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ABSTRACT

This document reviews the development strategies of the Far West Consortium for development, dissemination, and evaluation (D,D&E) training. These strategies concerned three areas: 1) cooperating institutions, 2) system development approaches, and 3) functional context programming. To develop the strengths of several agencies, a consortium of cooperating agencies included 1) agencies with competence in D,D&E installation and maintenance of training systems; 2) a junior college with competence in and commitment to the development and service of vocationally oriented curricula; 3) a college which is willing to develop and provide graduate level programs in D,D&E work; and 4) representation from educational, community, and student interests. Key procedures were the examination of the problem specification of expected outcomes, conceptual design and planning, prototype development, operational testing, revision and additional operational testing, and packaging for implementation and dissemination. The third area of stress, functional context learning, provides a meaningful orientation to the entire job for which the student is being trained, introduces and organizes topics so that the relevance of each to the whole job can be demonstrated to the student at the time the topic is introduced, follows a whole-to-part sequence in teaching functions and procedures, and programs instruction for each student so that he learns a graded series of tasks. (MJM)

Development Strategies Used by the Far West Consortium for D,D&E Training

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Whenever people ask us what the Far West Consortium is all about, we go through a series of mental and verbal gyrations that leave us feeling we may have been less than lucid. And yet it is extremely important that we be able to communicate what we are about and why we are about it. We also need to be able to describe our approach clearly, so that it can be understood by people at all levels of the educational spectrum.

The Far West Consortium was set up to create a transportable system for functional competence training of development, dissemination, and evaluation personnel at professional and paraprofessional levels in education. The design phase began in June of 1970, with a needs assessment, an examination of priorities, and the basic design of the training and supporting systems. This phase culminated in the Design Report, published in December of that year. In February 1971, the Far West Consortium began its operational phase. The first year's operations were devoted to further development of the various systems and the beginning of materials development. Last fall we began testing prototype programs at the Entry Professional level at San Francisco State College, and the Paraprofessional level at Canada College. At present these programs are still in operation and course development is continuing.

Future development of the Consortium is scheduled to include advanced design, development, evaluation, and revision of the basic systems through prototype and field testing. Our end product will consist of a transportable Functional Competence Training model for training personnel in educational D,D&E. We are committed to design, develop, evaluate and demonstrate a model program that immediately addresses itself to significant regional and national needs, that contains within its basic structure the capacity for easy and efficient modification, refinement, and elaboration to meet a variety of additional needs, and that has been validated and packaged for implementation in other areas. Our plan is to have the program ready for general dissemination in 1974.

The development of a program for training educational D,D&E personnel dictates a different type of strategy than that usually found in developmental projects. Clark and Hopkins (1969) suggested several, including

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(a) establishment and support of experimental or developmental training programs, (b) initiation of course content improvement programs, and (c) establishment of consortia of institutions for inservice development of D,D&E personnel in education. By integrating these recommendations we arrived at a new pattern of coordination which would combine the strengths of several different kinds of agencies. We put together a consortium of cooperating institutions including:

a. Agencies with competence in the design, development, evaluation, installation, and maintenance of training systems. These are the Far West Laboratory for Educational Research and Development, American Institutes for Research, Human Resources Research Organization, Stanford Research Institute, and Educational Testing Service.

b. A junior college with competence in and committment to the development and service of vocationally oriented curricula. Our choice here was Cañada College.

c. A college which is willing to develop and provide graduate level programs for personnel who wish to gain entry into D,D&E work at the professional level. San Francisco State College is hosting our program on the entry professional level, and we are currently involved in planning for a Ph. D. program with the University of California at Berkeley.

d. In addition there is representation on the Consortium Board of Directors from educational, community, and student interests. This representation is accomplished through members from the State Department of Education, the San Lorenzo Unified School District, and students in the program.

Our developmental strategy makes use of a body of concepts and techniques which have been developed during the past two decades and can be described as a systems development apporach. This approach consists of a set of key procedures, some of which we have already implemented.

These procedures include:

a. examination of the problem to establish the size and characteristics of the national and regional demand for D,D&E personnel;

b. the specification of expected outcomes;

c. conceptual design and planning;

d. prototype development;

e. operational testing;

f. revision and additional operational testing;

g. packaging for implementation and dissemination.

The first of these procedures is an examination of the problem area to identify needs and establish priorities. The rationale supporting the selection of our priorities was derived from our analysis of available manpower and training studies and our own surveys. Because of the nearly total absence of programs to train educational developers, and because of the surprisingly large numbers of development functions performed by sub-doctoral level personnel, we chose to focus on training for development positions at paraprofessional (technician) and entry professional levels.

Having identified the training development areas, the next procedure calls for the specification of training objectives. Since our training system focuses on the skills and competencies required to engage in educational development, we conducted four different types of analyses to verify competencies which were generic to a broad range of educational development projects. The outcome of this effort was a list of competencies and the associated proficiency levels for entry and paraprofessional personnel.

We designed the curriculum around a number of areas and sub-areas common to several D,D&E functions, and organized training in terms of modular units so as to provide a highly flexible training program from a relatively modest number of instructional modules. Our committment to presenting training in functional contexts results in the organization of these modules into five courses: Analysis, Planning and Design, Developmental Engineering, Evaluation, and Dissemination/Marketing. In addition, there are several process oriented courses that are germane to all five of these contexts, namely, Communication Skills, Information/Data Collection and Organization, and Management.

We place a great deal of emphasis on active learning with provisions for demonstration, practice, progressivly more difficult exercises, close supervision, regular assessment of performance, and utilization of a variety of training aids. We plan to bring the academic experiences together with the work situation through a highly engineered internship. We call it an "engineered internship" to indicate that the opportunity for learning on-the-job will not be left to chance, but will be given careful attention. This internship will provide the student with an opportunity to apply and extend the skills he has learned with the course materials and to acquire new ones under realistic conditions. The close relationship between the employer, the trainee, and the instructional manager makes possible the specification of job responsibilities and assignments, establishment of checkpoints and reduction of the usual gap between the vocational and academic areas.

The training system provides for evaluation of student competences to monitor the quality of training, determine student entry levels, evaluate student progress, and assess the level of competence upon leaving the program. There is a relationship between the assessment criteria used during training and the performance standards that the student is likely to need on his entry job.

An overall system and several subsystems make up the program. These subsystems are: Training Development, Training Implementation, Personnel, Employment, Evaluation and Dissemination. Underlying them all is the Integrating system, since it is responsible for making sure that all the others are developed and are functioning as designed.

If we were to list a group of Descriptors for our program they might include the following: "performance based," "multiple level program," "functional competence program," "functional context of R&D," "transportable," etc. There is a certain and intentional family resemblance among these terms. They indicate that the basic goal of the program is to give the student skills and knowledges that will be applicable in the field of D,D&E for which he is preparing or in which he is already employed.

The training materials themselves also have certain definite characteristics. A spiral sequencing concept (Banathy, 1963 and 1969) has been employed to create a multi-level training program in which fundamental concepts, skills, and knowledge areas are repeated with increasing complexity in successive levels of training.

One of the unique features is our emphasis on functional context programming. The essential form of functional context learning is to:

a. provide a meaningful orientation to the entire job for which the student is being trained;

b. introduce and organize topics so that the relevance of each to the whole job can be demonstrated to the student at the time the topic is introduced;

c. follow a whole-to-part sequence in teaching functions or procedures;

d. program instruction for each student so that he learns a graded series of tasks, each new task requiring him to master new knowledges or skills.

The modular units mentioned earlier are essentially self-contained. Students will be able to by-pass a module in a course if they can demonstrate the required level of proficiency on the competencies contained in the module. Students without these competencies progress through the modules at their own pace.

One of the major objectives of the training program is to place the student in an independent, self-directing, active learning position with an instructional manager functioning as a guide and resource. The instructional manager will be available as needed to assist the student on an individual basis to evaluate his performance, and to prescribe additional exercises or work as indicated by the quality of the student's performance. Our concept of the instructional manager's role, as a counselor rather than a content expert, places a heavy burden on the instructional modules. In essence, they must be self-contained and provide the students with the information and exercises required to master the competencies at the appropriate proficiency level.

The development of training materials, assessment measures, and of the various systems supporting the program, began as soon as the project became operational. Our development consists of the following stages: design, construction, validation, revision and revalidation. In most cases the

the design and construction of course materials and supporting systems has been a joint venture, including staff from the various colleges, one or more development agencies, and the Consortium and management staff. Student effort to practice training in real work settings with supervisors meeting with instructional managers and instructional managers working along with developers from several agencies provides fairly immediate feedback regarding the relevance and effectiveness of our instructional materials.

I should like to be able to say that our developments are all on schedule and that our operations are progressing smoothly. If I can characterize our experience by one phrase, it would be "trying to do too much, too soon, with too little." At first we concentrated most of our resources on development of materials and getting the Consortium going. Consequently, we were unable to fully test the real meaning of the instructional management role, the engineered internship, or to develop a viable evaluation system. We have reorganized our priorities somewhat as a result of our exper nces and are cutting back on developmental schedules and program operations. This will permit us to concentrate more of our resources on development of the engineered internship and the evaluation system.

The Consortium will have completed development and testing of model Functional Competence Training programs for the entry and paraprofessional levels for preservice and continuing education by 1974. Both will be available in transportable form. Our intent is to work closely with USOE to develop plans for the formation and installation of Functional Competence Training Model consortia in other regions.

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