DOCUMENT RESUME

ED 087 716 SP 007 693

TITLE	Partners for Educational Reform and Renewal.
INSTITUTION	Toledo Univ., Ohio. Coll. of Education.
PUB DATE	Nov 73
NOTE	50p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Demonstrations (Educational); Educational Development; *Inservice Teacher Education; Multiunit Schools; *Performance Based Teacher Education; *Preservice Education; *Teacher Centers; *Urban Education; Urban Teaching
IDENTIFIERS	*Distinguished Achievement Awards Entry; Ohio Model

ABSTRACT

The Ohio model, developed at the University of Toledo and implemented in the Toledo area, was designed to produce comprehensive educational change through the strengthening of relationships among the institutions, programs, and personnel who have an impact on educational change. The strategy of the model is to produce able teachers through the utilization of competency-based preservice teacher education programs, while simultaneously implementing in-service programs that introduce and support educational innovation, such as Individually Guided Education (IGE) and Multiunit Schools (MUS). The pre- and in-service training efforts are organized into five contexts of educational change: instructional organization, educational technology, contemporary learning-teaching process, societal factors, and research. The teacher education center is the conceptual and physical link in the model, tying together the university and the school systems, public and parochial. The center designs and implements strategies of change and also performs consultation, demonstration, production, instruction, and evaluation functions. (See related documents SP 007 699 through SP 007 706.) (HMD)

PARTNERS FOR EDUCATIONAL REFORM AND RENEWAL

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COLLEGE OF EDUCATION
THE UNIVERSITY OF TOLEDO

NOVEMBER 26, 1973

ABSTRACT/INFORMATION FORM - 1974 DAA PROGRAM

(Please note: This information will be the basis for the description of your institution's DAA entry in the official DAA booklet given at the Annual Meeting and subsequently distributed widely.)

Please Type or Print:

Name of Program Submitted: Partners for Educational Reform and Renewal

Institution (complete name): The University of Toledo

President: Dr. Glen R. Driscoll

Campus Public Information Officer: Fred Mollenkopf

Faculty Member Responsible for Program: Dr. George E. Dickson and associates

Title of the Faculty Member: Dean, College of Education and Professor of Higher Education

Signature: George E. Dickson

Title: Dean, College of Education Date: Nov. 19, 1973

Please describe in 150-200 words the program which you have entered in the 1974 AACTE Distinguished Achievement Awards. A sample is included below to give a general idea of the kinds of information we need. Your abstract will be the basis for reporting your entry in Excellence in Teacher Education. Please continue on back if extra space is needed.

SAMPLE: *Hypothetical Sample Description:* Recognizing the necessity for public school teachers to have a continuing education as well as realizing the need for continually updating the elementary science curriculum, the College of Saint Alphonsia Joseph, together with the school district of Stockton, New Hampshire, began in 1969 the Advance Learning for Science Teachers Program (ALSTP). The program, initially funded by a National Science Foundation grant, features a six-week summer institute during which members of the college staff instruct teachers throughout the school district. Also, 30 consultants from the college's science and education departments visit each of the elementary schools during the year. Featured in the six-week institute are effective ways to teach environmental studies, using the neighborhood as key resource. The program has had sufficient impact to project a similar one for secondary science teachers.

Recognizing that educators who understand and propose educational change cannot apply simplistic approaches to complex issues, the College of Education of the University of Toledo has attempted to come to grips with educational complexity by developing change strategies which recognize and encompass the various phenomena. We have developed and implemented an educational reform-renewal strategy for a region, a city, and their educational institutions which incorporates a systems approach and modeling in the developing, organizing, and operationalizing process. The unifying theme for the planned change is a unique competency-based teacher education (CBTE). The organizing elements in the system are a concomitant development of individually guided education and multiunit schools (IGE/MUS) and competency based education (CBE). We have recognized that attempting to bring about change in only one subsystem of the teacher education system--the college based professional education component--is futile without similar change in

other components, especially the field-based portion of the system. The "Partners" are (1) the effective linkages of the institutions involved (college and schools) and their personnel, to create a climate for and support of a strategy for massive educational change and (2) the putting together of CBTE, IGE/MUS and CBE in one prototype program. Attention is also given to all other elements needed to offer such a program, from the preparation of objectives to the management and assessment of student progress through a modularized curriculum.

The program efforts began six years ago with the aid of an U.S.O.E. grant but has principally continued through the unselfish and considerable efforts of faculty, teachers, school administrators, parents, consultants and others. It has involved one university, nine public school districts and one diocesan school system, involving 24 schools. Approximately 2700 undergraduate students are enrolled in the program. Although the substance of the program is related to a specific group of learners in a particular location, our process and products are a guide to action for others who can substantially modify and improve a real-world change effort.

SUMMARY

PARTNERS FOR EDUCATIONAL REFORM AND RENEWAL

This is the case study of the conception, development, and implementation of a comprehensive CBTE program of teacher education coupled with curricular change in schools. An assumption which underlies the program is that it is necessary to deal with all elements in the teacher education system. This assumption lead to the creation of new linking roles where relationships were missing or ill defined. It lead also to the design of training programs for all role groups concerned with teacher education.

The attention to the over-all teacher education system is reflected by the way the model was developed as well as a heretofore unusual reliance upon early, coordinated and continuing learning experiences utilizing a combination of field based--public school, private school, and/or community--and campus based--in varied instructional modes--experiences.

The field-based component is also mandated by another assumption that it is better to prepare and evaluate teachers by the competencies needed rather than solely by knowledge criteria. The way that the program is organized and presented is greatly influenced by the belief that learning which is individualized and, to the extent possible, particularized, is most effective. This is represented by varied modular approaches at the college level and by a particular approach to curriculum in schools.

In order to deal with the teacher education system, now broadly defined, interdisciplinary teaching teams of college faculty were assembled. For the same reason and to enhance individualization and particularization, a particular organizational pattern was adopted by cooperating schools.

What is explained in the full case study is a summary account of the way these elements were devised, revised, operationalized, and managed. We believe the process, as well as many of the products, will be of interest to colleagues everywhere.

A CASE STUDY FOR EDUCATIONAL REFORM AND RENEWAL: COMPETENCY BASED TEACHER EDUCATION, INDIVIDUALLY GUIDED EDUCATION AND MULTIUNIT SCHOOLS

Introduction

"Change is Inevitable in a Progressive Country. Change is Constant."

Disraeli, 1867

The above statement is just as true today as it was when Disraeli wrote it. In an age of rapid technological change punctuated by value-laden conflicts premised on philosophical polarities, American society is changing. Writings by anthropologists, particularly Spindler and Mead, have emphasized the ambiguous position of the school trapped by the emergent thrust of values and yet confirmed as the transmitter of traditional values. But, inescapably, schools do change as society changes. However, serious questions have arisen over the speed and quality of educational change. Critics have addressed themselves to the problem and generally have condemned the schools for failure to be relevant to society in general, but particularly in the area of educational opportunity for minority youth.

Irrespective of the particular debate, it can be documented that institutions, whether they be political, medical, religious, or educational, tend to rigidify the human behavior of their clients. Therefore, the body social, the organization, needs to develop change strategies sufficient to cope with the volutionary needs of society.

The College of Education at the University of Toledo is committed to educational change. In the Fall of 1967, this College in cooperation with a consortium of twelve state universities of Ohio began to design a comprehensive elemtary teacher education model program. The design effort resulted in a competency based teacher education program which consisted of the development of educational specifications and instructional modules for six target populations, three being preservice and three inservice. The preservice populations were (1) preschool and kindergarten teachers, (2) elementary teachers, grades 1-6, and (3) teacher aides or paraprofessionals. The inservice populations were (1) inservice elementary teachers, (2) administrative personnel (principals and supervisors in elementary schools), and (3) college and university personnel (the teachers of teachers). Since the original conception of the model, it has been expanded to include the secondary education teaching program, so that all University of Toledo education students would be taught through the model program. The Ohio model, as it became known, stated that all educational personnel involved in the education, induction and support of new teachers had to undergo training or retraining programs which dealt realistically with the contexts of educational change. The model identified these contexts as Instructional Organization, Educational Technology, Contemporary Learning-Teaching Process, Societal Factors, and Research.

The Ohio model's strategy was to insure that new and re-trained teachers would receive intelligent and sympathetic support in elementary schools, minimizing future risks of teacher failure and alleviating general educational unresponsiveness to change. Most attempts to change teacher education have been preoccupied with preservice educational populations rather than with all populations involved with schools.

Paralleling model development, the College of Education began inservice programs to introduce and support educational innovations with public school systems in the Toledo metropolitan area. One aspect of this activity was the development of individually guided education and multiunit schools. This educational concept represented by the acronym IGE/MUS was developed by the University of Wisconsin Research and Development Center for Cognitive Learning. Efforts are also under way to apply aspects of this same concept to secondary schools in our area and we are now experimenting with differentiated staffing and team teaching in two junior high schools. Twenty-four IGE/MUS schools are now operative in the greater Toledo metropolitan area. A major effort with this concept first occurred in the heart of Toledo's inner-city and has been ongoing since 1967. An informative report of this effort will be found in Educational Comment/1971, The Ohio Model and The Multiunit School, Toledo: University of Toledo, 1971, pp. 38-68. In the Toledo Diocesan Schools, the college has been instrumental in helping develop compe-

tency-based education (CBE) curriculum guides for the Diocesan elementary schools. We have developed an extensive inservice network of sixteen affiliated school districts in Northwest Ohio where we are mutually engaged in a wide variety of inservice work.

Further indications of our continuing working relationships with schools, community groups, professional organizations, and educational agencies, including the State Department of Education, have been reported in Educational Comment/1972, Field-Based Teacher Education: Emerging Relationships, Toledo: University of Toledo, 1972, pp. 4-13, 19-111. This report discusses the cooperation and alignments necessary in field situations for the operation of competency-based teacher education programs. Such subjects as individualization, the use of university facilitators, the utilization and activities of upper division college students and schools, and working relationships with the Ohio State Department of Education are clearly delineated.

In brief, the College of Education of the University of Toledo has had a considerable record of involvement with school systems and other educational agencies through organized and operating preservice and inservice teacher education programs utilizing the theme of competency-based teacher education and the organizing elements of individually guided education and multiunit schools. Through a process of change centered around teacher education we have attempted to deal with educational complexity and have tried to "put it all together" for

the benefit of children and youth.

A Comprehensive Model for Educational Renewal

The book titled Partners for Educational Reform and Renewal by Dickson, Saxe, et al., published by the McCutchan Publishing Corporation, 1973, is a complete case history of the development, organization and operation of the competency-based teacher education program at the University of Toledo. The reader is referred to this source for a full account of all plans, activities and results of university, public school and private school efforts from the Fall of 1967 through the Summer of 1973. The account which follows is a synopsis of the more comprehensive report.

Figure 1 represents a successful combination of educational programs, institutions, personnel and facilities for a comprehensive educational system. The comprehensive model presented in Figure 1 describes and directs a process for the improvement of teacher competency both preservice and inservice. All programs, institutions, personnel, and facilities are linked together for the benefit of children. To attempt to deal with educational complexity by considering any single component or factor which is involved with the educational process is an exercise in futility. Whatever occurs in one unit or facility affects all the others. Ultimately, the activity associated with Figure 1 results in educational change occurring in school districts, parish school districts and

A COMPREHENSIVE MODEL FOR EDUCATIONAL REFORM AND RENEWAL

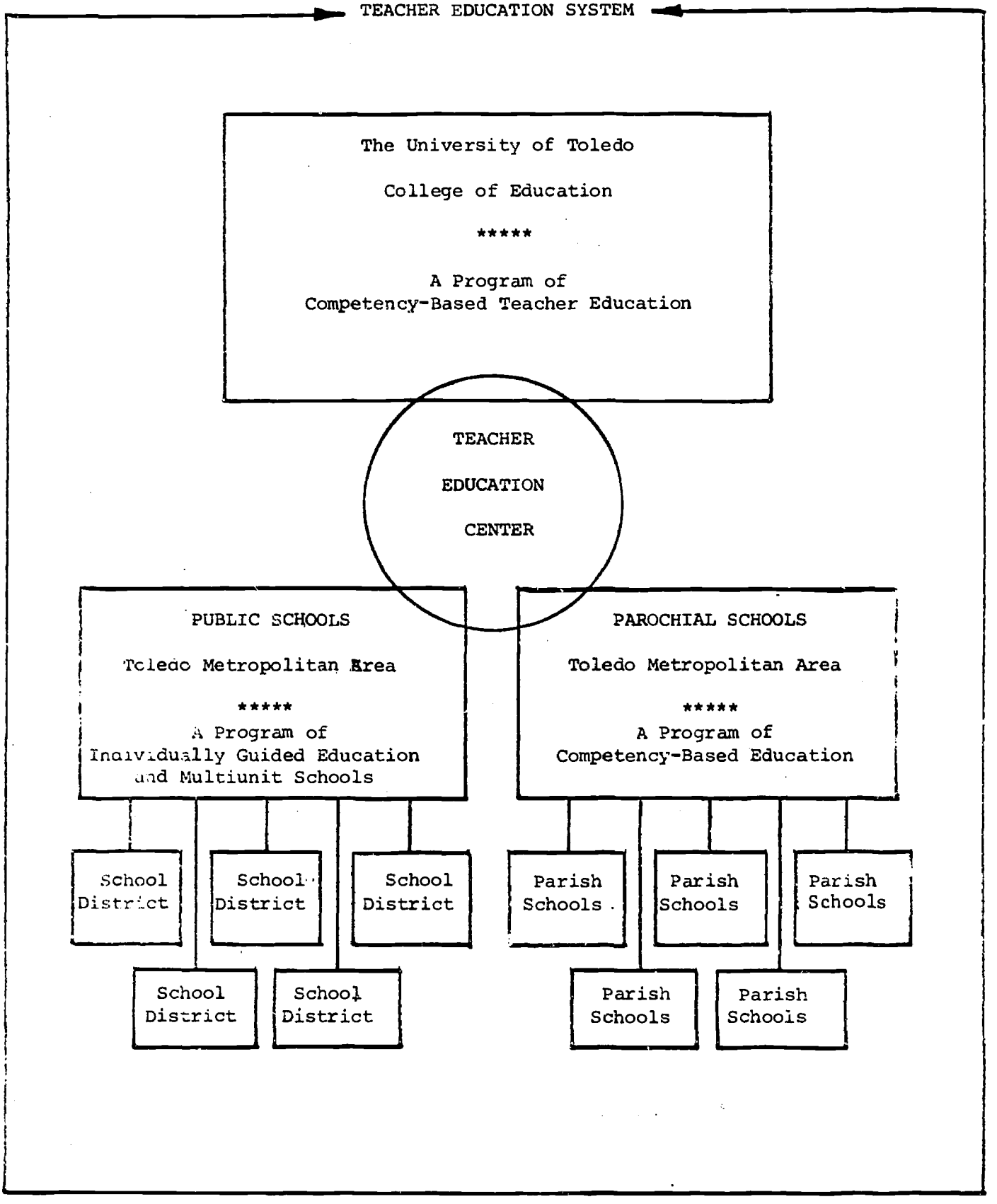

Figure 1

individual schools within those organizations.

The first important linkage involves educational programs. The college CBTE program cannot exist without its relationship to the new and changing educational programs in the public and private schools. They, in turn are bound to the evolving college based program in their programmatic efforts. Competency-based education in parochial schools and IGE/MUS in public schools have had a reciprocal and vital effect on the development of competency-based teacher education for preservice and inservice teacher training.

As with programs, so with institutions. The college does not operate successfully without reciprocal ties to the public and private school sectors. All three separate institutions can work with and do affect each other. The Toledo public schools are interested in the CBE curriculum guides produced by the parochial schools, the parochial schools are beginning involvement with individually guided education/multi-unit schools, and both are concerned with the University of Toledo competency-based teacher education program. A separation of any institution from the others would inhibit program development.

Personnel in each institution are also linked in many ways to each other through program development and implementation. College personnel are involved in public and private school operations. Teachers from both public and private schools have taken special classes and institutes offered by the college. The system for teacher education improvement is

continuous and comprehensive.

Facilities in the teacher education system are no less inter-connected than our programs, institutions, and personnel. The college freely uses school classrooms and other school facilities for instructional purposes and demonstrations. Teachers and administrators from the schools have equal access to College of Education facilities. One institution is able to borrow equipment and materials from the other with no formal arrangements needed.

Teacher Education Center

The concern of all institutions and personnel involved in the education of teachers is to maximize their interrelationships to promote educational change. Our concept and facility to achieve this goal is the teacher education center represented in Figure 2.

As a concept, our teacher education center becomes the primary institution to facilitate the implementation of IGE and CBE in the schools and CBTE in the University. In this construct the center has various roles. First, it provides the connecting unit through which subsystems relate to other subsystems of the educational system. Second, it helps provide the inservice and preservice training and re-education necessary for the above implementation process, ranging from individualized instruction through workshop or institute experiences. Fourth, it creates delivery systems

A MODEL FOR A TEACHER EDUCATION CENTER

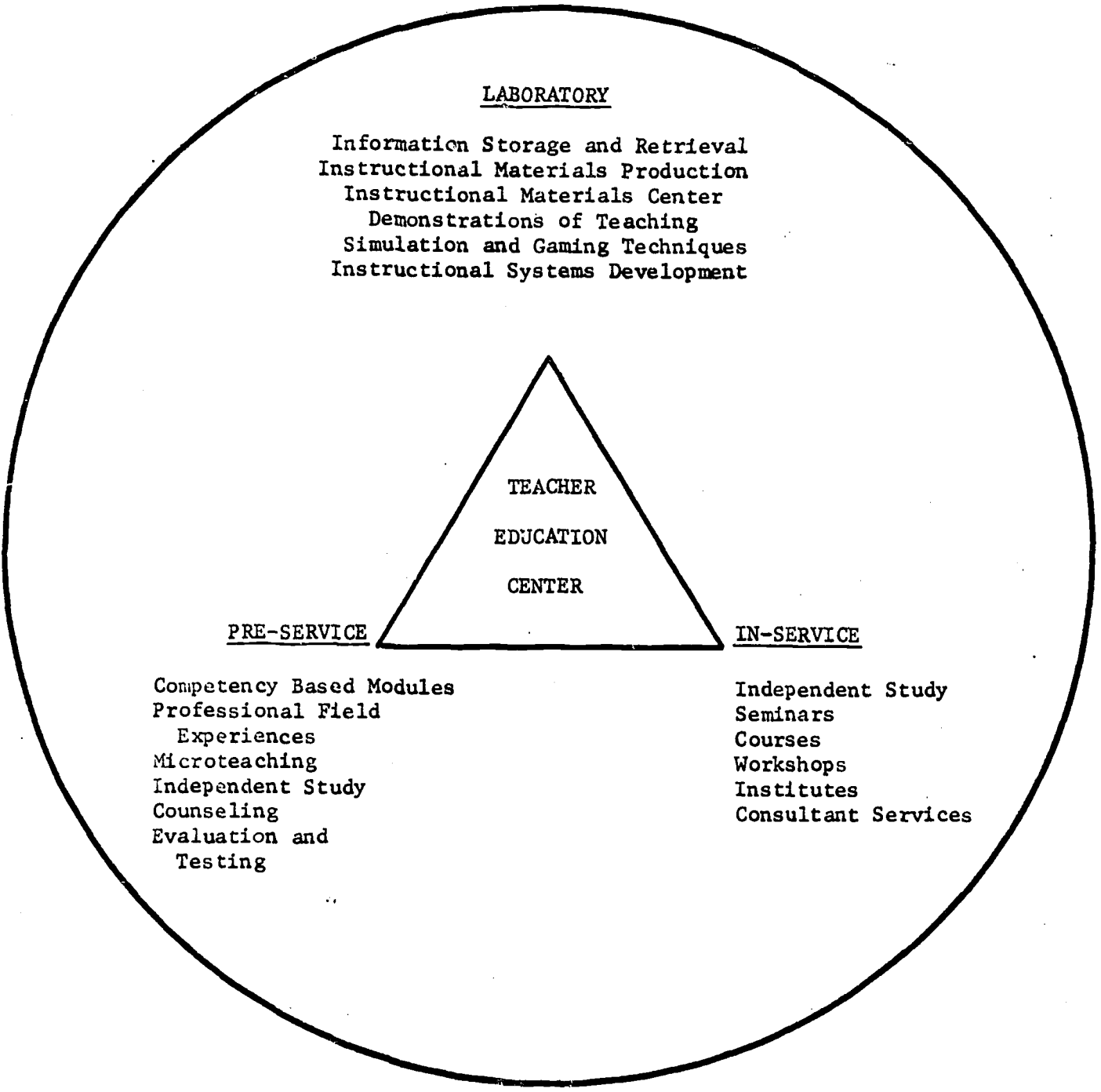

Figure 2.

to prepare and disseminate information about educational innovation and trends. Fifth, it provides opportunities for consultation on school and university educational problems ranging from individual exchanges to team teaching meetings and other meetings. Sixth, it provides evaluation and testing services for all teacher center users as well as program evaluation. Seventh, it aids in developing strategies for gaining acceptance of innovative instructional processes in schools and the university. Essentially, the teacher education center becomes the vehicle for educational change where change can be designed and where teachers can solve daily problems associated with instruction, teaming and a host of issues.

As an educational facility, the teacher center provides the following:

1. A broad collection of print and non-print instructional resources, a curriculum materials collection.
2. The opportunity for instructional materials production.
3. The development of an information storage and retrieval system to guide center users to available educational resources.
4. A microteaching laboratory to enable college faculty and pre- and inservice teachers to observe and analyze their own teaching behavior.
5. Model demonstrations of teaching techniques and practices, real and simulated.
6. A simulation and gaming laboratory to provide instructional, learning and motivational techniques through simulation and games.

As a laboratory the teacher education center makes possible the gathering together of instructional materials and equipment for a wide variety of educational utilization. Its basic functions are consultation, demonstration, instruction, production and evaluation.

Subsystems for Basic Comprehensive Model Design

Figure 3 presents a model of our competency-based teacher education program. The original Ohio model program design has greatly influenced the present result. Beginning with the original model design minimal program for preservice teachers, the faculty has accepted the original ten goals for teacher education of the basic design and the subjects, topics, and many of the behavioral objectives derived from those goals as applied to the five contexts of education previously mentioned in this paper. The faculty did not accept all of the behavioral objectives from the original Ohio model, but those accepted provided an essential core of the program on which further development was based. We look upon the development of our present teacher education program as a system of successive approximations of the ideal, original design. As we develop we implement; implementation is now a process of successfully approximating a more nearly ideal CBTE program. Program development and implementation efforts are never finished in our program. What will now be described as our competency-based elementary and secondary teacher education program is that particular program currently in existence. What the

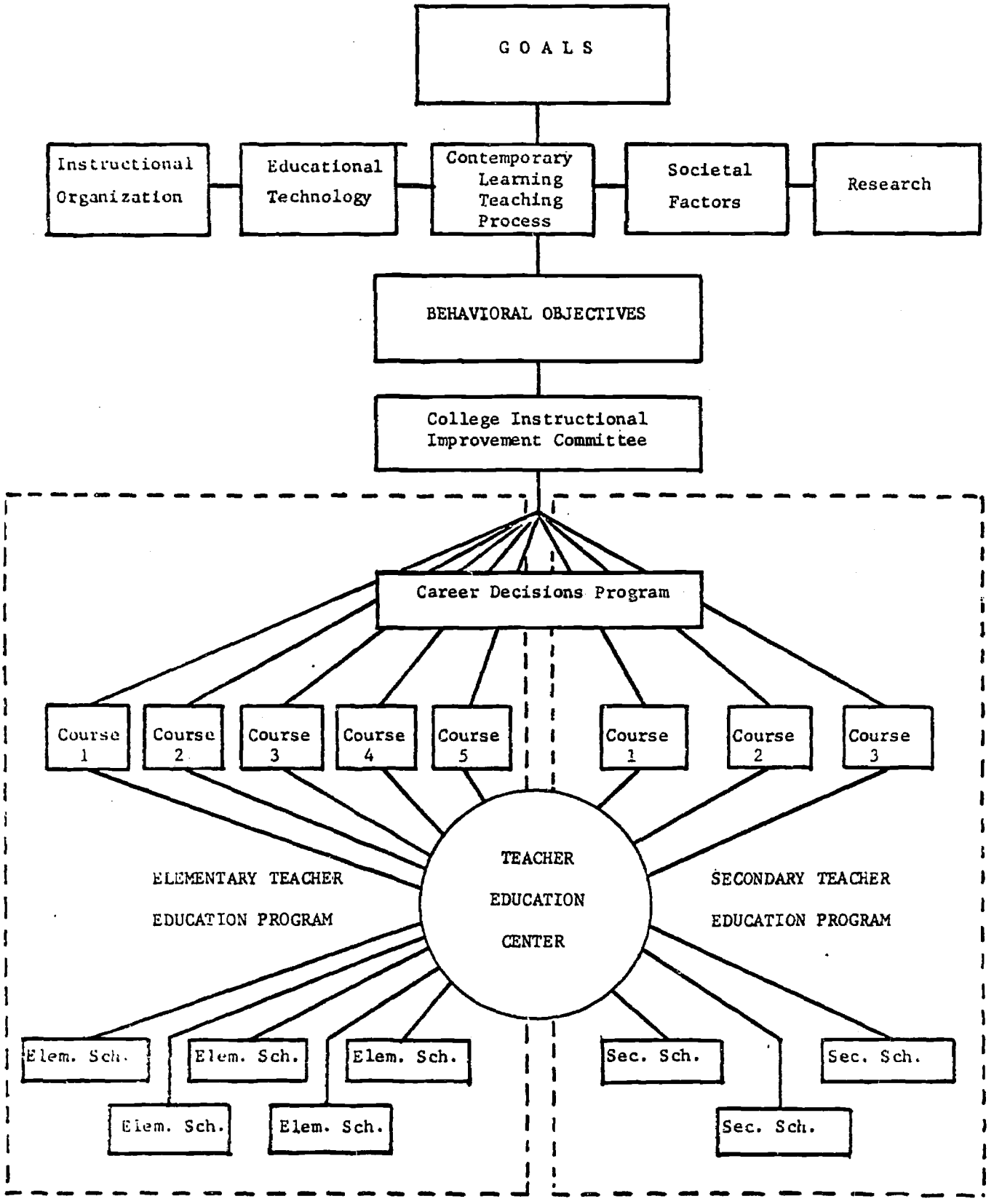
GOALS
Instructional Organization
Educational Technology
Contemporary Learning Teaching Process
Societal Factors
Research
BEHAVIORAL OBJECTIVES
College Instructional Improvement Committee
Career Decisions Program
Course 1
Course 2
Course 3
Course 4
Course 5
Course 1
Course 2
Course 3
TEACHER EDUCATION CENTER
ELEMENTARY TEACHER EDUCATION PROGRAM
SECONDARY TEACHER EDUCATION PROGRAM
Elem. Sch.
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Figure 3

program will be one, two, or five years from this date will represent our continued efforts to approach the ideal as we continue to be responsive to a changing world.

Our original conceptual design for the project involved the following efforts: (1) Defining general goals of teacher education, (2) examining these goals in five contexts, (Instructional Organization, Educational Technology, Contemporary Learning-Teaching Process, Societal Factors, and Research), (3) developing behavioral objectives for the five contexts, (4) creating educational modules to incorporate the behavioral objectives for each of six target populations (three preservice and three inservice), and finally (5) bringing together these specifications into composites called model programs.

Our broad goals of teacher education were adapted from a statement on educational goals by the Committee on Quality Education for the State of Pennsylvania.* Each of our ten goals begin with the phrase, "Each teacher should be prepared to employ teaching behaviors which will help every child" ---

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*This Committee contracted with the Educational Testing Service to develop goals of American education and how such goals were to be evaluated in Pennsylvania. Experts in the behavioral sciences from all parts of the United States constituted the standing advisory committee for the project. The report produced was in three volumes titled, A Plan for Evaluating the Quality of Educational Programs in Pennsylvania, published by the Educational Testing Service, Princeton, New Jersey, 1965.

1. Acquire the greatest possible understanding of himself and an appreciation of his worthiness as a member of society.

2. Acquire understanding and appreciation of persons belonging to social, cultural and ethnic groups different from his own.

3. Acquire to the fullest extent possible for him mastery of the basic skills in the use of words and numbers.

4. Acquire a positive attitude toward school and toward the learning process.

5. Acquire the habits and attitudes associated with responsible citizenship.

6. Acquire good health habits and an understanding of the conditions necessary for the maintenance of physical and emotional well-being.

7. Acquire opportunity and encouragement to be creative in one or more fields of endeavor.

8. Understand the opportunities open to him for preparing himself for a productive life and enable him to take full advantage of these opportunities.

9. Understand and appreciate as much as he can of human achievement in the natural sciences, the social sciences, the humanities, and the arts.

10. To prepare the world for rapid change and unforeseeable demands in which continuing education throughout his adult life should be a normal expectation.

These ten goals were our starting point in the process to develop more specific terminal and enabling objectives. They were then considered and refined from the perspective of the five contexts which represented the more important sources of change in teacher education today. From this effort there were generated more than 2,000 behavioral objectives arranged by context with each context further divided into major subjects and topics. These

behavioral objectives plus later additions and deletions became the core of our CBTE programmatic efforts.

College Instructional Improvement Committee

Before describing the present CBTE program, a brief description is needed of the composition, organization and function of the College Instructional Improvement Committee (CIIC). This committee was the third administrative, leadership unit designed to further CBTE development and implementation. Reference to Chapter 5 of Partners for Educational Reform and Renewal will reveal that there were two previous units to guide CBTE development. These temporary development units need not be described here, but it is important to note that no system created for teacher education model development is fixed or complete in its conception and operation. Modification and renewal are essential to a dynamic program. We now find that our College Instructional Improvement Committee is adequately serving the leadership and development functions for a rapidly growing program which is having a more regular and less experimental format and which demands increased attention to budget and personnel, especially the supervision and assignment of personnel.

The CIIC is a large committee (22 persons) which is made up of all persons who have leadership roles in the process of developing CBTE, CBE, and IGE/MUS programs. In addition to needed college administrators it has the team leaders from each instructional team, two student representatives and two school representatives. The dean of the college serves as an ex officio

member of the committee. The committee has the necessary personnel to continue planning and administering the CBTE program.

Career Decisions Program

The Career Decisions Program is common to both the elementary and secondary CBTE programs. Career decisions provides an introduction to the world of professional education by giving students opportunities to make three basic career decisions: (1) Whether they wish to become teachers and if they are suited for teaching, (2) on what educational level they should teach, and (3) the subject matter area of specialization. The fundamental rationale of career decisions is the belief that a student should get as much information as possible about teacher roles in a variety of school settings, the organization of schools, the social and community influences which affect school programs, and the realities of teachers' professional "life styles" before he makes a commitment to the profession of teaching. This information must be made available to each student early in his college career when he is still able to change or modify his objectives so as to not be forced to extend his preparation beyond the usual four-year period.

Career decisions is a merger between the conceptual and experiential components of teaching. The conceptual component deals with teaching and learning strategies, the problem of educational gains and losses, the distinction between description

and explanation, the techniques of modified behavior, and inquiry and value clarification. The experiential component is designed to enable students to recognize teaching and learning strategies as utilized in the classroom, to judge the effectiveness of those strategies in terms of their consequences, to observe how subject matter can be operationalized so that it becomes meaningful to students, to assess the effectiveness of behavior modification techniques used in the classroom, and to provide an "experience" in personal introspection, value clarification and analysis. All of this needs to be related to career choice, one's future pupils, oneself, and the contemporary issues of the education profession.

Career decisions is a two-quarter, eight quarter credit hour program required of all students entering the College of Education. It is taken during the freshman or sophomore years. Each course consists of a series of instructional modules. The modules for career decisions will be found in the supplementary materials accompanying this report. A student spends two hours per week on campus in small group classroom instruction and one hour in large group instruction. In addition, he is required to provide one full morning or one full afternoon per week in a related field experience as a Career Decisions Aide (CDA). Each CDA prepares a written contract which lists the duties and responsibilities for his two quarters of service. His contract is approved by the cooperating teacher. CDA experiences are of a wide variety with children of different

socio-economic levels and in different geographic settings for limited teaching activities. Time is equally divided between work on campus and activities in schools.

The modules of the first course in the Career Decisions program concern:

1. Professional interest areas involving job entry requirements, educational supply and demand, working conditions, and other pertinent information;
2. Identification of and experience with brainstorming, buzz sessions, panel discussions, sensitivity sessions;
3. Planning and organizing the career decisions aide experience including the compilation of a list of CDA activities and means to analyze various personal and language relationships between CDA's and cooperating teachers and pupils;
4. Taking audiometric tests, a speech-articulation test and the Strong Vocational Interest Inventory, including analysis of results plus comparisons of congruencies of results with persons in various occupations emphasizing some aspect of teaching;
5. Correctly understanding and distinguishing identifying characteristics between self-contained classrooms and multiunit school operations;
6. Experiencing ways of modifying behavior; selecting a specific behavior to be changed and then using positive reinforcement and/or extinction;

7. Noting examples of various forces operating in school and the surrounding neighborhood, such as those affecting teachers and teaching and involving influences of parents, colleagues, non-instructional personnel, race and/or ethnic groups, special purpose agencies, teacher organizations, status considerations, etc.; and
8. The evaluation of experiences associated with being a career decisions aide.

The second course modules are all devoted to inquiry and value clarification in teaching. These modules not only provide competencies in value clarification and analysis but also promote introspection about career decisions. The modules aim at helping the students become value investigators and decision makers, not to rebel or devalue present society but to identify choices and create alternatives.

Staffing for the Career Decisions Program is from the faculties of the divisions of educational foundations, curriculum and instruction, educational leadership, and health, physical education and recreation. Each career decisions course is taught by an inter-disciplinary team of four to six faculty and several graduate assistants. The faculty teams serve as teachers and undergraduate advisers. The adviser relationship continues after the student leaves career decisions until the junior year when he is assigned to an adviser from the faculty operating the elementary and secondary teacher education programs.

The Career Decisions Program provides a screening device through which students and the college can mutually accept or reject one another based on objective criteria, both cognitive and affective. For those who remain in the program a foundation has been provided from which more intensive educational experiences can be generated. Moreover, it provides continuity in the remainder of the student's undergraduate program.

All of the foregoing is based on the assumption that the primary task of colleges of education is not to produce teachers who will move smoothly into existing school structures, but to produce teachers who will have a dedication to experimentation, intellectual curiosity, and the maturity of judgment to nurture and develop that which is educationally viable as well as to alter or eliminate that which is educationally weak.

The Preservice Elementary CBTE Program

The elementary CBTE program consists of four basic components: general education, career decisions, the professional year program, and area of specialization. The CBTE portion of the program is limited to the five professional courses on the teacher education model (Figure 3) labeled course 1 through course 5. The Career Decisions Program has been presented above. General education consists of 94 quarter credit hours in English, mathematices, social science, art, music, health and physical education and psychology. Social science, English, science and mathematics courses consume 69 quarter hours of

this total general education requirement. The area of specialization requires a minimum of 20 additional quarter hours in a subject matter area of student choice. There are also 22 quarter hours available for electives which are usually used to strengthen the subject matter specialization area. The total program calls for 192 quarter hours for graduation with a bachelor's degree.

Professional education requirements total 56 quarter hours with career decisions using eight hours of this total. The remaining 48 quarter credit hours are divided among five courses: elementary teaching and learning, 1, 2, 3, 4, and 5. The first four courses are offered for eight quarter hours each and the last calls for 16 quarter hours. These five courses, the professional sequence, use a competency-based modularized format.

The fundamental principle that underlies the progress of the student through the program is that module achievement should be held constant, not time. A student may work as rapidly or as slowly as he chooses, but, in general, he cannot progress to the next module until he has demonstrated competency at the prerequisite stage.

The use of traditional course numbers and credit allocation is observed to provide the registrar with information compatible with the university system for recording credit. Grades are given for the successful completion of the modules in a course because of a current university requirement for grades and student interest in grades. Since modules can only

be passed or failed, the grade depends upon both the quality of work and the amount of work contracted in completing the module. The faculty wishes to go to a pass-fail system of grading, which will occur as soon as it can be arranged and agreed upon by all parties.

Students who do not complete modules are recycled (i.e., repeat) through the module a second time. Failure to complete repeated modules and general difficulty with a number of modules usually results in students being counseled out of further teacher education work or separation from the program. Our present experience indicates that slightly more than 90 percent of all students successfully complete all modules in each course and proceed to the next experience. Approximately 50 to 100 students are enrolled in each course.

The first four courses are offered two half-days a week. Each half day consists of four clock hours. Course 5 is offered on a full day basis five days a week and includes what is usually known as student teaching.

Each course and set of modules is field-based, that is, efforts are made to ensure that what is introduced in college relates to actual practice. Thus, each course in the elementary program requires an in-depth experience in a school setting where the student can demonstrate selected competencies while working with elementary pupils. Students are typically assigned to work in multiunit schools in the Toledo metropolitan area and they are under the supervision of the

instructional team responsible for the particular course in which they are enrolled.

Each multiunit school which has college students assigned to it as career decision aides, participants, or student teachers is also assigned a college facilitator. The facilitator is a member of an instructional team, participates on the elementary school instructional improvement committee, and coordinates all student field experiences in that school. Facilitators carry a half-time load for their activities in schools. In addition to aiding students assigned to the school, their primary goal is to help teachers develop their roles as classroom teacher educators. They further aid the school faculty in the implementation of IGE/MUS.

The facilitator typically has the following responsibilities:

1. Coordinating the field component of team modules and the planning of these experiences with personnel in the schools.
2. Continuing implementation of IGE/MUS through mutual agreement to attend IIC and unit meetings, to provide or obtain other needed school inservice activities, plus informal meetings with teachers when requested.
3. Coordinating the career decision aide activities in the school.

4. Supervising the student teaching program in the school including the supervision of student teachers assigned to the school.
5. Providing training and supervision to unit leaders so that they can assume a major responsibility for direct supervision of teacher education students in all field experiences.

All courses in the program are the responsibility of teams of faculty members who represent the disciplines of educational psychology, curriculum and methodology, educational media and technology, and the social foundations of education. Each team of regular faculty instructors consists of four to six persons for each course assisted by a minimum of three graduate assistants. The courses offered are arranged sequentially and can begin as early as the first quarter of the junior year. It is the present desire of the interdisciplinary teaching teams that provide instruction and serve as the students' advisers to work with the same group of students throughout their first four quarters in the professional program (courses 1-4). Team planning includes not only the team members but also elementary education student course representatives and selected public school personnel from the schools in which the students from any particular course are assigned. Each team meets at least once per week in planning sessions outside of regular class schedules. Elementary education specialists can be brought into the courses for special instruction

when necessary with particular modules. Presently there are three elementary instructional teams which will be expanded to four and possibly to six teams to accommodate the entire sequence of courses.

The initial modules came from the original Ohio teacher education design with its five contexts. The first major task was the selection from that original study of those specifications perceived to be most relevant to an elementary (as well as a secondary) teacher education program. Those instructional areas perceived necessary but not included in the original study required further generation of behavioral objectives by the faculty.

The basis objectives for the entire effort were: (1) to write objectives for the major context areas in a measurable form, (2) to write criterion instruments for the behavioral objectives, (3) to write modules in a common format, (4) to sequence modules in terms of prerequisites, concurrent and successor modules, (5) to PERT (Program Evaluation Review Technique) the instructional development events including periodical revisions, (6) to pilot test the individual modules, (7) to revise the modules on the basis of the evaluation data from the pilot test, (8) to form instructional teams with specific goals, (9) to design a strategy for accomplishing the goals, (10) to design a management system for the implementation and coordination of the program and (11) to fully implement the program.

All of the above objectives have now been met with the exception of the management system where work is partially completed. The modules in the present courses are provided as summplementary materials to this case study. Courses 1, 2, 3, 4 and 5 are numbered in the college catalog 312:320, 312:324, 312:328, 312:340, and 312:392, respectively.

Content within the course blocks is subdivided into instructional modules which meet criteria for CBTE; that is, they contain behaviorally stated objectives, enabling objectives or concept statements, a preassessment, learning activities including those of a self-instructional mode, and a criterion-referenced postassessment. Though the major responsbility for teaching a given module is based upon the expertise of a given team member, all team members play a part in that instruction. Another vital function of instruction is that all teaching strategies and methodologies taught in the blocks are "modeled" throughout by the teams. Students are provided with models of inquiry techniques, values clarification strategies, behavioral management approaches, etc., by the instructional team members as an advance organizer prior to their formal instruction.

Demonstrated competence in the pre-student-teaching (course 5) modules, both at the knowledge level in course content and at the application level in the field component of CBTE, provides an opportunity to redefine the role of the student teacher as it exists in a traditional teaching training sequence. Each step in the elementary program requires an in-depth experience in a

public school setting where the student can demonstrate selected competencies while working with elementary pupils. Students are assigned to work with a variety of innovative schools in the Toledo metropolitan area during each step in the program. The instructional team, in cooperation with public school teachers, provides close supervision of these field experiences. Two, three, four, and five weeks of class time are devoted to the field component of the respective courses.

As a result of the field-based professional sequence modules, the experiences that a student teacher has in the final laboratory experience more closely approximate those of a regular teacher. The student teacher's role changes from that of a passive observer, limited participator, presenter of materials and conforming instructor to that of a full, functioning teacher, diagnostician, and decision maker.

Terminal performance objectives that we have identified for elementary teachers require the student to:

(1) Identify important knowledge, skills and concepts with respect to specific subject matters and needs of elementary children;

(2) Translate those instructional goals into behavioral objectives;

(3) Create preassessment instruments appropriate to the subject matter and the students;

(4) Develop strategies for implementing and evaluating instructional procedures in the classroom;

(5) Implement those strategies and evaluate their effectiveness;

(6) Evaluate and revise those procedures in light of the feedback gained from the pupils' performance.

The particular role of Elementary Teaching and Learning 5 (formerly student teaching) includes two major functions:

(1) To refine terminal performance objectives of previous modules in a continuous teaching situation;

(2) To synthesize the terminal performance objectives learned in previous modules to create a continuous student teaching experience.

To aid the faculty and cooperating teachers supervising Elementary Teaching and Learning 5, twenty-two criterion-referenced checklists have been developed to evaluate student teacher performance. These criteria include the terminal performance criteria of the modules that have been taught prior to the student teaching experience. Final determination of whether or not the student has met the criterion lists is made by the cooperating teacher and college supervisor, on the basis of data collected using the common criteria.

Elementary Teaching and Learning 5 includes a weekly seminar to permit extensive analysis and refinement of teaching behaviors by the several students, with the assistance of both college and public school support staff. This provides a cadre of interdisciplinary, inter-institutional expertise with resources beyond the reach of the best college supervisor of the usual teacher education model, which features one junior

faculty member and twenty student teachers placed in five or more schools.

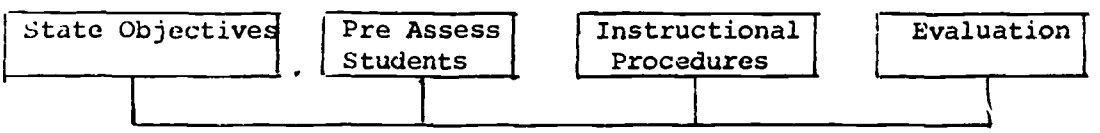
The module titles indicate faculty concern with professional academic disciplines; teaching, teaching skills and methodology; and the educational technology and media techniques and materials necessary for effective subject matter presentation. Such is the first CBTE approximation of the Ohio elementary model.

The Secondary CBTE Program

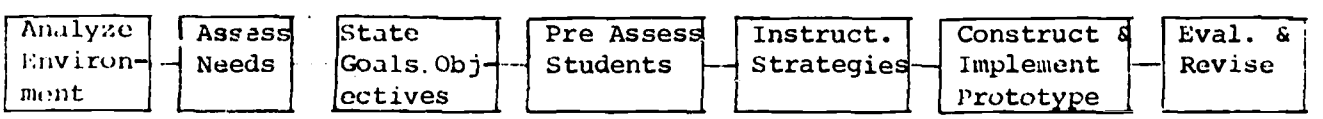
The present secondary CBTE program has drawn heavily from the original elementary design, but has also developed its own individuality. The CBTE portion of the program includes only professional education courses and totals 40 quarter hours with eight of these being the Career Decisions requirement. The remainder of the work for a baccalaureate degree in secondary education, 152 quarter hours, is devoted to subject matter specialization and general education.

It is difficult to conceive of a single organizational plan for professional education that will encompass the wide variety of program features contained in middle schools, junior high schools and senior high schools. The differences in educational philosophy, student populations, and organizational patterns of secondary schools are profound. Thus, the present professional program for secondary education is a combination of trying to recognize "what is" and "what is desired" for an effective program.

A most crucial operation in the design of a CBTE system is the decision about what objectives should be included in the program. It would seem logical that this decision should be based on what the "successful teacher" should be able to do. Faculty members are usually able and willing to state what teachers should be able to do. What was more needed was a process which enabled one to generate a comprehensive list of skills which covered most if not all aspects of teaching and which would also suggest a possible sequence for teaching these skills. A model of the teaching process was used for a broad conceptualization of what a teacher actually does. The initial model used was that prepared by Glaser:



Although this model was helpful, the functions were too broad and, therefore, did not allow for a comprehensive generation of objectives. A second teaching model with more functions was then considered.



This second model was found to be useful for the following reasons:

(1) The model depicted a general sequence in which the functions would occur, thereby suggesting a possible instructional sequence.

(2) Most actions of a teacher could be subsumed under at least one of the functions of the model.

(3) Each of the functions could also be thought of as a broad skill. A task analysis of each of these broad skills yielded several learning hierarchies of enabling objectives. These hierarchies were comprehensive and included the great majority of objectives which are included in the secondary CBTE program.

Figure 4 depicts the relationship of the process model and each of the existing secondary "courses." Note that the course labeled Secondary Teacher and Learning 3 (which includes student teaching) requires the preservice student to demonstrate competence in each of the performance areas of the model, while prior to 3 each course concentrates upon part of the model.

The effort has been to provide a mix of teacher behaviors, school and curriculum organizational patterns, and student outcomes that vary from school to school. The general approach has been to try to identify a minimal core of modules and to sequence them across three courses to comprise the program. The first two courses consist of eight quarter hours and meet four hours mornings or afternoons two days a week. The final course calls for sixteen quarter hours of credit which includes student teaching.

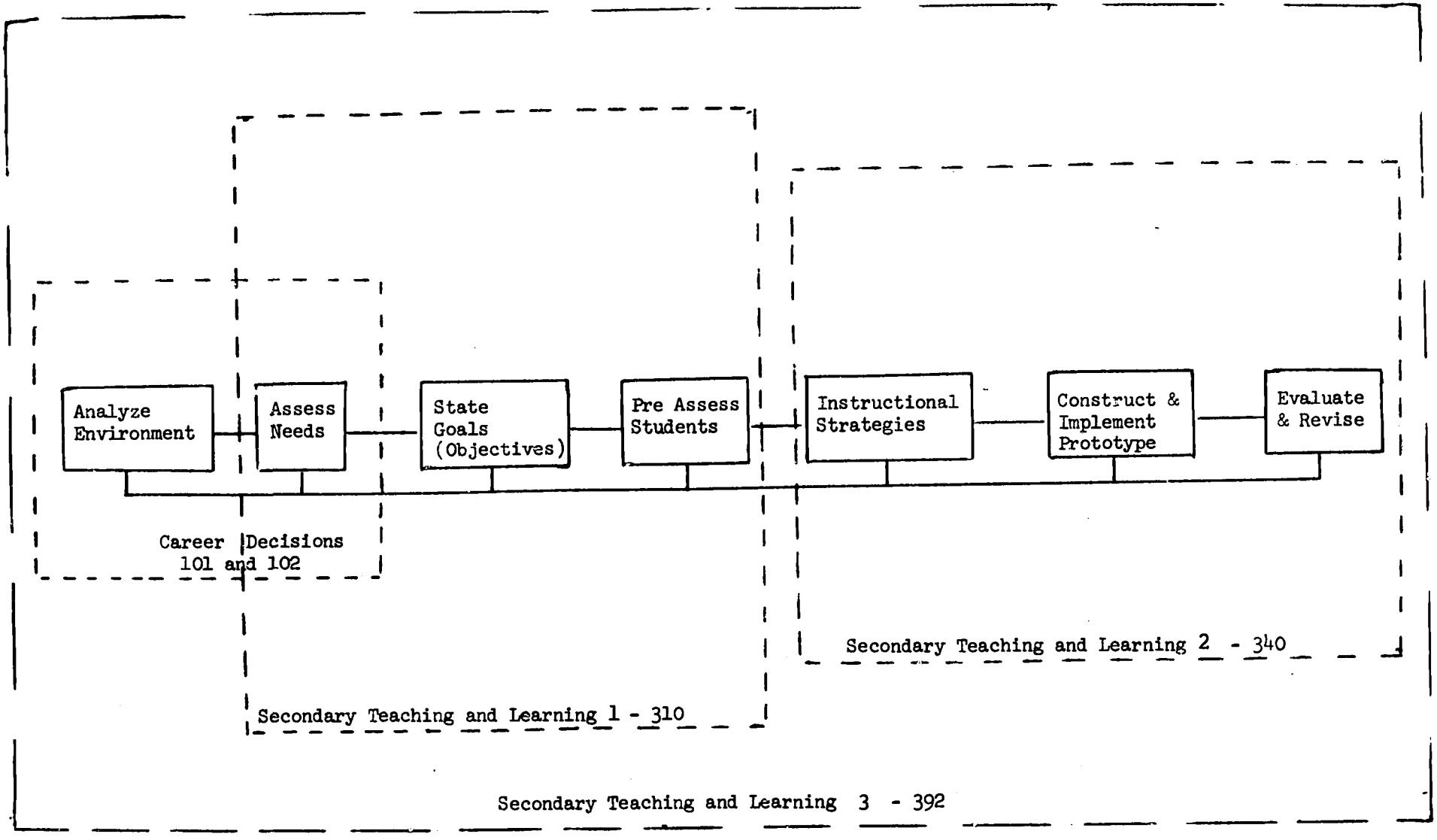

Analyze Environment
Assess Needs
State Goals (Objectives)
Pre Assess Students
Instructional Strategies
Construct & Implement Prototype
Evaluate & Revise
Career Decisions 101 and 102
Secondary Teaching and Learning 1 - 310
Secondary Teaching and Learning 2 - 340
Secondary Teaching and Learning 3 - 392

Figure 4

The secondary education faculty presently has a special working relationship with two large junior high schools to develop differentiated staffing and team teaching operations (comparable to the multiunit school concept). However, the activities of students and faculty in other secondary schools utilize the usual organizational and instructional situation. Thus, the field portion of the secondary CBTE program is based on a classification scheme for considering the behavior of a potential teacher in the field. This general classification of needed secondary education student behavior is as follows: organizing and planning classwork, classroom management, developing a motivating environment, instruction, evaluation, guidance and counseling, professional activities out of school, interpersonal behavior, and school-community relations.

The classification allows us to focus on tasks associated with the general teacher role. Sample categories of participant and student teacher field behavior are then developed as a process for selecing field behavioral objectives within the instructional modules.

The entire secondary education faculty has previously worked as two large teams to plan and operate their CBTE program. Fall Quarter, 1973, the faculty has divided into three teams of five, seven and two faculty members. Unlike the elementary program, university facilitators are not assigned to secondary schools. Secondary faculty members supervise students in their field experiences and through this effort come in contact with secondary school personnel

and work with them for the general benefit of the students under supervision as well as the inservice program development desired by the school. More definite role expectations would legitimize the outcomes sought by university supervisors.

The secondary education courses are composed of modules developed by the secondary education faculty. All courses are team-taught with specific teams assigned to each course. Inderdisciplinary secondary faculty members (curriculum and methods, educational technology and media, social and philosophical foundations, and educational psychology) differentiate functions relative to module requirements across all courses. In this arrangement all faculty members work in schools as well as on campus.

The secondary professional education courses are titled Secondary Teaching and Learning 1, 2, and 3. These courses and modules assigned to them are provided as supplementary materials to this case study. Courses 1, 2, and 3 are numbered in the college catalog 314:310, 314:340, and 314:392, respectively.

Secondary Teaching and Learning 1 aids students in differentiating between pupil behavior and teacher inferences about pupil behavior, assessing pupil needs in the classroom, instructional goal identification (behavioral objectives in the cognitive, affective, and psychomotor domains), and evaluating and analyzing instructional goals. Opportunities are provided to apply the concepts and skills in field settings.

The emphasis in Secondary Teaching and Learning 2 is the design, implementation, and evaluation of actual teaching. A microteaching clinic is utilized to help students acclimate themselves to teaching performance and to gather firsthand data about such performance.

Since students entering Secondary Teaching and Learning 3 have already field-tested some basic teaching concepts and skills and identified areas of potential strengths and weaknesses in their teaching repertoire of behaviors, they begin what has been known as student teaching with greater confidence and higher expectations and standards for performance. This experience is viewed as an extension of previous field experiences and a time for further refinement and development of skills. Specific behavioral competencies are utilized which will be demonstrated by preservice students within the ten-week period. No specific teaching strategy is dictated as "best;" what is required is that a variety of instructional strategies will be demonstrated. A weekly seminar accompanies the school and teaching experiences undertaken by students; the seminar has the following objectives: (1) to provide an extension and sophistication of skills previously learned (questionning skills, test construction, classroom management, etc.); (2) to introduce additional professional information (school laws, associations and unions, interviewing, etc.); (3) to enable further microteaching experience when needed; and (4) to provide analysis of teaching using audio-video

tapings of student teacher performance. Th entire experience is oriented toward the notion of accountability--that teachers should be evaluated on the basis of what happens to pupils in the teaching process.

Similarities and differences will be noticable in the modules for the secondary and elementary professional education courses. There is in both a concern for educational methodology and the teaching of subject matter. However, both need continued development to approximate a more ideal program.

A final examination of Figure 3 indicates that the relationship of course module instruction to the schools is provided through the teacher education center. As previously indicated, module testing and evaluation and considerable instructional effort connected with modules occurs in the teacher education center. The elementary and secondary CBTE programs are basically joined through teacher education center operations. Otherwise, the programs are distinct with the exception that they both utilize the career decisions program as their initial point of entry.

Summing Up

The public school model for IGE/MUS and the parochial school model for CBE with university CBTE relationships to both models is fully explained in Partners for Educational Reform and Renewal, pp. 263-269. Because this account is a brief case history of an unique CBTE program, more information on the inservice aspects of the program will not be presented

here. The reader is referred to the comprehensive source, Partners for Educational Reform and Renewal, published by the McCutchan Publishing Corporation.

We have explained an operating comprehensive model for educational change, represented by competency-based teacher education, competency-based education, and individually guided education and multiunit schools. It is a strategy for the preparation of educational personnel, both preservice and inservice, combined with curricular change and development that is heavily process oriented. Hence, the substance of our program is constantly evolving and emerging from the employment of program strategies and processes.

We wish to emphasize that our model has not been a preoccupation with a limited aspect of education. We have concerned ourselves with the whole of education and all individuals engaged in the educational process. We have tried to develop varied approaches to educational change while remaining consistent in our attention to educational objectives. Our model is ambitious and innovative. It combines program description and flexibility. We have created initial procedures for objective feedback and bring to our efforts a self-correcting up-to-date aspect. We understand that what now has been developed and initiated will not remain the same year after year; for us education is and shall be a changing, self-renewing process. As a strategy for preparing educational personnel, our model has considerable potential to bring about needed educational reform, given intelligent leadership and adequate support.

But any strategy devised for bringing about educational change has many problems, and our model is no exception. For example:

What are the generally agreed-on knowledge, performance, and product criteria essential in CBTE programs?

How are such criteria identified?

How are such criteria to be validated to establish that we have the right criteria, as well as to provide methodology to further a validation process?

How does one assess teaching behavior and pupil learning?

How can a CBTE program in all its complexity be managed?

How are we to install the evaluation model we have designed for our program?

These are some of the problems connected with our model development. We do not perceive such problems as insurmountable and are confident that our model has the potential to deal with these and others. For example, we have an excellent evaluation design which needs to be put into operation but we have not yet secured the funds necessary for full implementation. Our present implementation efforts are merely our best approximation of the ideal program that was designed. However, much of the potential of the program and the sophisticated procedure for evaluation cannot be realized until program operations have run for several cycles and difficulties have been worked out.

What is important is that we are implementing a very comprehensive teacher education model which has considerable potential for the improvement of teacher education. We have found that the model is well within the time and cost constraints applicable to most teacher education programs. We have been aided in model development by outside funds from the United States Office of Education, the Sears Foundation, the State Department of Education, and the Wisconsin Research and Development Center to an amount approximating $333,000. However, the greatest effort and expenditures on our model have not been from outside sources. They have come from the hard work and extra effort of our faculty who have gone far beyond usual work loads in programmatic design and implementation efforts. We are operating our present innovative model on the same financial base that has been available for our previous teacher education program. Currently, our entire college budget for undergraduate and graduate work is $2,630,373 per year. The time for the operation of our CBTE program is no greater than that utilized by the previous program. And, finally, our work has exemplified the spirit of cooperation, communication, and the best thinking of our faculty, public and private school personnel, students, and consultants. Total participation has been the norm. Our efforts have involved literally hundreds of people.

Our comprehensive model has been a unique response to our particular needs and resources. We do not think that others can exactly replicate our program because special, local

conditions make our program suited to our place and time. We do think, however, that important elements may be transferred to other institutions and programs that have similar purposes. For example, we feel that many of the processes we have experienced are transferable and that the following developments can be duplicated:

The teacher education center concept,

The process of module development,

A plan and a structure to coordinate schools and university programs,

A plan to compose interdisciplinary teaching teams of university faculty,

The role of facilitator,

A plan to merge preservice and inservice education of teachers, and

A teaching laboratory concept.

This is a partial inventory of important elements in our present comprehensive model. We have also identified several of our needs, the answers to which we would unhesitatingly adapt and incorporate in our model should we learn that someone else has made the necessary discovery or invention. We have learned that both process and product are important in innovative efforts. We stand ready to cooperate with and aid others who wish to adapt similar program elements or program development processes to their own situations.

APPENDIX

STATE OF OHIO
DEPARTMENT OF EDUCATION
COLUMBUS
43215

MARTIN ESSEX
SUPERINTENDENT OF
PUBLIC INSTRUCTION

DIVISION OF
TEACHER EDUCATION
AND CERTIFICATION
PAUL W. HAILEY
DIRECTOR

November 14, 1973

Dr. George E. Dickson,
Dean, College of Education
The University of Toledo
2801 West Bancroft Street
Toledo, Ohio 43606

Dear Dr. Dickson:

Dear Partners, Dickson, Saxe, et al:

It is more than a delight to read *Partners for Educational Reform and Renewal* by George Dickson, Richard Saxe, et al, The University of Toledo.

The book is much more than theory because I have seen it in actual practice at the University of Toledo. The Division of Teacher Education and Certification joins with those around the nation in congratulating you on this significant contribution to education in our most exciting hour in history.

Respectfully yours,

Paul W. Hailey

Paul W. Hailey, Director
Teacher Education
and Certification

PWH:kf

TOLEDO PUBLIC SCHOOLS
Manhattan and Elm
Toledo, Ohio 43608

Lee R. McMurrin
Deputy Superintendent-Instruction
and
Program Development

November 16, 1973

Dr. George E. Dickson, Dean
College of Education
University of Toledo
Toledo, Ohio 43606

Dear Dr. Dickson,

Thank you for inviting us to your faculty retreat and allowing us to participate in your planning for the forthcoming year. As you know we have been happy to work with you and your faculty in the development of field centers for your Elementary and Secondary CBTE programs and the continuous development of the inservice component of your Graduate offerings.

It makes great sense to us to be involved jointly with your staff in the design and implementation of elements of your program which take place in the public schools. This permits both of us to make effective use of the time of teachers and college participants. What is most important to us, it ensures a worthwhile experience for our clients, the pupils.

We look forward to cooperating with you in arranging field experiences as well as inservice work for our faculties moving into new programs. Clearly, the cooperative relationships which we have arranged are synergistic. We look forward to continuing and expanding these mutually advantageous activities.

Sincerely,

Lee R. McMurrin

Lee R. McMurrin
Deputy Superintendent

LRM/ae

DIOCESE OF TOLEDO
DIOCESAN SCHOOL OFFICE
436 WEST DELAWARE AVENUE
TOLEDO, OHIO 43610

Telephone 255-8282
Area Code 419

Nov. 16, 1973

To Whom It May Concern:

For the past three years the Toledo Diocesan Schools have received considerable help from the University of Toledo College of Education and Center for Educational Research in curriculum development on the elementary and secondary levels.

By means of specialized courses and consultations with our curriculum coordinators and committees, University personnel have given us invaluable assistance in the complete revision of the elementary curriculum for our ninety-seven schools. They have also provided help in the inservice programs developed to help teachers to implement the new guidelines.

Specialized courses and consultations with University personnel have also been important factors in curriculum revision programs conducted by several of our Diocesan high schools.

We all feel that the University should be commended for making available to local schools and school systems services such as our system has received.

Sincerely,

Raymond A. Etzel

(Rev.) Raymond A. Etzel
Superintendent

Funded by Diocesan Development Fund

SYLVANIA CITY SCHOOLS
6801 Maplewood Avenue
Sylvania, Ohio 43560
882-0555

Office of the Assistant Superintendent

August 27, 1973

Dean George E. Dickson
College of Education
University of Toledo
Toledo, Ohio 43606

Dear Dean Dickson:

As the new school year approaches, we again look forward to working closely with the College of Education.

We are especially interested in the continuance of the excellent University of Toledo field-based teacher education program. Both your student and teaching personnel have been most helpful in assisting us to develop the curricular structure within our functioning multiunit schools. Through your facilitators we have, in fact, been able to better individualize instruction for the youngsters in our school system.

We would also like to continue our strong relationship with your staff members assigned to the preservice and inservice training components of our schools. Our staff has been most receptive to the variety of inservice training provided by University of Toledo facilitators and offered during the instructional day. It was also most helpful to have off-campus courses offered in our school district, defined by our staff and provided by your Center for Educational Research. We have on the drawing board, this year, a plan to involve parents in an off-campus course explaining programs in our elementary schools.

Again, we look forward to our continued relationship and to future ideas that will most certainly be generated by Sylvania City Schools and the University of Toledo in this cooperative venture.

Sincerely,

Merrill A. Grant

Dr. Merrill A. Grant
Assistant Superintendent

MG;kb

TOLEDO PUBLIC SCHOOLS
MANHATTAN AND ELM
TOLEDO, OHIO 43608

November 20, 1973

George E. Dickson, Dean
College of Education
University of Toledo
Toledo, Ohio 43606

Dear Dean Dickson:

The Metropolitan Toledo League of Multi-Unit Schools is well into its second year of operation as a consortium of institutions. The six participating school districts, the fifteen schools and the College of Education have developed cooperative and viable relationships. However we are certain that these relationships could not have developed without your leadership at the University of Toledo.

Yet, we must also indicate that the field-based component of the CBTE program could not have become compatable with IGE/MUS without inspiring leadership from the university teams and their facilitators. All facilitators, according to feedback from the schools, are leading their students (freshmen aides, juniors methods students, and senior student teachers) through a comprehensive field-based CBTE/IGE/MUS program.

The Elementary Teacher Education Teams are finding and exploring new paths in teacher education for both pre-service and in-service personnel. Moreover, the secondary Teacher Education Team is showing, at Robinson Junior High School, that CBTE/IGE/MUS alternatives are available for discovery and development at the middle school level. I would suggest that this team will make discoveries that will be of national importance.

Finally, those field consultants assigned directly to the Metropolitan Toledo League of Multi-Unit Schools are the backbone of our in-service program. All evaluations to this point show teacher perception of effectiveness maximum.

We look forward to this continuous cooperative building process.

Sincerely,

Hawthorne Faison

Hawthorne Faison

HF/fc