ABSTRACT
            This paper describes the Educational Media Center
(EMC) at the University of Michigan School of Education and its
attempts to become technologically ready for competency-based teacher
education. The EMC, a facility for storing, producing, promoting, and
disseminating learning resources, comprises seven components. A media
library serves as a model of a school library to train prospective
teachers and library media specialists in the use of school media
centers. The autiovideo library, which includes a multimedia
classroom/workshop, conducts a series of workshops each semester to
train teacher education students in media competency. A
self-instruction laboratory is equipped with adequate hardware for
the faculty to develop modular units and for students to retrieve
information. The laboratory also includes a program designed for
students to teach themselves how to operate the nonhuman sources of
instruction, and to design and produce inexpensive graphics material.
A graphics laboratory includes equipment for dry mounting and
laminating, photographic copying, and production of transparencies
and overlays. The closed circuit television studio and control room
is used to develop programs on videotape to supplement classroom
instruction. The darkroom and the film ordering and processing office
complement the other units in performing their tasks. (PD)

INSTRUCTIONAL TECHNOLOGY IN SUPPORT OF COMPETENCY-BASED TEACHER EDUCATION AT THE UNIVERSITY OF MICHIGAN

Competency-based teacher education is a concept in teacher education that is rapidly gaining a foothold in divisions, departments, and schools of education throughout the United States. Allan A. Schmieder[1] in his Competency Based Education: The State of the Scene, reported data from questionnaires sent to 1200 teacher preparatory institutions by the AACTE Committee on Performance Based Teacher Education. Of the 783 responding institutions, 125 indicated that they presently had programs which, for the most part, could be said to be consistent with the CBTE definition for Stanley Elam's[2] "State of the Art" paper. Another 366 institutions stated that they were in some developmental stage of planning to establish competency-based programs. Only 228 teacher preparatory institutions indicated that they were not involved in competency-based teacher education at the time.

In a recent edition of the Phi Delta Kappan, Alfred P. Wilson and William W. Curtis[3] presented results of a questionnaire circulated to chief state school officials to ascertain the extent to which each of the 50 states had mandated or encouraged competency-based certification programs. Their survey showed that 10 states have mandated competency- or performance-based certification programs for teacher preparation.

Benjamin Rasner and Patricia McKay[4] in their recent
article in the Phi Delta Kappan, January, 1974, stated
that "Among the most important factors in the development
of the CBTE movement has been the technological readiness
of the education community - a readiness that advanced
rapidly during the sixties." They further stated that
"the recent advances in instructional technology may be
due, in large measure to the investment of federal funds
in a variety of R and D efforts, combined with a willingness
of both practicing educators and the educational research
community to address themselves more closely to the problems
of the classroom. The U.S. Department of Health Education
and Welfare's Commission on Instructional Technology,[5] often
referred to as the McMurrin Commission defined instructional
technology as follows:

> A systematic way of designing, carrying out,
> and evaluating the total process of learning
> and teaching in terms of specific objectives,
> based on research in human learning and com-
> munication, and employing a combination of
> human and non-human resources to bring about
> more effective instruction.

In 1972, a task force was appointed in the School
of Education at the University of Michigan to study the
feasibility of incorporating CBTE in its teacher education
program. Immediately, the Educational Media Center (EMC)
of the School of Education sensed an obligation in this
regard and promptly began to gear itself up in order to
become technologically ready if and when CBTE were adopted

by the School. It was clear that it was absolutely necessary
for us to maintain a viable instructional technology service
facility to support CBTE, for it was recognized that
instructional technology is the hub around which CBTE revolves.

What has the EMC done, and what is it continuing to
do to become technologically ready for CBTE at the University
of Michigan? An answer to this question can best be
derived from a description of the activities of the Center
since its inception in 1970.

In June of 1970, the University elementary and
high school were phased out at the University of Michigan,
and the task of renovating the University school to house
the School of Education was undertaken. The several media
units in both schools were brought together in a renovated
area on the third floor of the Education Building to form
what is now known as the Educational Media Center, a
facility for storing, producing, promoting and disseminating
learning resources.

The Educational Media Center is comprised of the
following components: (1) a media library; (2) an audio-
video laboratory, including a multi-media classroom/workshop;
(3) a self-instructional laboratory; (4) a graphics laboratory;
(5) a closed circuit television studio and control room;
(6) a darkroom and (7) a film ordering and processing office.

The Educational Media Center library houses approximately
20,000 elementary and secondary school trade books and

approximately 6,000 textbooks on the elementary and secondary levels. There are also some 1,300 curriculum guides from school systems from all parts of the United States and a variety of "software" materials for use in elementary and secondary curricula, including records, filmstrips, kits, super 8mm filmloops, transparencies, and cassette tapes. The materials in the library are used almost exclusively in the teacher education curricula, and by student teachers doing their directed teaching. The library also serves as a model of a school library to train perspective teachers and library media specialists in the use of school media centers. Twenty-four wet carrells in the library make for easy use of audio visual software and support individualized instruction and learning, one of the underlining tenets of CBTE.

The audio-video laboratory consists of an equipment storage and repair room from which "hardware" is dispensed to faculty and students in the School of Education. Adjacent to the audio-video laboratory is a multi-media classroom equipped with rear projection screen and a lectern controlled system for multi-media presentations. This classroom also serves as a workshop area for projection and audio training and practice.

The audio-video laboratory maintains for loan to faculty and students in the School of Education all the conventional types of audiovisual equipment as well as television equipment including several portable systems

which include camera, VTR and VTR adapter and monitor.

Besides loaning and maintaining audio-visual equipment, the audio-video laboratory staff conducts a series of workshops each semester to train teacher education students in media competency. Available to them are three two-hour workshops in projection training, magnetic recording and video-tape recording.

The self-instructional laboratory is equipped with fifteen carrells and adequate hardware necessary for faculty to develop modular units or programs and for students to retrieve information. It permits students to do independent study and to work at their own individual pace. Presently, in the self-instructional laboratory there are programs designed for students to teach themselves how to operate the non-human resources of instruction and to design and produce inexpensive graphics material.

The graphics laboratory principally serves the faculty and students of the Teacher Education Division. Graphic production available in the laboratory includes dry mounting and laminating, photographic copying, production of transparencies and overlays, and correlation of subject areas with activities involving map-making, models, mock-ups, bulletin boards, posters and scientific exhibits.

The closed circuit television studio and control room are completely equipped and operational with two studio cameras, a special effects generator, four monitors in

a single unit, a communication system including headsets
with built-in microphones, a sound mixer and three microphones.
Conduits were installed from the studio to all classrooms
on the second floor during the renovation of the building
making it possible to transmit signals from the studio
to the classroom in the future. The studio is now being
used by faculty to develop programs on video tape to
supplement classroom instruction. It also serves as a
training facility for a television course entitled,
"Television in Teaching."

In addition to the four major units mentioned above,
the film processing office and photography laboratory com-
plete the Educational Media Center's operation and complement
the other units in performing their tasks.

Some recent actions have indicated that competency-based
teacher education will soon be adopted by the School of
Education in its teacher education program, if not fully,
in part, as a viable component for educating teachers.
For example, recent correspondence from Dr. John W. Porter,
Superintendent of Instruction for Michigan, to Dean
Wilbur J. Cohen stated that the State Board of Education
has approved the proposal of the University of Michigan
and the Ann Arbor Public Schools entitled, "A Competency-
Based Elementary Teacher Preparation Program Model."

The School of Education is studying CBTE thoroughly
and thoughtfully, and appears determined to be deliberate
rather than hasty in its adoption of the concept. Likewise,
our efforts to become technologically ready for CBTE is
deliberate and intense.

1   Allen A. Schmieder, Competency-Based Teacher Education: The State of the Scene. (Washington, D.C.: American Association of Colleges for Teacher Education and ERIC Clearinghouse on Teacher Education, 1973)

2   Stanley, Elam, Performance-Based Teacher Education: What is the State of the Art?(Washington, D.C.: American Association of Colleges for Teacher Education, 1972)

3   Alfred P. Wilson and William W. Curtis, "The States Mandate Performance-Based Teacher-Education," Phi Delta Kappan, October, 1973, pp. 76,77.

4   Benjamin Rasner and Patricia McKay, "Will the Promise of C/PBTE be Fulfilled?" Phi Delta Kappan, January, 1974, p. 290.

5   Tickton, Sydney G. (ed.): To Improve Learning: An Evaluation of Instructional Technology, Vol. I, R.R. Bowker, New York, 1971, p. 22.