A SURVEY OF LITERATURE CONCERNING COMPETENCY-BASED TEACHER EDUCATION PROGRAMS: 1970-1976

by

TITILAYO F. LASEINDE

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Major Professor

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INTRODUCTION

The Competency-Based Teacher Education (CBTE) or Performance-Based Teacher Education (PBTE) movement has been in the education scene of the United States over the past twelve years. The major thrust of this movement is on knowledge and attitudes that teachers should possess in order to significantly influence student learning. Today, CBTE is one of the most frequently discussed topic in education. Approximately 500 teacher education institutions,[1] and over thirty-five states have become involved in either studying or developing CBTE programs.[2] CBTE has been defined in various ways, but there is general agreement on at least two basic elements. The first essential characteristic is the specification of teacher competencies which form the basis of the entire program. The second is the design of assessment techniques directly related to the specified competencies which are necessary in order to determine whether or not a student has achieved the competencies.[3]

Recent educational trends and concerns have led to the development of CBTE programs at a number of teacher training institutions across the country. According to James and Schaff, the trends and concerns include (1) development of behavioral objectives, (2) application of systems approaches to problem solving in education, (3) concern for accountability

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[1] S. S. Sherwin, "Performance-Based Teacher Education: Results of a Recent Survey," Educational Testing Service, Princeton, N.J., 1973.

[2] R. A. Roth, "Performance-Based Teacher Education: A Survey of the States," Michigan Dept. of Education, Teacher Preparation and Professional Development Services, September 1974.

[3] Ibid.

in all educational enterprises, (4) recognition that, since learning is individualized, efficient and effective instruction should be and (5) the attempt at recent legislative efforts to implement competency-based certification.[4]

The nature of education is an everchanging one as conceived by many educators. In the following, Schmieder stated:

> The quest for methods and programs which will improve the quality of instruction in American schools must be an unending one. For in the pursuance of betterment there is always one more challenge to encounter; a design to further perfect, one more refinement to make.[5]

On the basis of this statement, it is important that educators, students and teachers understand how the CBTE program came about, its practices and future trend. Man appears to always seek to cope with his environment by establishing systems with specific purposes. As the environment changes, better solutions are sought to solve new environmental problems. Teacher education programs also can be viewed as systems designed to respond to the environment's (society's) needs. Elfenbein pointed out that PBTE is an effort to develop an optimally flexible system to keep pace with rapid societal changes.[6]

A survey of educational journals, texts and unpublished papers over the years 1970-1976 produced a wealth of information on CBTE practices,

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[4]Robert K. James and Joel Schaff, "Practitioner's Ideas on Laboratory Skills Competencies Needed for Physical Science Teachers," Science Education, 1975, 59(3):373.

[5]Allen A. Schmieder, "Competency Based Education: The State of the Scene," PBTE Series: No. 9, Pub. by AACTE, Washington, D.C., 1973.

[6]Iris M. Elfenbein, "Performance-Based Teacher Education Programs: A Comparative Description," PBTE Series: No. 8, p. 8. Pub. by AACTE, Washington, D.C. October, 1972.

but only selected materials are reported in this report. Although there were numerous articles and papers dealing with CBTE, they consisted mainly of opinions, discussions and descriptions with comparatively few experimental studies or researches reported. Burdin and Mathieson in their review of the literature on research on PBTE programs substantiated this observation.[7] While some educators distinguish CBTE from CBTE, the terms should be considered synonymous for the purpose of this report.

Purpose of the study

This study was undertaken with the hope that it will provide some insight into CBTE activity as found within the period 1970 and 1976. Many papers, and some texts have been written to describe various aspects of the CBTE programs operating in the United States. Some educators were very optimistic about CBTE practices and potential. Meyen indicated that if CBTE is appropriately implemented, it could lead to efficiency in the acquisition of skills on the part of teacher trainees and provide for more student involvement in program related decisions.[8] On the other hand, some educators appeared to spend a great deal of time studying only 'flaws' or 'weaknesses' of the program. This was inferred from the statement made by Griffith when he stated, "No one has yet related a teacher's behavior to a student learning. There is some doubt that this will ever be done."[9]

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[7]Joel L. Burdin and Moira B. Mathieson, "A Review of the Research on Performance-Based Teacher Education," Educational Technology, 1972, 12(11):61.

[8]Edward L. Meyen, "CBTE: An Overview," U.S., Educational Resources Information Center, ERIC Document ED 122 472, April, 1976, p. 1.

[9]Daniel E. Griffiths, "Intellectualism and Professionalism," New York University Education Quarterly, Fall 1973, 5(1):2.

This project attempted to bring together and review selected literature on the positive and negative views of various educators by focusing on the following areas:

I. Historical descriptions of CBTE programs

II. Related studies on some elements of CBTE

III. Issues and problems about CBTE

IV. Analysis and future directions of CBTE

Limitation of the study

The study was limited to the review of information concerning CBTE programs between 1970 and 1976. Further the study was concerned mainly with pertinent literature available in the Kansas State University library. In the sub-section on 'Related studies on some elements of CBTE,' more attention was devoted to review of literature related to science education because of the author's interest in science education.

Definition of terms Terms unique to this study and defined according to their usage are:

Competency Based Teacher Education (CBTE) -- Teacher preparation program embodying an education philosophy which specifies competencies assumed to promote desirable pupil learning. Students progressing through the program are asked to demonstrate proficiency in these specified competencies.[10]

Competencies -- knowledge, skills, behaviors and attitudes believed to facilitate intellectual, social, emotional and physical growth of children.

Instructional Module -- A set of learning activities intended to facilitate the student's achievement of an objective or set of objectives.

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[10]Stanley Elam, "Performance-Based Teacher Education: What Is the State of The Art?" ERIC Document ED 058 166, 1971, p. 1-2.

Individualized Instruction -- Instructional activities designed to attend to expressed needs of the individual learner taking into account each learner's accumulated knowledge, skills, and attitudes, his potential and his rate of learning.

Performance Based Teacher Education (PBTE) -- Definition is the same as for CBTE. (For this study, CBTE and PBTE are used synonymously)

Procedures

The procedures followed in this study were to (1) read current literature, (2) organize the selected materials, (3) analyze and synthesize the materials and (4) draw conclusions on the basis of the materials used. The study was organized in the following manner:

I. Historical description of CBTE Programs

II. Related studies on some elements of CBTE

III. Issues and Problems about CBTE

IV. Analysis and future directions of CBTE

REVIEW OF THE LITERATURE

I. Historical description of CBTE programs

History of CBTE and general characteristics unique to CBTE programs

The roots of CBTE probably originated in the Sixties when public attention focused on the schools and their difficulties in providing adequate education for all segments of the nation's population. In an attempt to improve education and assist teachers to meet society's rapidly changing needs, educators were engaged in a continual search for alternative means to improve teacher competence.[11] Another driving force behind the development of CBTE programs came from educational researchers (educational psychologists) who were concerned with developing more precise modes of controlling, analyzing, and measuring human behavior.[12] The concept of performance-based teacher education emerged in the latter part of the Sixties as an alternative way to prepare teachers.[13]

By 1972, many states had begun to explore the possibility of certification of teachers based on performance as well as on education and knowledge. Generally, certification of teachers was granted upon the comple-

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[11]Iris M. Elfenbein, "Performance-Based Teacher Education Programs: A Comparative Description," PBTE Series: No. 8, p. 8. Pub. by AACTE, Washington, D.C., October, 1972.

[12]Donald Arnstine, "The Development of PBTE: A Marriage of Politics and Psychology," Produced in Regaining Educational Leadership - Critical Essays on PBTE/CBTE, Behavioral Objectives and Accountability by Ralph A. Smith, (John Wiley and Sons Inc. N.Y. 1975), p. 166.

[13]Elfenbein, op. cit., p. 8.

tion of a state-approved teacher education program or upon the completion of certain courses worth a particular number of credits as indicated by college transcript. This procedure was assumed by some persons to "...guarantee that teachers and administrators are properly prepared..."[14] but it does not specify explicitly those competencies that have been mastered.

It was believed that performance objectives could provide minimal specifications for the development of teacher competence. Referred to as performance-based certification, advocates hoped that this approach could be combined with PBTE programs to aid in bridging the gap between theory and practice and to provide more competent teachers.

Other sources too, provided impetus to the movement. The United States Office of Education (USOE) encouraged PBTE movement through funding. The USOE provided funds for the development of ten Model Elementary Teacher Education Programs based on some form of performance criteria and means for testing their feasibility. The USOE also continued to support Teacher Corps programs which required performance-based training programs.

Technological developments also made available new resources for teaching and learning. Business and industry have entered the education field, not only operating education programs for their own purposes but preparing and marketing new learning tools and techniques. School boards began in 1967 to contract with private firms for specialized, educational services, and a new industry was born. Among its prominent features was

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[14]Lucien B. Kinney,"Certification in Education," (Englewood Cliffs. New Jersey, Prentice-Hall Inc., 1964) p. 4.

an emphasis on the use of paraprofessionals and 'learning center managers" who require a minimum of specialized training.[15]

Essential Elements of CBTE/PBTE Programs

Many teacher training institutions claim to operate CBTE/PBTE programs for training their students because they have some features common to CBTE programs. However, review of literature revealed that some programs are not actually CBTE/PBTE in nature. Therefore, it is difficult to offer only a single definition of CBTE programs because of the many features of the approach. There is a multitude of examples of models and schemata used to communicate definitions and/or descriptions of competency-based programs. In spite of the differences which exists in the application of CBTE programs, there are elements which are common to most programs. The following is a list of essential elements prepared by the AACTE committee on PBTE in 1971.[16]

There is a general agreement that a teacher education program is performance-based if:

1. Competencies (knowledge, skills, behaviors) to be demonstrated by the student are:

   -- derived from explicit conceptions of teacher roles,

   -- stated so as to make possible assessment of a student's behavior in relation to specific competencies, and

   -- made public in advance;

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[15]Stanley Elam, "Performance-Based Teacher Education: What Is The State of the Art?" ERIC Document, ED 058 166, 1971, p. 3.

[16]Ibid. p. 6-7

2. Criteria to be employed in assessing competencies are:

   -- based upon, and in harmony with, specified competencies,

   -- explicit in stating expected levels of mastery under specified conditions, and

   -- made public in advance;

3. Assessment of the student's competency

   -- uses his performance as the primary source of evidence,

   -- takes into account evidence of the student's knowledge relevant to planning for, analyzing, interpreting, or evaluating situations or behavior, and

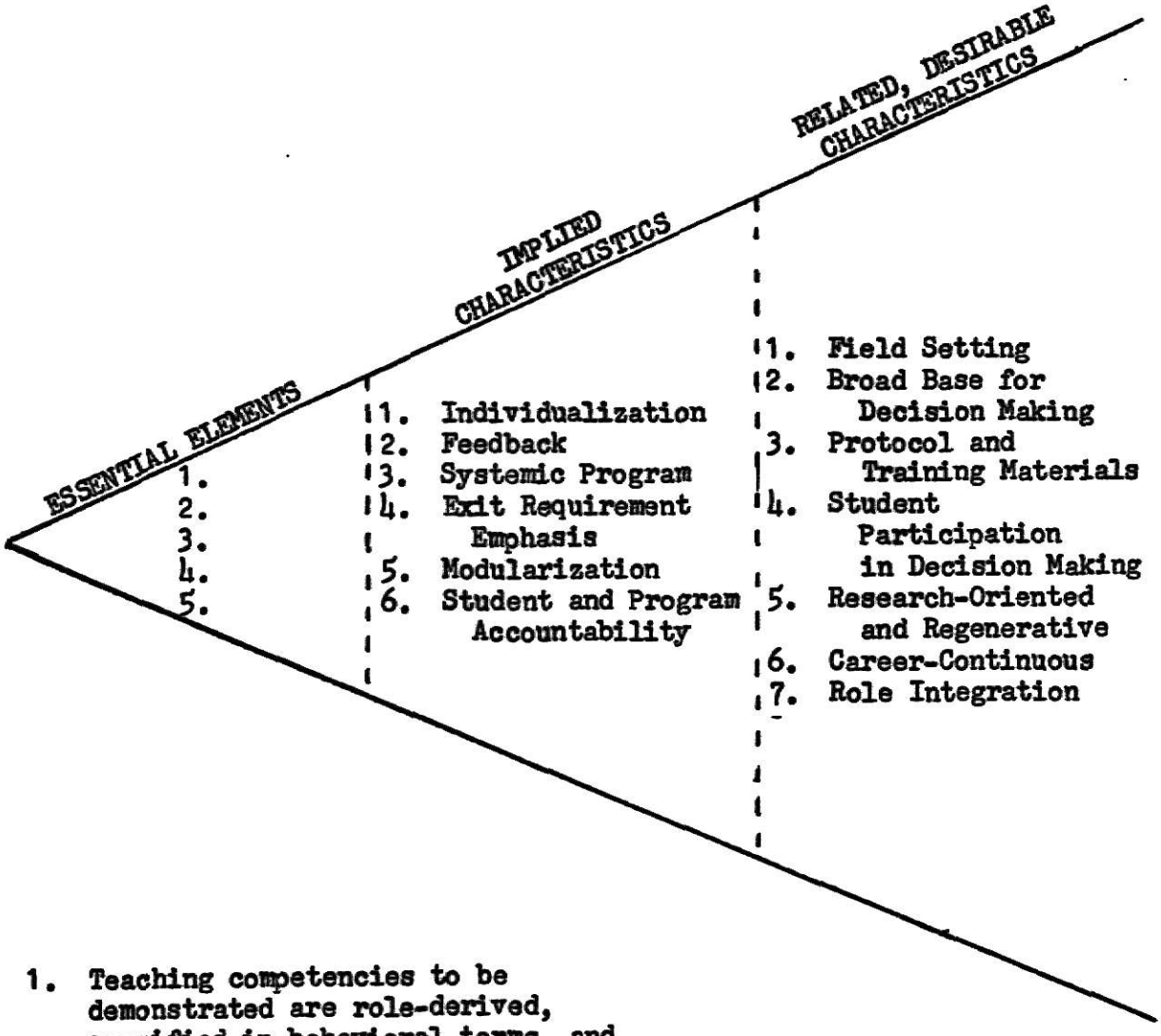
   -- strives for objectivity;

4. The student's rate of progress through the program is determined by demonstrated competency rather than by time or course completion;

5. The instructional program is intended to facilitate the development and evaluation of the student's achievement of competencies specified.

Other elements are referred to as implied and related/desirable characteristics as shown in the model below.

Conceptual Model of Performance-Based Teacher Education (Prepared by Elam, 1971 for the AACTE Committee on PBTE).



1. Teaching competencies to be demonstrated are role-derived, specified in behavioral terms, and made public.
2. Assessment criteria are competency-based, specify mastery levels, and made public.
3. Assessment requires performance as prime evidence, takes student knowledge into account.
4. Student's progress rate depends on demonstrated competency.
5. Instructional program facilitates development and evaluation of specific competencies.

Description of selected CBTE/PBTE programs: 1970-1976

Kansas State University, Manhattan, Kansas

Bailey and others reported a description of CBTE for Secondary Math and Science Teachers at Kansas State University.[17] In this CBTE program, some continuity was maintained with the on-going program as of then, in which students were required to enroll in a professional semester which included Principles of Secondary Education, Education Sociology, Methods of Teaching in the Secondary School, and Teaching Participation in the Secondary School. The first three courses were taught on-campus during the first eight weeks of the semester and students spent the latter eight weeks in their student teaching assignment. The faculty team responsible for developing the CBTE program made the following improvements on the former on-going program:

Greater flexibility of time and space;

Greater variety in learning activities;

More field experiences;

Elimination of overlap in courses;

Exposure to educational and community leaders;

Student feedback concerning learning activities and the general structure of the program; and

Accountability for student learning documented in a film which contained evidence of student performance.

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[17]Gerald D. Bailey, Jackson A. Byars and Robert K. James, "CBTE for Secondary Math and Science Teachers: A Model Program." Kappa Delta Pi Record, 1975, 11(3):71.

The CBTE program at Kansas State utilized unit packages called instructional modules. The instructional module had eight basic elements: Rationale, Prerequisites, Instructional Objectives, Pre-Assessment, Learning Activities, Post-Assessment, Remediation and Challenge Activities. Each unit was self-paced and each student proceeded at a rate commensurate with his ability and learning style. Instructional module evaluation included both formative and summative measures.

Oregon College of Education, Monmouth, Oregon (OCE)

In 1976, the AACTE gave a report describing the elementary preparation program at OCE which was an example of a reasonably mature program.[18] The elementary teacher education program at OCE was a four-year program that required approximately one-third of a student's total credit hours to be taken within the liberal arts, one-third within subject matter areas to be taught, and one-third within professional education courses dealing with the process of teaching, including psychology, methods, and media. Within the one-third (actually, 54 quarter hours) made up of professional education courses was a 33-36 quarter hour component of required courses and practicum experiences which was referred to as the "professional component." The professional component consisted of 21-24 quarter hours of work in classroom problem identification, educational psychology, methods, materials, and pre-practicum teaching experiences; and fifteen quarter hours of practicum teaching experience either as a student teacher or teaching intern. The professional component of the

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[18] AACTE - American Association of Colleges for Teacher Education. PBTE Series: No. 20, "From Commitment to Practice: The Oregon College of Education Elementary Teacher Education Program" 1976.

program incorporated the clinical and practicum phases and each of these phases had two substructures. One was an essentially college-based instructional program leading to mastery of knowledge and skills assumed to be needed by a teacher to perform competently in an on-going school context. The other was an essentially school-based instructional program that led to the acquisition and demonstration of competency as a teacher in an on-going school context.

Illinois State University

Pierce gave a description of the model being used at Illinois State University which had been in operation over six years.[19] Some of its features were:

Identification of specified instructional objectives as the base for a competency-oriented program;

Self-pacing and individualized instruction using self-instructional packages;

A maximization of individual instructor-student conferences;

Increased use of media through an Ampex Retrieval System, cassette videotapes and closed circuit Television.

Eight semester hours of CBTE had replaced three courses. The cognitive, affective, and psychomotor competencies required were included in over 100 self-instructional packages (modules) which were organized into a book called "Professional Sequence Guide". Structure of each package included

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[19]Walter D. Pierce, "Trauma and Euphoria - Changing to CBTE," The Clearing-House, March 1976, 49(7):320-323.

a minimum of the following: Rationale, Instructional Objectives, Questions to be answered (Preassessment), Learning Activities - Required, Learning Activities - Optional, and Evaluation.

Each of the instructional objective packages was assigned a merit weight that approximated the number of hours the average student would need to complete the package. Equating 40 merits with each semester credit hour, 320 merits constituted the entire program. Approximately 70% of the total merits were required of all students and students could complete the remaining 30% by (1) Working through optional self-instructional packages, (2) Attending minicourses, and (3) Engaging in independent study under the guidance of an instructor.

II. Related Studies on some Elements of CBTE

Research studies on the total CBTE programs between the period 1970 and 1976 were absent in the literature reviewed. However, there were studies reported in the literature on some elements of CBTE programs. Some of these studies were included in this report.

The introduction of Competency-based education into the teacher-education process has been widely discussed, but a number of controversies exist because of the absence of much research evidence supporting its efficacy in resolving problems facing teacher education. Rosenshine in a commentary on PBTE research noted that the research base was thin and he suggested the need for research aimed at the process of selection of competencies for development and at making the connections between teacher behaviors implicit in competency statements, and what comes about in

classrooms.[20] In 1974, Rosenshine stated that:

> Most papers on teacher education contain the embarrassing recognition that the present scientific base for teaching and teacher education is primitive. That is, the number of studies which have looked at both teacher behavior and student outcomes is embarrassingly small. A diligent search will uncover less than a hundred studies. The quality of many of these studies is questionable. The results are most useful for suggesting future research; the results of these studies are not sufficiently strong or clear to direct teacher training practices or certification or evaluation of teachers.
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> In contrast, there is no lack of research on how to train teachers to introduce a lesson, ask questions at higher cognitive levels, redirect pupil responses, praise students, or encourage student talk. Nor do we lack for lists of teaching skills. What is lacking, however, is research demonstrating an experimental or correlational connection between these skills and measures of change in pupil achievement and affect.[21]

In his review, Rosenshine found that fifteen correlational studies had been carried out which contained classifications of teacher questions and measures of student gain. However, he expressed that fifteen studies were unsatisfactorily small. He suggested that in order to aid interpretation, experimental studies should contain:

(a) Groups which were exposed to different questioning experiences

(b) Observational data on whether differences in questioning procedures actually occurred

(c) Data on outcomes measured

It is also important to research curriculum packages and teaching competencies to determine whether the teaching skills which are part of

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[20] B. Rosenshine, "PBTE: Proceed with Caution." Produced in Performance Education: Assessment Multi-State Consortium on Performance-Based Teacher Education, Ca. 1973, p. 28-33.

[21] Barak Rosenshine, "Teacher Competency Research." Taken from A Report of A National Conference on Competency Assessment, Research and Evaluation. University of Houston, March 12-15, 1974. p. 138-153.

the curriculum packages are indeed related to student achievement. Sieger and Rosenshine did a set of correlational and experimental studies related to curriculum packages and teaching competencies.[22] They obtained significant results on the importance of teacher correction procedures, in a highly structured curriculum program.

Rosenshine selected nine "most-promising" variables from a review of a correlational research literature and suggested that these variables could be researched into because they could yield useful findings about CBTE. The variables were:

Clarity of teacher's presentation

Variety of teacher-initiated activities

Enthusiasm of teacher

Teacher emphasis on learning and achievement

Avoidance of extreme criticism

Positive responses to students

Student opportunity to learn criterion material

Use of structuring comments by teacher

Use of multiple levels of questions

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[22]M. A. Sieger and B. Rosenshine. "Teacher Behavior and Student Achievement in the Bereiter-Engleman Follow Through Program." (Urbana, Illinois: Computer Education Research Laboratory, 1974).

[23]Barak Rosenshine, "Teacher Competency Research." Taken from A Report of A National Conference on Competency Assessment, Research and Evaluation. University of Houston, March 12-15, 1974. p. 138-153.

In 1973, Miles made a study to compare a competency-based physical education model with the traditional method.[24] The purpose of the study was to determine which of two teaching methods would produce the most positive knowledge gain concerning the teaching of elementary school physical education. Competency-based learning modules combined with field experiences were compared to the traditional lecture-teaching method combined with laboratory work involving the peer group. The competency-based group was primarily student self-directed and the traditional group was teacher directed. The effect of the methods was inferred by the performance of the subjects on the knowledge test. The mean gain between the pre-test and post-test mean scores was significant for both groups which indicated that both methods were effective. However, the competency-based method produced a knowledge gain significantly greater than the traditional method.

Wineman carried out a study to expand the CBTE model beyond the cognitive and behavioral domains through affective individualization. By incorporating humanistic principles into the CBTE model, he developed a science and social studies methods course for prospective teachers with the intent of affecting transformations of attitudes and self perceptions, as well as increasing skill levels. A review of course and instructor evaluations, along with prospective teacher-evaluations, suggested that the science and social studies methods course increased positive attitudes,

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[24]Gloria Gladys Miles, "An Evaluation of the elementary Physical Education Competency-Based Component in the Georgia Educational Model," Dissertation Abstracts International, 34:6A, 1973, p. 3121A.

[25]Sheila Ann Brooks Wineman, "A Humanistic Competency-based Science and Social Studies Methods Course," Dissertation Abstracts International, 35:4A, 1974, p. 2111A.

self-perceptions and skill levels. It was concluded that the competencies of the prospective teachers were strengthened from moderately low to moderately high; that the prospective teachers learned new content as well as new methods; that the course was helpful in preparing them to teach science and social studies; and that the instructor was perceived as prepared, organized, enthusiastic, considerate, easy to approach and one who stimulated intellectual curiosity.

Fulton investigated the effects of a modular special education competency-based teacher training program for regular teachers upon the academic achievement of exceptional children mainstreamed in regular education classrooms.[26] Teacher effectiveness in assisting mainstreamed exceptional children was evaluated through the analysis of cumulative grade point averages of all the exceptional children mainstreamed in the special education teacher training program. Based upon the findings, Fulton made the following conclusions (1) Secondary special education students taught by participating teachers in the study made positive statistically significant improvement in grade point average, (2) Secondary special education students taught by non-participating teachers showed insignificant academic achievement, and (3) The special education teacher training program (Competency-based) appeared successful in improving the participating teachers' effectiveness and the academic achievement of their special education students.

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[26]Steve Chandler Fulton, "The Effects of A Special Education Competency-Based Teacher Education Program on Teacher Effectiveness and Pupil Achievement," Dissertation Abstracts International, 1977, 37:11A

CBTE Studies related to Science Education

Smigelski made a study to compare some humanistic behaviors of science teachers trained in a performance-based teacher education program with those trained in a non-performance-based program. The effect of PBTE training on types of objectives teachers set for their classes, the student's perception of self-progress and their perception of classroom environment were evaluated and compared. His results seemed to indicate that the humanistic behaviors of science teachers were little influenced by their training program. Teachers trained in PBTE programs were found to be no more or less humanistic than teachers lacking PBTE training.[27]

West conducted a research on one phase of competency development in the pre-service training of elementary science teachers. She studied two modes of instruction. (1) The abstract mode and (2) the applied mode with gains made from them. The conclusion drawn from the study pointed to the fact that student-teachers gained more competence from an applied mode of instruction than from an abstract mode.[28]

Berger and Roderick made a survey of groups of teachers in and around Ann Arbor, Michigan to collect information about characteristics a competent elementary school teacher should have in order to teach science. Teacher educators rated these competencies and major discrepancies were found as teacher educators placed a very important value on competencies

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[27]Leopold Boleslaw Smigelski, "A Comparative Study of Some Humanistic Behaviors of Science Teachers Trained in a Performance-Based Teacher Education Program and Those Trained in a Non-Performance Based Program," ERIC Document ED 106 115, August 1974.

[28]Doris K. West, "Basic Research in One Phase of Competency Development in the Preservice Training of Elementary Science Teachers," ERIC Document, ED 118 464.

which were rated low or as having no value by practicing teachers. From the study, three main conclusions were drawn. (1) Teacher educators appeared to attach less importance to classroom discipline and record keeping and more importance to working with students, (2) teacher educators appeared to believe that competencies should be attained earlier in the student's career, and (3) the differences found between teachers and teacher educators indicated that assessment of the competencies themselves is an important a task as assessing student's attainment of the tasks and should be included in any competency-based program.[29]

III. Issues and Problems about CBTE

No educational innovation is devoid of problems. The same is true of CBTE. In spite of the rapid and extensive spread of the philosophy of CBTE in the United States, a great deal of controversy and misunderstanding still exist and criticisms are varied. Broudy questioned the philosophical underpinnings of CBTE.[30] Nash criticized what he believed to be the behavioristic flavor of CBTE and its failure to provide the humanistic orientation so badly needed in the society.[31]

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[29]Carl F. Berger and Stephen A. Roderick, "Evaluating and Assessing Competencies for Elementary Science Education," ERIC Document, ED 106 127, 1975.

[30]Harry S. Broudy, "Accountability: What does not go without saying" Produced in Regaining Educational Leadership - Critical Essays on PBTE, Behavioral Objectives and Accountability, by Ralph Smith, (John Wiley and Sons Inc. N. Y., 1975), p. 149-164.

[31]Paul Nash, " A Humanistic Approach to Performance-Based Teacher Education," Produced in Regaining Educational Leadership - Critical Essays on PBTE/CBTE, Behavioral Objectives and Accountability by Ralph A. Smith, (John Wiley and Sons Inc. N. Y., 1975), p. 186-201.

The humanistic approach to education draws upon many sources, including the humanistic psychology of Carl Rogers and Abraham Maslow. Most humanistic assumptions about the nature of man stem from a basic belief in man as a free creature. This means that he is able to make significant personal choices to initiate actions and to take a measure of control over his own life. Nash believed that a humanistic approach will encourage the inclusion in CBTE programs concern for self-direction, and the development of qualities like curiosity, wonder, imagination and respect for self and others.[32] The problems with this lies in measurement and evaluation because it seems impossible to develop a CBTE program without being able to measure the performances that are deemed desirable.[33] As long as terminal objectives are stated for each student behavior, it was believed that students may be less intrinsically motivated to learn, less creative and become more passive and unable to make choices or develop personal goals. Since CBTE demands predictable outcomes, fixed goals and measurable performances, Nash believed that it tends to threaten the environment that is crucial in developing creativity. Creativity is more conducive with an atmosphere of unpressured and present-oriented playfulness.

Another criticism which some educators exert on CBTE programs is the difficulty found in specifying certain competencies unique to the teacher role. The reason for this is because much of what the teacher does defies easy categorization.[34] Flexibility of teacher behavior is one example of

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[32] Ibid.

[33] Ibid.

[34] Walter D. Pierce, "Trauma and Euphoria - Changing to CBTE," The Clearing House, March 1976, 49(7):320-323.

a skill which is generally ignored because of difficulty of defining and measuring it in operational terms. There is also the tendency to specify only those competencies that can be easily identified and measured. Pierce believed this is natural, but stressed the importance of specifying higher order cognitive competencies that require creative evaluation. Without these qualities, any competency-based program will likely remain subject to the charges of simplicity as the traditional teacher education program.[35]

Another concern related to the narrowness or scope of PBTE and the lack of research. The problem of criterion levels for behaviors and the resources necessary to develop modules and assessment was especially apparent.[36] To expand further on the concern with criterion-referenced evaluation, in describing CBTE program at Illinois State University Pierce stated that:

> Students also experience difficulty adjusting to criterion-referenced evaluation procedures after spending so many years with a norm-referenced system. With norm-referenced evaluation, many students learned that they could perform at a relatively low level and still get by. Failure was reserved for those who were significantly below any defensible level of competency. In professional sequence, each competency is assigned a particular criterion level. This level, however, exceeds that which ordinarily is identified for the average student in a traditional program.
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> Given sufficient time and clear perception of what competency implies, most students are able to adjust to this change. But until students are able to adjust, they may exhibit a high level of discontentment and anxiety as it takes them two or three attempts to demonstrate a competency. Such 'recycling' discourages the student and may cause him to be despondent or rebelious or to drop out of teacher education entirely...[37]

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[35] Ibid.

[36] Robert A. Roth, "The Competency Movement and Science Education" Science Education, 1973, 57(3):361-364.

[37] Pierce, op. cit., p. 322.

To dwell further on the measurement aspect of CBTE, it is obvious that teaching skills cannot be validly measured by using only paper-and-pencil types of evaluation nor can the quality of teaching performance be equated with performance on quantitative measures. Because the quality aspect of teaching is so difficult to measure, some educators have been led to consider pupil achievement as an appropriate indicator of teaching skill.[38] However, focusing exclusively upon products of learning will likely prove to be unfruitful in improving teaching. In focusing on products for determining teacher competency, there are additional problems like the nature of the student performance.[39] A particularly gifted teacher may somehow create conditions which some students are led to engage in higher levels of cognitive or affective functioning not obtained by the teacher who is otherwise able to get students to perform very well or adequately on ordinary achievement tests. Because achievement tests focus almost exclusively upon low cognitive performance, the talents of a great teacher may go unnoticed if only student achievement is used as the standard for judgment.[40] However, Morrison pointed out that student achievement as the standard for judgment is not completely unreasonable when he stated:

> The fact is that all teacher evaluation is handicapped by substantial, unresolved conceptual and methodological problems and by lack of agreement on educational values. As a result, neither advocates

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[38]James M. Cooper, "Pupil Growth Measures and Teacher Evaluation: Pressing for Practical Applications," ERIC Document, ED 090 297, April 1974.

[38]W. J. Popham, "The Performance Test: A New Approach of Teaching Proficiency," Journal of Teacher Education, 1968, 19(2):216-222.

[39]Clifford H. Edwards, "Problems and Promise of Competency-Based Science Preparation," Science Education, 1977, 61(4):519-525.

[40]Ibid.

> nor opponents of any particular evaluation plan can make a convincing case on the basis of evidence or consensus.[41]

Some educators inferred from CBTE practices that a good teaching was somehow equated with a mechanical addition of discrete performances rather than the way the total act of teaching was executed. According to Broudy, CBTE programs made this assumption.[42] This usually involved having teacher trainees demonstrate competency for each of a number of competencies independent of one another. For example, students may be expected to demonstrate the skill of set induction in one evaluation situation and questioning skill in another. There is usually a sequence of competencies which the teacher trainee acquires one at a time until the total act of teaching is demonstrated. Broudy reported however, that drilling on separate parts of complex acts like teaching generally yielded disappointing results. He suggested that only after a pattern has been sensed or understood that subcomponents could be perfected separately.

There appeared to be no end to criticisms on single issues relating to CBTE practices. However, despite all the criticisms of CBTE, the literature pointed to the fact that the practice was still gaining ground up till 1976.[43]

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[41]Edward J. Morrison, "Performance Observation As An Approach to Teacher Evaluation," Educational Horizons, Summer 1974, 52(4):167.

[42]Harry S. Broudy, "A Critique of Performance-Based Teacher Education," PBTE Series No. 4. American Association of Colleges for Teacher Education, New York, 1972.

[43]Robert Andreyka and Bill Blank, "A Checklist for the Evaluation of Competency-Based Teacher Education Programs," Educational Technology, 1976, 16(1):34.

IV Analysis and Future Directions of CBTE

The review of literature revealed that CBTE programs appear to offer new ways of educational planning, organizing and structuring teacher education. Hence CBTE may be regarded as a vehicle of change. Because there is emphasis on field activities which require a continuous preparation they could provide a bridge between preservice and in-service teacher education. The CBTE movement, as it affects teacher education institutions already, appears to be widespread nationally. Schmieder reported data obtained in responses received from 783 teacher education institutions concerning their degree of involvement in PBTE. Only 228 reported no involvement in the program.[44] At least 35 states declared their intentions to issue teaching certificates through some form of competency assessment at some future date.[45] A more recent evidence for this was revealed by Andreyka and Blank in 1976 about national involvement in CBTE:

> Over 30 states report either legislative/administrative support for CBTE or are studying the concept seriously;
>
> Nearly a hundred teacher education institutions report either total CBTE programs or alternative programs;
>
> There are at least 20 national consortia, institutes, centers or groups whose primary or major function is the promotion of CBTE movement; and
>
> Literally hundreds of articles, position papers, monographs and other publications dealing specifically with CBTE appear monthly.[46]

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[44] Allen A. Smieder, "Competency Based Education: The State of the Scene," PBTE Series: No. 9, Pub. by AACTE (jointly with ERIC Clearinghouse on Teacher Education) Washington D.C. 1973.

[45] AACTE, Committee on Performance-Based Teacher Education, "Report of a Survey of 1,2500 Institutions," Washington, D.C. 1973.

[46] Andreyka and Blank, op. cit.

The focus of CBTE programs appeared to be on specific competencies. This requires or demands a clarity of purpose because new education approach often lack credibility unless clearly defined. It is encouraging to note the contributions of the American Association of Colleges for Teacher Education Committee on PBTE through their published series of reports on CBTE practices going on in the country. To a high degree, these monographs have clarified the CBTE approach. However, more documented evidence is still needed to clarify the purpose of CBTE practices in order to convince many, if not all educators, that CBTE is contributing new and useful knowledge to teacher education.

Current CBTE programs appear to point to a direction that will make educators focus on their purposes and rethink their goals in order to meet the pressures and needs of school and society. They will also assist participants in developing a potential for new and increased responsibility and accountability.

One of the promises of CBTE programs is that they provide opportunities to explore and research competencies because objectives are stated specifically and publicly. Elfenbein agreed that this holds great promise for educational research through the use of technological tools for data collection, storage, retrieval, and analysis.[47] CBTE programs have the potential of providing sufficient data about teaching useful in investigating process-product teaching effects. Research is of utmost importance in the CBTE program. Institutions involved in CBTE can provide a clearer

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[47]Iris M. Elfenbein, PBTE Programs: A Comparative Description," PBTE Series: No. 8. Pub. by AACTE, Washington, D.C. October 1972. p. 1.

knowledge base for CBTE practices if they conduct at least one study on the total CBTE program, and one review of research per year. This should provide a base from which to proceed in training and in research.

Finally, it appears that CBTE offers a potential to raise professional standards and encourage the teaching profession to be responsible for the development of and maintenance of such standards. Although CBTE offers promise for the future of teacher training, the issues and problems discussed earlier on in this report should not be overlooked. Some strategies should be sought to eliminate, reduce or minimize the effects of these problems in order to come up with teacher education programs which will be efficient vehicles for change in preparation of teachers.

SUMMARY AND CONCLUSION

The purpose of this study was to examine available literature (educational journals, texts and unpublished papers) on Competency-Based Teacher Education program within the period 1970 and 1976. The procedures followed were to read current literature, organize the selected materials, analyze and synthesize the materials and draw conclusions on the basis of the literature selected focusing on the following areas of CBTE practices:

I. Historical descriptions of CBTE programs

II. Related Studies on some elements of CBTE

III. Issues and Problems about CBTE

IV. Analysis and future direction of CBTE

The literature revealed that CBTE originated in the late Sixties. Two major factors were assumed responsible for bringing CBTE into the education scene. (1) Some representatives of the public believed the schools were not providing adequate education for all segments of the nation's population. They also wanted more competent teachers to carry on the act of educating children, and (2) Some educational research workers (educational psychologists) were concerned with developing more precise modes of controlling, analyzing, and measuring human behavior.

By establishing a program for teacher trainees in which all the competencies necessary for good teaching are attained, many educators believed a better education could be provided for the public in order to solve the problem of decreasing student performance associated with teacher incompetence. With this belief, advocates for such a program came up with the concept of Competency-Based Teacher Education. There are some essential elements common to all CBTE/PBTE programs that were used to determine

whether a teacher training program was competency-based in nature. First, statement of objectives for the learner in behavioral terms was central to the CBTE programs. Second, accountability which means the learner knows that he is expected to demonstrate the specified competencies to the required level and in a manner agreed upon.

The literature revealed that by 1976 over thirty states offered legislative/administrative support for CBTE. Each institution involved in CBTE program developed its own program and an appreciable amount of time devoted to CBTE was spent by teacher trainee in acquiring field experiences.

Research on total CBTE programs were completely absent in the literature selected. Experimental or correlational studies were scanty between 1970 and 1976 as compared to the multitude of papers written on CBTE revealing personal opinions of many educators either praising or criticizing CBTE practices. Criticisms were numerous and varied. For example, some educators believed CBTE hampered creativity and was not humanistic because of its reliance on specified objectives. However, some educators looked at CBTE as a vehicle of change that could improve the type of training pre-service teachers receive because there is emphasis on field activities. The following conclusions were drawn from this study:

(1) The society is very much concerned about the type of education provided by the schools and as changes occur in the society educators are challenged to provide the type of education that will meet the needs of the society. This is a major reason for the birth of CBTE. Legislative and administrative involvement have made CBTE to come alive in many states.

(2) Statement of objectives explicitly in behavioral terms and accountability are two main characteristics at the heart of CBTE programs.

(3) CBTE was well embraced by some educators who looked at it as a vehicle of change while some were pessimistic about its future because they felt CBTE was not different from the traditional teacher education programs except a new term (CBTE) was used to describe the traditional program.

(4) Well documented correlational and experimental researches on CBTE were scanty between the period 1970 and 1976. Also, research on the total CBTE programs were absent from the literature.

(5) Many literature supported the CBTE program even though some critics of CBTE had a lot of criticisms against the practice.

The lack of research on process-product effect of CBTE has an implication for further study because the worth of any teacher education program can only be determined by an evaluation of the effects it had on the pupils the teachers would teach. CBTE has to become product-based teacher education. Process-product research should be performed on the competencies and the total CBTE programs to ascertain the effectiveness of CBTE as a vehicle of change in teacher education.

Finally, it could be concluded that before CBTE can be a viable alternative for training truly professional teachers, a number of important problems will have to be attended. Some of these problems are already discussed in the main body of this report. These problems are not insurmountable if a rational, balanced approach is taken. It will be necessary to educate teachers beyond the competencies which have been set down in behavioral terms by providing opportunities for teachers to develop and exhibit their personal creative talents. In addition, it will be necessary to broaden our view of measurement, by researching further into CBTE

and measurement. An effort should be taken to broaden the knowledge base underlying teaching so that program development is rationally supported and a greater effort can be given to training teachers involved in the CBTE program.

I wish to thank Dr. Robert James for his help in choosing the topic of this report. His suggestions led me to the discovery of a field I had not previously considered, but which proved to be quite interesting. I also wish to thank Dr. Gerald Bailey and Dr. Harvey Littrell, members of my committee for my Master's program for the time and effort they devoted to this paper on my behalf without whose help this report could not have become a reality. Dr. Jerry Horn also deserves recognition for his willingness to substitute for Dr. James who was absent at the completion of this report.

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A SURVEY OF LITERATURE CONCERNING COMPETENCY-BASED TEACHER EDUCATION PROGRAMS: 1970-1976

by

TITILAYO F. LASEINDE

B. Sc. Ed., Ahmadu Bello University, Zaria, 1976

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College of Education

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Manhattan, Kansas

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The purpose of this study was to examine available literature (educational journals, texts and unpublished papers) in the library on Competency-Based Teacher Education (CBTE) program within the period 1970 and 1976. The procedures followed were to read, organize, analyze and synthesize the available materials, focusing on the following areas:

I. Historical descriptions of CBTE programs

II. Related studies on some elements of CBTE

III. Issues and Problems about CBTE

IV. Analysis and future direction of CBTE

The literature revealed that CBTE originated in the late Sixties in response to two major forces (1) public dissatisfaction with the type of education provided by the schools and (2) educational psychologists concerned with developing more precise modes of controlling, analyzing and measuring human behavior. Two major characteristics central to CBTE programs were stated objectives in behavioral terms and accountability.

A review of existing literature revealed that CBTE was advocated by many educators and a number of states offered legislative/administrative support for CBTE. Criticisms of CBTE practices were many and varied (i.e. CBTE was not humanistic and failed to encourage creativity). There is a multitude of papers composed mainly of discussions, suggestions, and personal opinions about CBTE. Unfortunately, few correlational and experimental studies relating to the effects of CBTE on teaching were available. Research on the total CBTE program were absent in the literature selected for this study.

By 1976, institutions in over thirty states were either engaged in CBTE or studying the possibility of implementing the concept in their

teacher training programs. CBTE appeared to be gaining much ground and the literature revealed that CBTE holds a substantial promise for changing the future of teacher education in a better direction.