

## 0COMPETENCY BASED EDUCATION

The following information will provide the reader with sufficient information to understand the basic elements of a competency-based education program and its implications for education. Only the kernels of competency-based education will be presented in this article; however, there is much material available for those who wish to explore the subject further. I owe much of the following data to Houston and Housom at the University of Houston who were pioneers in competency-based education at the college level.

1. What is competency-based education? A competency based education program is a program that specifies the competencies or objectives to be learned by the student; indicates the specific performances that will be accepted and the criteria that will be used in evaluating the performances and level competency. Houston and Housom give the following characteristics of a competency based education program:

"(1) specification of learner objectives in behavioral terms;

(2) specification of the means of determining whether performance meets the indicated criterion levels;

(3) provisions for one or more modes of instruction pertinent to the objectives, through which learning activities may take place;

(4) public sharing of the objectives, criteria, means of assessment, and alternative activities;

(5) assessment of the learning experience in terms of competency criteria; and

(6) placement on the learner of the accountability for meeting the criteria."

2. Who is to decide upon which competencies are to be in the program? Competencies for any public school program should be decided upon by those who have the responsibility for the education program and have sufficient data about the target population to formulate a realistic level of performance. It is important to remember that the competency must be compatible with the capabilities of the learner. Therefore, competencies must be individualized unless all students are expected to achieve the same minimum level of competencies. At the college level every student should be capable of and required to meet the minimum level of competency required to be proficient in his/her profession.

3. How are competencies determined? Competencies have been determined by a variety of means. Some state boards of education have or are in the process of developing a list of basic competencies which learners at various grade levels are expected to obtain. Florida, Texas, Arizona, Minnesota, New York, Utah, Oregon, Washington and Vermont are presently involved with competency based educational programs. Other states are most likely working with or exploring the idea. In some cases local school districts or even schools within a district are developing their own set of competencies. The procedure for arriving at a particular set of competencies varies from an arbitrary decision by a teacher, principal, superintendent, school board or some committee to a comprehensive needs analysis study. There is no set way of deciding how to determine the competencies a school shall require. However, if the program is to be effective, the competencies must be relevant and within the capabilities of the learners. The more one can involve all that will be affected by the competencies required; greater is the likely-hood of selecting appropriate competencies.

4. Why a competency based education program? The primary justification for a competency based education program is that it is more effective and efficient than traditional programs. The program being more effective and efficient means one can provide a better education for boys and girls. A competency based program is more effective because it forces the teacher to specify the task the learner must achieve and then to determine that the learner has achieved this task. The efficiency comes from the fact that in specifying the task or competency the teacher must also select appropriate strategies to achieve the task and then measure the results. Feedback data from the learner enables the teacher to make corrective adjustments. So as a result of this systematic interaction the teacher learns what is most effective in particular situations and with certain types of individuals.

5. Why is there a need for a competency based program? Study after study indicates that the traditional program is failing to meet the needs of a large per cent of the students enrolled in school. In some inner city schools, for example the percentage of children having problems may be as high as 90 per cent. In general one finds a great number of students experiencing low achievement in academic work and skill development. The problem appears to be that the traditional program simply is not designed to cope with the demands of modern education. It lacks the evaluative and corrective features of a competency based education program. Because the competency based approach is basically self-correcting it means that a more effective and efficient education program will result.

6. How do competency based programs differ from traditional programs? The primary difference is that in a competency based program achievement is a constant and time is a variable. A learner is expected to be able to demonstrate by performance his achievement of the task or competency. If the competency is considered to be important then it must be achieved regardless of the time. In a competency based program the experiences are more directed toward achieving a specific objective. Another difference is that a competency based program has a built in feedback system which the teacher and learner must use. In the traditional system the use of feedback data is of limited value as the system is not designed to make effective use of such data. Another important difference between the competency and traditional systems is that in a competency based system there must be a clear delineation of expected goals or outcomes in behavioral terms.

7. Should all objectives be stated in behavioral terms? Yes, it is possible to state any desired objective in behavioral terms provided one accepts the fact that the accuracy of measurement of the objectives will vary. However, unless the objective can be accurately measured it should not be used in evaluating the teacher's performance. It is simple to measure with a high degree of accuracy whether a child knows elements of the addition process. It becomes more difficult to measure a person's attitude towards appreciating music. However, if the appreciation of music is considered to be an essential objective by the school then it must be defined in such manner that will enable the teacher to evaluate whether the child is achieving the objective or not. In general this will be done by establishing a set of observable behavioral patterns which you would accept as proof that the person does appreciate music. The selection of these criteria must be done by the individuals responsible for the education program. The criteria selected might not, in reality, actually measure whether the person appreciates music. The validity of any set of criteria must be constantly evaluated by long range observation and research. But, until one has valid research data to indicate something is or is not valid one has

to operate on the assumption that it is.

The importance of stating the objectives deemed critical in behavioral terms is that it provides a feedback system for evaluation and action. The more valid data one has about something the greater is the probability that the correct decision will be made.

8. What are negotiable and non-negotiable objectives? Negotiable objectives generally refer to those objectives which are negotiated between a student and the instructor. They are more individual in nature and are not considered to be a critical element even though they may be important. Non-negotiable objectives are those objectives that are considered to be absolutely critical and that everyone should achieve. These objectives are determined by the educational system responsible for the instructions and program.

9. What should be the percentage of negotiable and non-negotiable objectives in a competency based program? There are no established percentages as to what per cent of a program's objectives should be negotiable and non-negotiable. The per cent of non-negotiable objectives will depend upon many factors. Among the most important are: the basic goals and philosophy of the particular system; the level for which the objectives are established; the goals of the students, the type of education being pursued; and the population involved.

The percentage of non-negotiable objectives usually will increase as the specific goal becomes more clearly defined and the tasks to achieve the goal are determined. For example the percentage of non-negotiable objectives for a program to develop a brain surgeon will be higher than a program to develop the abilities and skills of a group of fifth grade pupils. In the case of the program to develop brain surgeons there is a specific and clearly delineated goal that must be achieved. The goal has been carefully analyzed and the knowledge and specific skills to perform, at least at a minimum accepted level, have been determined. In fact everyone must achieve these minimum levels of competency in order to be allowed to perform brain surgery. Certain basic assumptions are accepted. These are: (1) there are certain levels of performance necessary for the task; (2) everyone in the program is assumed to have the necessary potential or ability to achieve the levels of performance; and (3) individuals have a choice of being in the program. These basic assumptions are important but they apply primarily to high school and college level students as elementary students have no choice about being in the program or grade. The educational program for fifth-graders is entirely different in that there are no clearly defined goals for all pupils. Since there are no clearly defined goals that are applied to all pupils then there can be no specific non-negotiable competencies that will be required of all fifth-grade pupils. There may be specific goals to be attained and specific competencies to be mastered, but these must be individualized rather than assigned to particular grade levels.

10. Should you use a competency based approach in your education program? Yes, every educational program should use a competency approach, provided they understand what is and what isn't a competency based approach and the teachers have the freedom to make decisions about the objective an individual student needs and how best to help the student achieve it..

11. What are the major problems a public school system is likely to encounter in developing a competency based program? In most cases the major problems a public school system are likely to encounter in developing a competency based program are in the areas of philosophy,

understanding, training and commitment. Philosophy: A competency based program forces one to adopt an operating philosophy as it becomes the basis for major goals, decisions and operating procedures. Will the system accept the responsibility of helping each individual to grow regardless of his ability or will the system only accept the responsibility for those that have the ability? Will the system adopt and operate on individual competencies or group competencies? These are important and difficult questions that must be answered, and the answers will depend upon the system's basic philosophy.

Understanding: A clear understanding of competency based education by the school personnel and public served is imperative. Experience has shown that unless there is a clear understanding of what and how a competency based program operates there is going to be confusion and resistance to the program. Training: It is a mistake to assume that a teacher or an administrator can suddenly begin a new program without adequate preparation and training. In a competency based program there are new concepts, role changes and new skills that must be mastered. Without a carefully developed training program for the involved personnel, they will be unable to perform the demanded task and the program most likely will fail. This was very evident in the Teacher Development Program.

Commitment: Everything else may be fine but unless the administration and teachers have a commitment to the ideas of a competency based program, it will not succeed. Commitment must go beyond words - it must be exhibited by action. These are certainly not all the problems one will find in developing and implementing a competency based educational program. However, if these problems can be resolved one is well on his way towards a competency based approach to education. It was the work of Houston and Howsom and interacting with them that helped design the Teacher Development Program. It certainly could work at the college level but would it work in a public elementary and secondary school. Now we know that it can work but it is going to be difficult to get schools to make the changes necessary