE programs are developed, the opportunity to study the effectiveness of such programs increases. Comparative studies of CBTE and traditional programs would not only provide information on the relative effectiveness of these two program types but also specific information for each particular institution. Program evaluation would be strengthened with feedback from longitudinal studies that identified the long term effects of training techniques and teacher competencies.

The CBTE Consortium will be in a position to provide the Validation Unit with some direction in terms of research topics. In return, these colleges would be able to utilize the research findings and serve as field sites for validation of competencies and training techniques. Faculty involvement inconducting the studies would be encouraged. Colleges actively involved in a competency approach could serve as reasearch and development centers supported with grants from foundations and other sources, in addition to the resources of the Management Center. With the coordination of resources and research efforts even institutions

with limited resources could be involved in sophisticated experimental research. With the coordinated and shared research responsibility, a systematic approach would evolve and unnecessary duplication eliminated. Competency-based inservice programs (even entire school districts) could provide and receive information in the same way as the colleges described above. This would provide opportunities for classroom teachers to be involved in research studies. Also, realistic settings would be provided to researchers instead of the contrived situations they are frequently forced to work with.

The Validation Unit would rely on the Resource Center to provide sufficient information, such as previous research and and materials from operating programs, necessary to formulate research designs and conduct the studies. Results of studies would be on file at the Resource Center also.

Resource Center

In order to encourage and aid in development of competency programs, there is a need to provide a variety of resources to the colleges and schools interested in moving toward CBTE. The Resource Center would serve this function. Among the resources that would be pertinent are the following:

1) Teacher Performance Criteria - a catalog of criteria at various levels of specificity. These may be adapted, adopted, or used only as guidelines.

2) Modules - a module bank (learning packets) which can be utilized as needed by individual programs.

3) Protocol Materials - a resource center of tapes, films, and simulated materials depicting teacher behaviors.

4) Program Descriptions - detailed descriptions of working CBTE programs across the country.

5) Contact- where to obtain additional materials, consultants, and program descriptions.

6) Resources - training materials, position papers, related research, consultants.

7) Training - workshops on development of modules, writing performance criteria, etc.

Figure six provides a comprehensive list of functions, characteristics, and resources provided by the Resource Center.

CBTE SUPPORT SYSTEM - RESOURCE CENTER

Functions	Characteristics	Resources Provided
-collect materials	-system for two way flow of information	-competencies (organized, cross referenced)
-catalog materials	-capability of retrieval and cataloging	-modules
-establish data bank and catalogs	-capability of dissemination	-training materials
-disseminate materials	-access to state programs	-assessment techniques
-publish lists of materials	-accessible by state programs	-management plans
-provide consultant services	-expertise or ability to assemble it	-program evaluation systems
-assemble expertise	-leadership, coordination, and training capability	-how to do it descriptions
-provide services	-regenerative nature through evaluation system	-resource lists, bibliographies
-coordinate state activities		-position papers
-conduct needs assessments on CBTE problems		-consultant assistance and/or names
-conduct state-of-the art surveys		-program descriptions
-conduct conferences		-strategies
-develop plans for future steps		-research
-develop position papers		-surveys
-conduct conferences		-protocol materials
-plan research activities		
-conduct training sessions		

(figure 6)

Both on-going and new programs need considerable assistance in their efforts to operationalize their theoretical framework. Position papers, research, contacts, and program descriptions are particularly useful to those institutions exploring the concept before designing program proposals. On the basis of this information, interested faculty members can develop strategies for implementing a program. A set of centrally located materials that are readily accessible can be extremely useful in this regard.

For those institutions or departments who have decided to move in this direction, the sample teacher performance criteria, modules, protocol materials, and training workshops are most valuable. Sample materials and training not only facilitate the process but frequently are essential.

An important point to note is the elimination of duplication of effort. In the past, each institution would have to do its own literature search and accumulate materials by writing directly to the source. Under the current system these materials would be avialable for evaluation on short notice. The Resource Center, however, will need to be somewhat selective in its purchasing and will therefore need the assistance of requests from interested institutions.

All of the above advantages also apply to the teacher centers providing competency-based inservice programs. Here, in particular, training and consultative assistance will be of value.

The Validation Unit will need materials for specific research studies. It is important that they be aware of studies conducted in other states in the same area of the specific proposed study. Also, in order to conduct a particular study the competencies, modules, or other materials on file may be utilized. The Resource Center would provide these to the Validation Unit. Again, a great deal of time is saved.

CBTE Consortium

Most states have several colleges which have begun pilot programs in CBTE in various departments. These are not only relatively new programs, but they are dealing with a new concept in teacher education. Certainly, there are many problems to be resolved as they begin to operationalize their plans. A coordinated effort to resolve problems common to these colleges which are unique to CBTE programs would be of significant value.

A CBTE Consortium is proposed to meet the needs identified above. The purpose of this area of the Competency Management Center is to assemble and coordinate all colleges in the state that are involved in CBTE. This

group would be a colloquim for discussion of common problems, needs, and activities to promote the dissemination of information and improvement of CBTE programs. Assistance in planning conferences and workshops would aid the dissemination purposes.

One means of assisting each other in the developmental process is through the exchange of ideas and materials. Competencies derived for one teacher education program may apply to another. Modules developed for one program may be adapted to fit others. Management techniques must deal with certain very similar problems no matter what the type of CBTE program. The exchange and discussion of these materials and ideas would be mutually beneficial to participating groups.

In accordance with the purpose of sharing materials, one objective of this group would be to establish a module bank, a collection of modules developed by CBTE colleges. This resource would be available to colleges and thus facilitate the development and improvement of programs. The Resource Center would maintain this module bank.

The Consortium would also be responsible for identifying appropriate materials of interest to the CBTE colleges. This would enable the Resource Center to procure these materials and make them available at a central location.

Another essential function of this group would be to identify areas of research deemed important to CBTE. This information would then be transferred to the Competency Management Center, where it would be synthesized with similar information from other sources such as competency-based inservice programs. These research areas would then be referred to the Validation Unit.

Another goal of this group would be to plan for cooperative arrangement with inservice programs. This would provide opportunities for CBTE colleges to develop relationships with public schools and teacher centers, and enable the process of teacher education to be a truly continuous and articulated process.

One of the primary functions of Teacher Education and Certification offices is to evaluate teacher education programs. Identification of characteristics of CBTE programs which are essential to their effective operation would be important in the accreditation process. CBTE programs would be subject to current approval procedures but with particular emphasis on unique aspects of competency-based programs. This office

will need to examine their approval procedures carefully with respect to this new approach. The CBTE Consortium would be of significant assistance in determining the unique aspects of competency programs. The CBTE Consortium could serve in an advisory capacity to enhance the relevance and effectiveness of program evaluations.

CBTE Inservice

This proposal has recommended establishing teacher centers at the intermediate district level. These competency programs would serve the public schools and could be a continuation of CBTE preservice programs. The relationship between these programs and the work of the Consortium may therefore be closely related. The CBTE institutions could work with the local districts and centers to cooperatively develop programs for both the preservice and inservice levels, thus enabling the process of teacher education to be a truly continuous and articulated process.

The local district or teacher center would be able to obtain materials such as lists of performance criteria, assessment techniques, modules, and protocol materials directly from the Resource Center. This would obviate their searching for these documents across the country and significantly reduce the time involved in establishing a program.

The results of the research efforts being conducted would have significant implications for inservice programs across the State. The validation of competencies and development of training materials would be pertinent to these programs. In addition, the competency-based inservice programs could serve as field sites for research in conjunction with the efforts of the Validation Unit. As in the case of the Consortium, the inservice programs could also identify areas where research is needed. The local district and teacher center could then cooperate in the implementation of studies designed by the Validation Unit in areas identified by the inservice programs.

A link between inservice programs and the certification office should also be made. Should a competency-based recertification process be instituted whereby an individual teacher would undergo an inservice evaluation, results of these evaluations could easily be applied to inservice programs designed to upgrade the teacher's skills. The Teacher Education and Certification office could assist in this process through its permanent certification evaluation.

Regulation Change Specification

Clearly if a new certification system is being proposed which creates a different number of certificates, changes in existing laws must be made. Also, if just the certification standards are changed, such as moving from course lists or area descriptions to competencies, regulation revisions are required.

In addition to actual certification requirements, regulation changes may be required to:

1) Initiate new processes or organizations such as teacher centers
2) Amend or create (for inservice) approval procedures
3) Require changes in program structures
4) Create new allignments among organizations and require participation by various groups or individuals such as consortia
5) Require a specific number of inservice training days
6) Appropriate funds

The above changes may require new laws, certification or administrative codes, or policy changes only. The groups making these changes are legislatures, state boards of education, chief state school officers, or department of education agencies such as teacher preparation and certification offices.

Quite often when ideas become regulations they are then most difficult to change. It is important that such changes be made only after careful consideration and a thorough study of all aspects of the proposed program.

Management Plan Development

The Multi-State Consortium on Performance-based Teacher Education has determined that the purpose of a management plan is "to get us from where we are to where we want to go." Assuming a state knows where it is (if not, a survey may be of value), it is then necessary to achieve the goal.

The goal statement needs to be translated into specific objectives which clarify direction and enhance evaluation. Following a format similar to the Program Evaluation and Review Technique (PERT), the next step would be to select significant events and the activities which lead to these events. Resources needed and assignments of responsibility should also be determined in the plan.

A time line should be developed to coincide with the events listed, indicating beginning and completion times for each set of activities and a target date for each event. Sequential and parallel activities should be so indicated. Alternatives and decision making points may also be a desirable component of the plan. Data on the anticipated and actual costs should be collected. Evaluation of activities and objectives should be built-in. evaluating both program operation (is it operating as planned?) and program effectiveness (is it making any difference?).

The plan should be comprehensive, specific, and long range in scope. The management plan is necessary but not sufficient for the accomplishment of the goals, as Andrews points out, it guarantees nothing.[25] Careful monitoring of the plan is essential.

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