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ABSTRACT

This booklet contains a functional system for the development of the vocational education curriculum. It is intended as a quick reference when a brief curriculum overview is needed by those interested in vocational education, such as congressional aides, the National Council of Vocational Education, the U.S. Department of Education, and the American Vocational Association. It is also designed for use by vocational educators involved in developing curriculum and instructional materials to prepare students for an occupation. The booklet describes each of the seven steps to curriculum development: (1) precurriculum study; (2) job study; (3) design curriculum; (4) develop materials; (5) field test; (6) implement; and (7) follow-up evaluation. The document lists names, addresses, and telephone numbers of the members of the National Network for Curriculum Coordination in Vocational and Technical Education. (YLB)

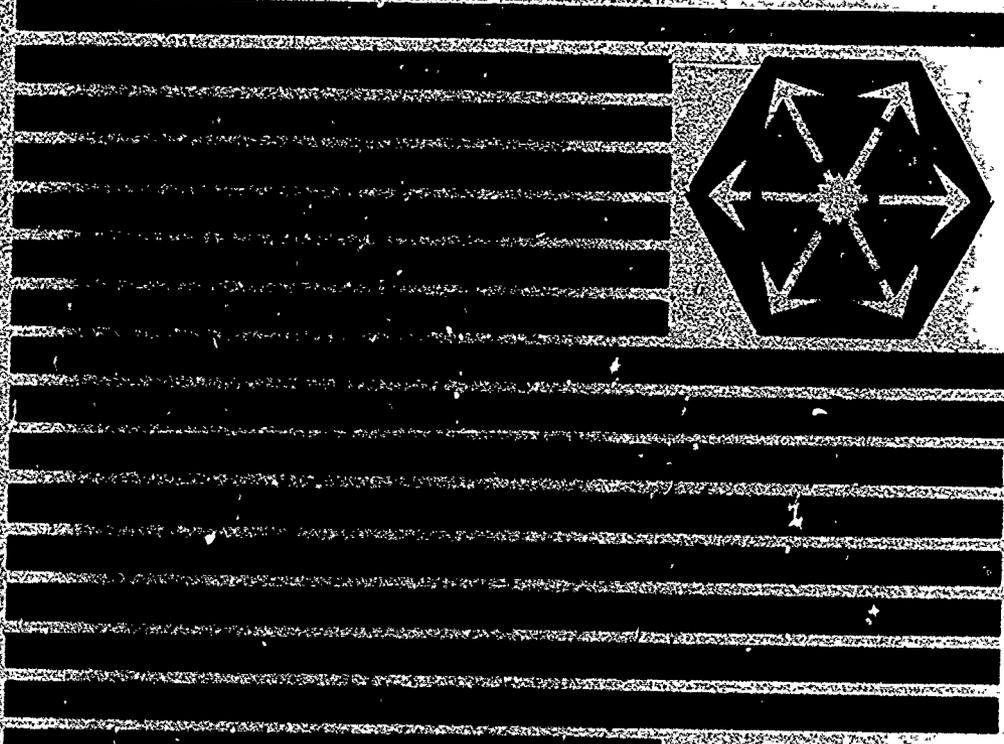
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A System For

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A System for Curriculum Development

East Central Network for Curriculum Coordination



**National Network for Curriculum Coordination in Vocational
and Technical Education, NNCCVTE**

June, 1989

Preface

The East Central Network is one of six regions in the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE). The network serves the vocational education community through the sharing of curriculum and curriculum-related information.

Each of the six regions has a Curriculum Coordination Center, a director, and a State Liaison Representative (SLR) in each state or outlying area of the region. Their names and addresses begin on page 17.

The East Central Network State Liaison Representatives and staff of the East Central Curriculum Coordination Center are continually involved with the identification of resources needed by vocational educators. This document is intended to be a quick reference for use in developing vocational education curriculum.

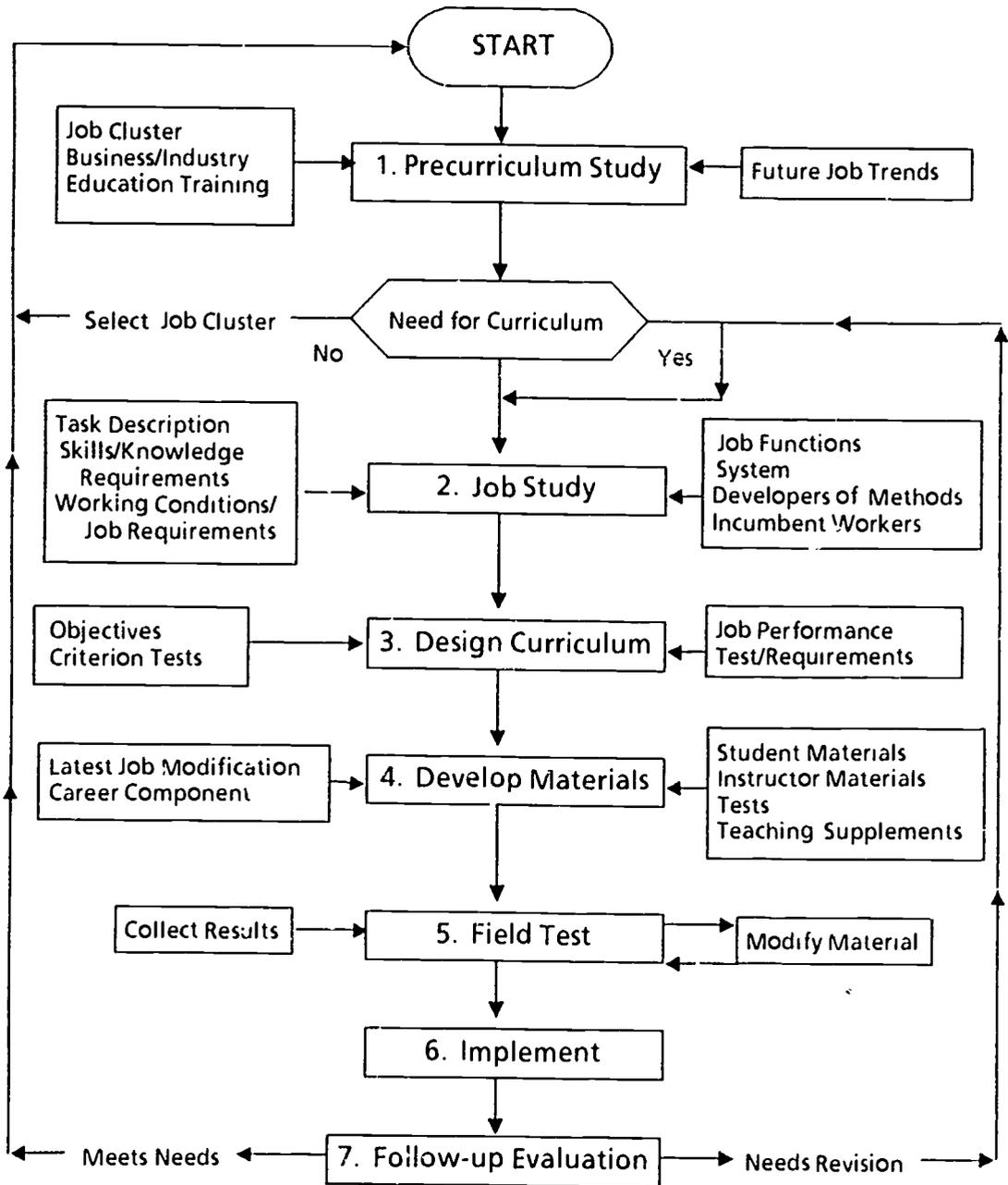
We wish to express our appreciation to the ECN Curriculum Development Committee: Peggy Pool, Illinois, chairperson; Rachel Williams, Delaware; Ted Glenn, District of Columbia; Joyce Keefer Leimbach, Ohio; and Lou Chinnaswamy, Wisconsin. Their concern, dedication and expertise made this document a reality. Printing was accomplished through the Illinois Vocational Curriculum Center.

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Curriculum Development System



Introduction

This booklet contains a functional system for the development of vocational education curriculum. The system will be helpful as a quick reference when a brief curriculum overview is needed by those interested in vocational education, such as congressional aides, National Council of Vocational Education, U.S. Department of Education and American Vocational Association. It is also intended for use by vocational educators involved in developing curriculum and instructional materials to prepare students for an occupation.

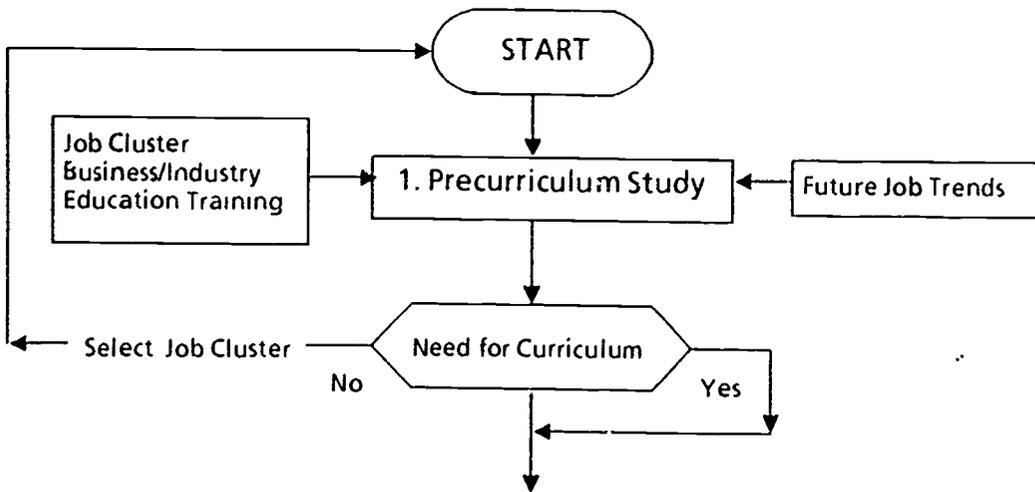
The system includes seven "steps" to curriculum development. The development process begins with an analysis of the need for a specific curriculum and ends with an evaluation of the curriculum's effectiveness.

The steps resulted from a consensus of the East Central Network (ECN) State Liaison Representatives (SLRs) Committee and the curriculum development system used in their respective states.

This approach is designed to be **flexible** with consideration of the needs of students with individual differences or special characteristics. It allows for consideration of socio-economic factors, job trends, and business/industry needs.

This illustrated system will need modifications due to differences among states and agencies. The process represents what all vocational education and training institutes are striving to implement in order to prepare the individual for employment.

Curriculum Development System



Step 1

Precurriculum Study

The need to create new vocational education curriculum or modify existing curriculum may surface due to student or instructor requests, business/industry suggestions or evaluation results by the educational institute.

Regardless, it is appropriate to determine curriculum need and decide on the best developmental approach. The purpose of the precurriculum study is to make this determination.

Data collection and analysis are the core of the precurriculum study. The study requires an initial selection of a cluster of jobs or an occupation. Analysis of the job cluster data identifies interrelated skills, and both vertical and horizontal relationships among the different levels of the job cluster.

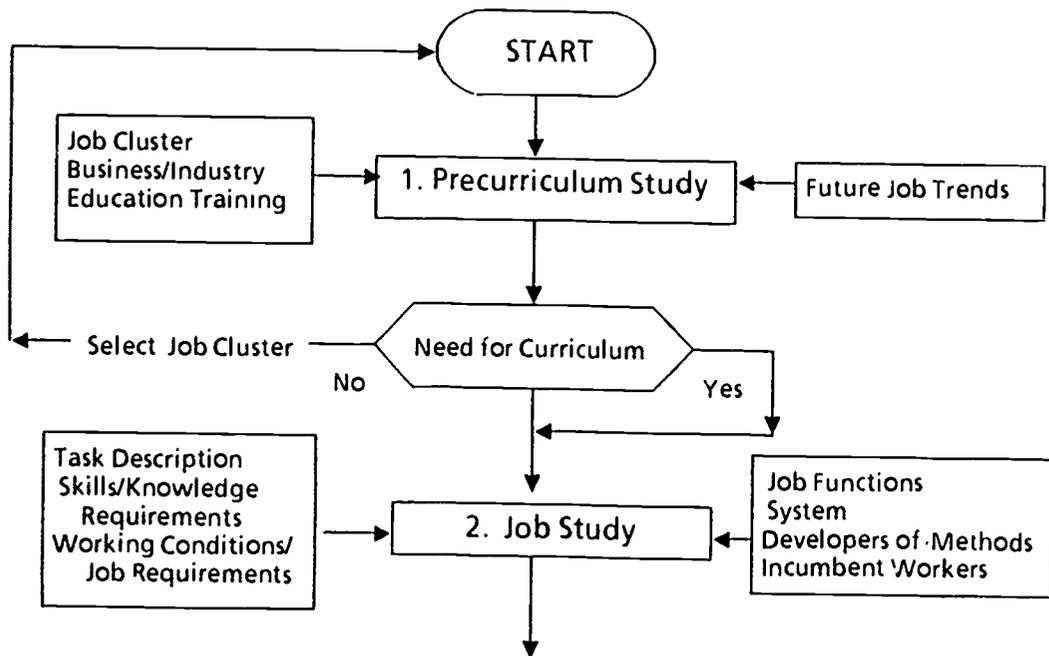
Business and industry input is used to focus on the potential need for workers, type of training and education needed to make the individual more employable, and the expectations of the hiring establishment. In addition, on-the-job-training by business/industry is identified allowing for an improved overall training program provided by the educational institute and business/industry establishment.

Duplication of program offerings is minimized by analyzing data on education/training program offerings by educational institutes in the same geographic area. Findings promote strengthening some programs and deleting others in order to better prepare the learner.

Job trends are used to determine curriculum needs and provide justification for considering, creating, modifying or deleting curriculum

Step 1 ends with a recommendation either to develop or not develop curriculum. When curriculum development is recommended, the effort moves to Step 2.

Curriculum Development System



For education/training to be on target, the curriculum must match the on-the-job-training requirements. If there is a mismatch, the individual may not be adequately trained for the job.

The documentation produced from the Job Study becomes the basis for all further curriculum work.

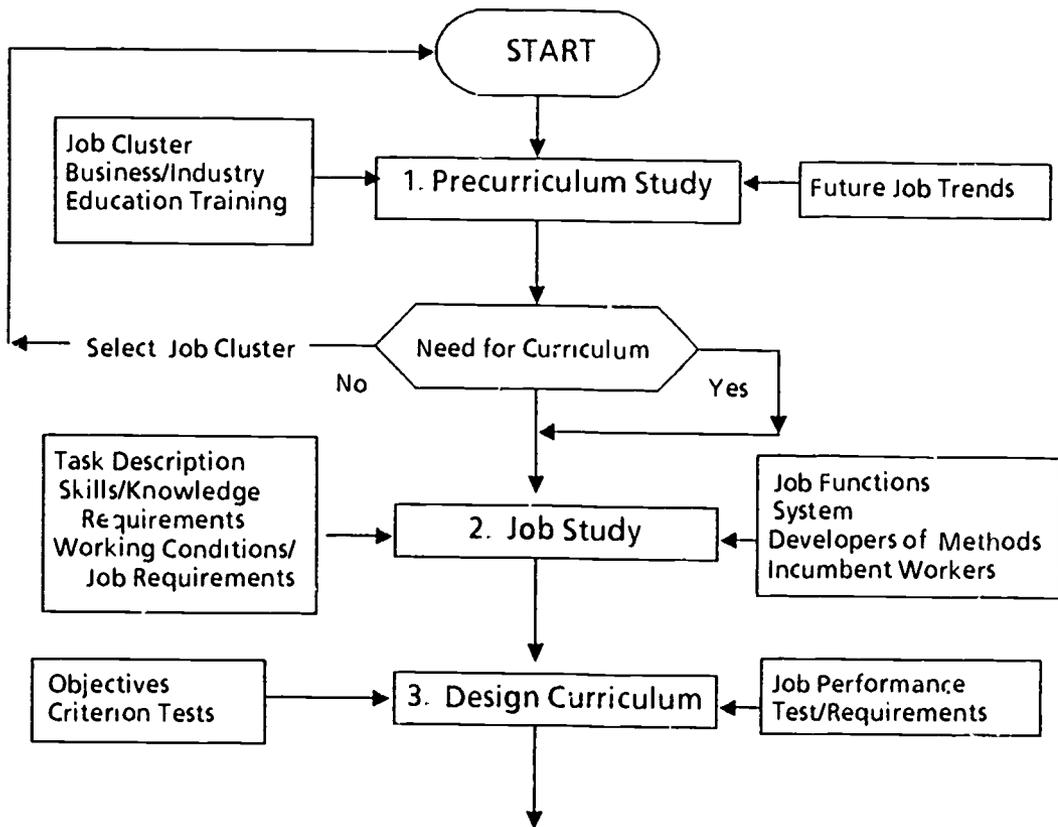
For the Job Study to serve as an adequate basis for curriculum development, it is necessary to collect and analyze data leading to a complete description of job performances under study.

Major sources for such data include the following: documentation that provides information about how the job functions are carried out; the overall system utilized in the area where the job is performed; developers of the methods used for carrying out the job functions; incumbent workers and supervisors of workers performing the job activities; and state employment bureaus/data.

The job study should contain a detailed description of tasks; the required skills and knowledge needed for the job; and the working requirements, conditions and environment.

When the incumbent workers and supervisors, the working conditions and job requirements are represented in the Job Study, the data form a sound basis for the curriculum to be developed.

Curriculum Development System



Step 3

Design Curriculum

The process of curriculum design uses the results of the Job Study in Step 2. The design provides the best means for individuals to learn the required skills and knowledge and to have a better concept of the particular working environment.

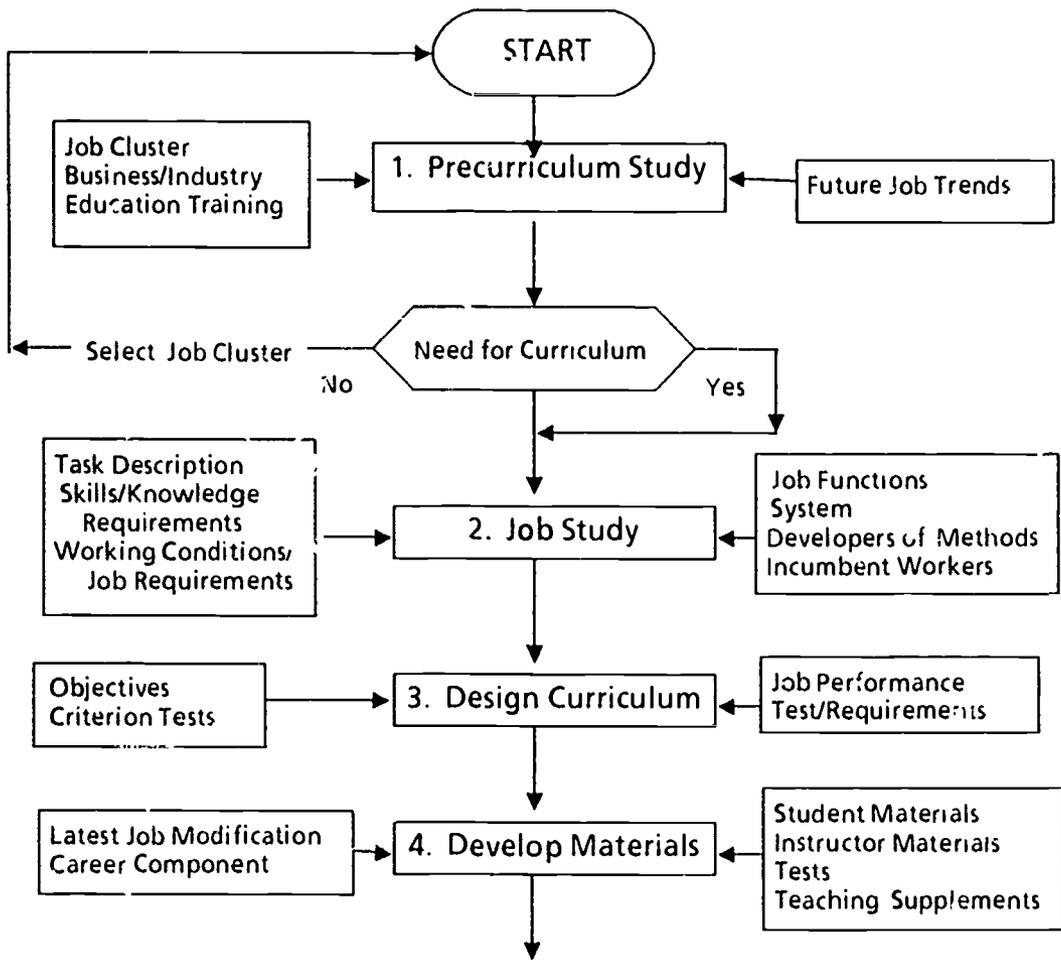
The curriculum design is like a blueprint used for constructing a building. Using the design as specifications, education and training are developed.

Step 3 is applied to existing programs that need to be revised, to new programs that need to be developed, or a combination of these.

The design process identifies limitations so that they can be dealt with appropriately. The objectives serve as a focus for further work on the curriculum design. Requirements, both job and educational institute, are recognized in the design. Tests -- criterion and performance -- are developed to judge the effectiveness of the program.

The curriculum design establishes the parameters for developing the materials in Step 4. Thus the design determines how the education and training will be presented.

Curriculum Development System



Step 4

Develop Materials

The purpose of Step 4 is to develop materials which present information to individuals in a way that the requirements or measurable objectives are learned.

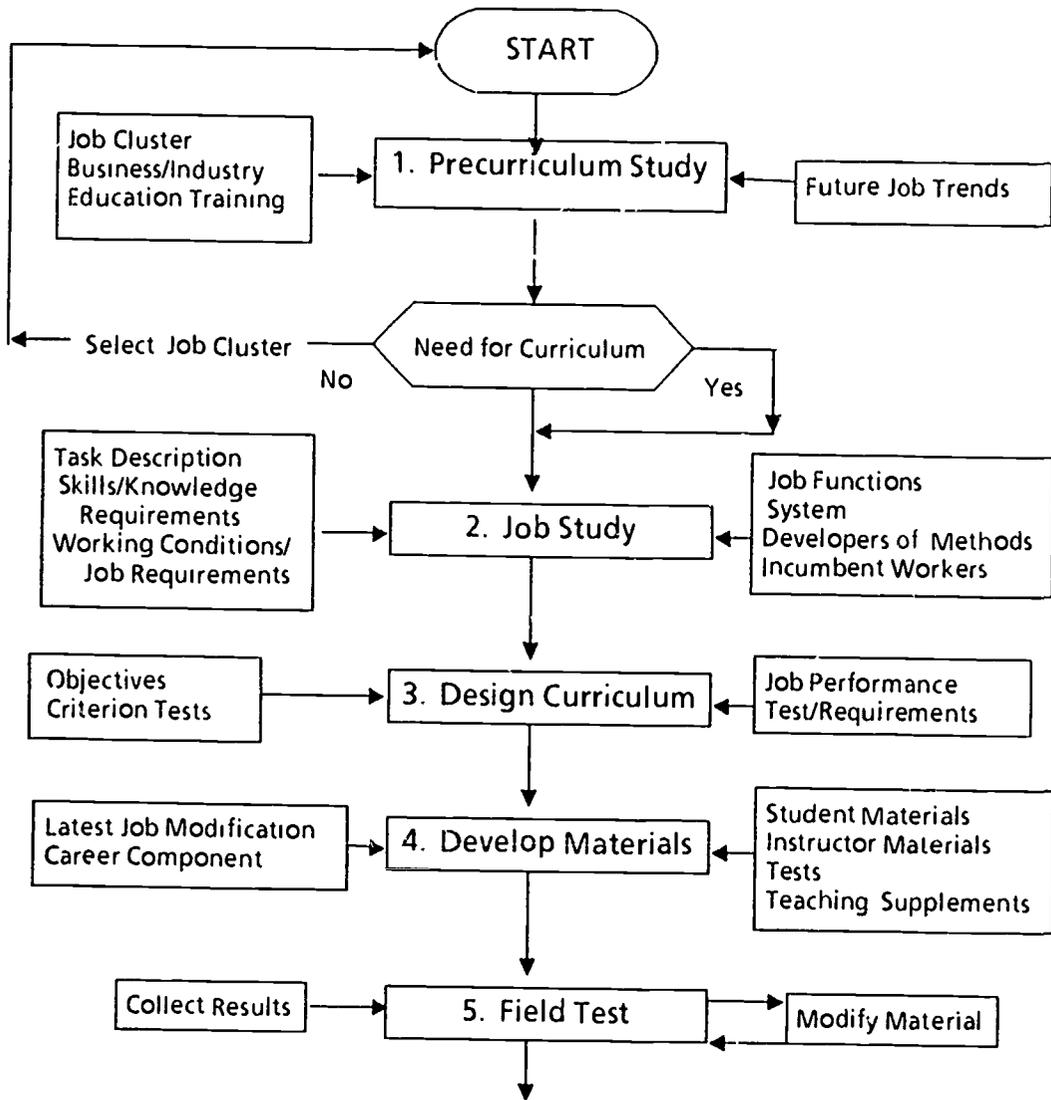
By depending on the curriculum design of Step 3, the developer is able to concentrate on the best methods for presenting content. More attention can be given to meet the specific needs of the individual learner such as reading level, safety concepts, individual learning style, and the necessary visual and teaching supplements.

The activities in Step 4 enable the developer to incorporate the latest job modifications so that the education and training are as up-to-date as possible. The career component allows the individual to be better informed about types of jobs in a job cluster, job advancement/promotion, and requirements for advancement. This information is vital for matching the individual with the job and therefore with the education/training program.

As materials are developed they are used with small groups of learners. The materials are repeatedly tried out and modified, as time permits. Again, reference is made to the objectives identified in Step 3, as they serve as a guide for revisions.

Within the confines of the curriculum design and guidelines, the developer still has considerable latitude as to content and format for the learning materials in the curriculum packet. Format should vary to conform with the requirements as established by the objectives.

Curriculum Development System



Step 5

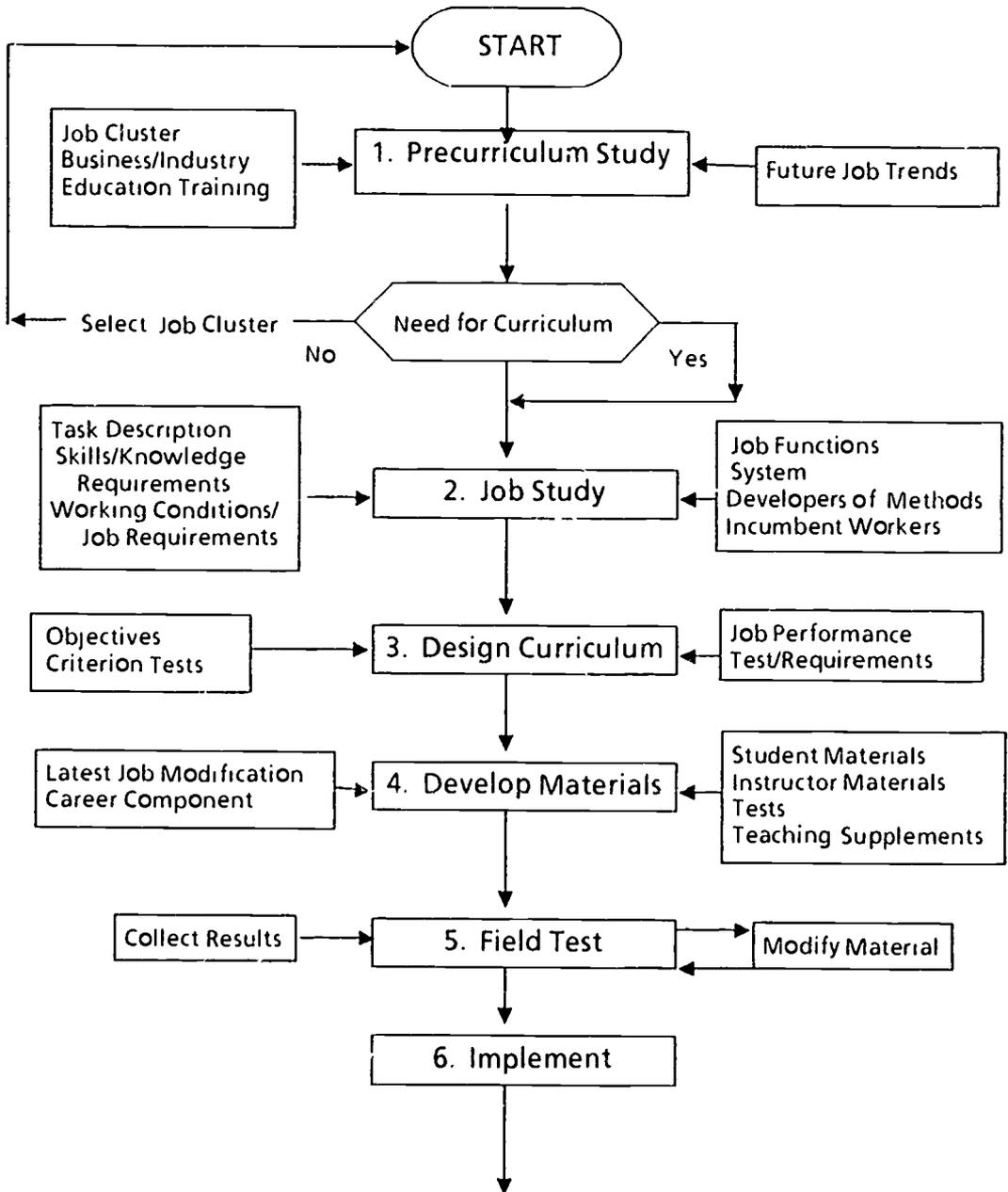
Field Test

The field test of curriculum materials closely simulates the actual instructional program and job environment. The purpose of the field test is to evaluate the effectiveness of the entire system including materials, guides, logistics and management.

Due to the variety of vocational training programs, there can be no one set guideline for implementing the curriculum in all settings. The field test provides the information that enables the instructor to use the curriculum materials more effectively. This information explains to the user how the system functions, what specifically it teaches, how effective and efficient it is, and how it can best be implemented.

Upon completion of the field testing, materials in the curriculum packet are refined to the point where they can be introduced for general use.

Curriculum Development System



17

Step 6

Implement

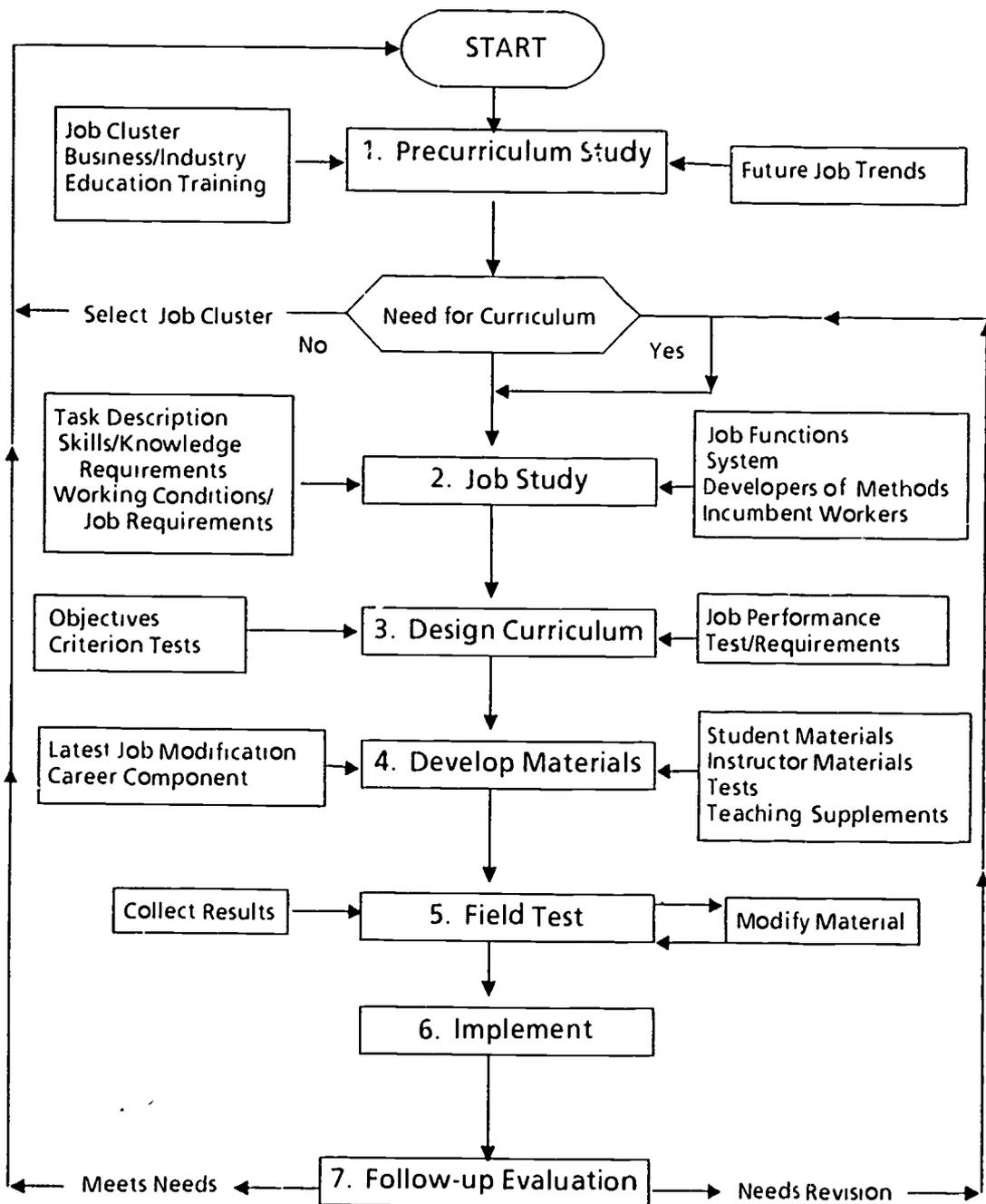
Implementing the curriculum packet in the learning environment determines its effectiveness. During this phase, feedback should be continuous so that the packet can be modified to meet the local situation. The curriculum packet is never a finished product due to the ever-changing needs of the individual learners and of the work force.

Two groups of people have significant roles for implementing the curriculum packet: the developer of the curriculum and the instructors using the packet.

The developer of the curriculum packet should provide in-service training to interested parties. The in-service would assist in adapting the packet to the local classroom situation.

The faculty must be encouraged to constantly improve the performance of the instructional process. Unless faculty are involved in the process, it is difficult to have an effective training or instructional system.

Curriculum Development System



Step 7

Follow-Up Evaluation

All curriculum has the potential to become mismatched with job requirements. This happens because requirements change and community/business needs differ. An inadequate system for curriculum development increases the likelihood of a mismatch.

The follow-up evaluation addresses whether the needs identified in the precurriculum study have been met and the education/training content matches the current job. Program completers are a source to determine if the content learned and objectives identified were relevant and valid for them.

Evaluation data are often the basis for judging the value of continuing with the current curriculum, revising it, or dropping it.

For vocational education to be an instructional system capable of providing a predictable product, the instructors and administrators must integrate regular follow-up studies as part of their own job responsibilities.

By using feedback from those who have completed the program and are employed and from their employers, vocational education curriculum remains relevant and meaningful.

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