Understanding The Need, Principles and Process of Curriculum Development for Effective Teaching and Learning

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ABSTRACT *Curriculum is a tool in the hands of the teacher, which helps him to mould the learners and bring about necessary and desired behavioral changes in them, which can be evaluated. It has been often described as an environment in motion and includes all the experiences within or outside school, which help the child to develop in various areas-social, physical, mental and emotional. Curriculum development is a cyclical process and is continuous in nature. It is very comprehensive in its scope and influences all facets of child development. Understanding curriculum development thus becomes one of the core concerns in the modern educational process. This will in turn facilitate effective and efficient teaching learning process in our schools. The present study focuses on the principles and objectives of curriculum development and the various stages involved in this process. It also highlights the subsequent effect of curriculum development on learner and professional development.*

Introduction

The term curriculum has Latin origins from the word 'currere' which means a 'race course' or a 'pathway' along which one has to run to achieve the objectives and aims of education. Cunningham defines curriculum as the "tool in the hands of the artist (teacher), to mould the material (pupil), in his studio (school)". Munroe defines curriclum as "All those activities which are utilized by the school to attain the aims of education". Thus curriculum acts as a pivot around which the whole human knowledge concentrates. It dictates the various means of knowledge transaction and subsequent learner development. Teaching is a purposeful process which aids in habit formation, but it lacks entity in the absence of objectives. It is often recognized as a science as all the activities of teaching can be supervised and analyzed. Learning is the process of acquiring new knowledge and new responses, due to training (Saxena & Oberoi, 2009). Guilford states learning as any change or modification in behavior as a result of teaching. Learning cannot be possible without teaching, but without learning, teaching is possible. It is a properly framed, systematic, well developed curriculum which gives the much needed guidance to the teaching-learning process by providing answers to all 'wh-' questions raised by teachers- what to teach, how to teach, where to teach, when to teach *and* why to teach.

The concept of curriculum development is a continuous and cyclical process having 1) **teaching objectives** which is aimed at realizing change in behavior, 2) **methods of teaching** designed to achieve the desired objectives, 3) **examination or testing** of the pupil to gauge the knowledge acquired, as the effectiveness of the teaching process is found out by evaluating student progress and achievement and 4) **feedback**, which will provide input regarding the modifications to be made in the curriculum. Thus the four basic elements of curriculum development are teaching-learning objectives, teaching content, teaching methods/ strategies and evaluation
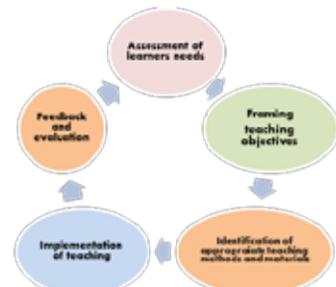
Fig 1-Cyclical Process of Curriculum Development (source: Saxena, 2011, pp. 333)

Objectives of curriculum development

The educational process comprises mainly of teaching and learning. There are three main components in this process namely- teacher, student and curriculum. Bloom, considers it as a tri-polar process- 1) educational process 2) learning experiences 3) change of behaviors (as cited in Saxena, 2011)
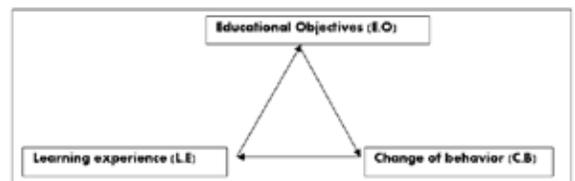
Fig. 1- Tripolar Process (Source: Saxena, 2011 pp.334)

As the teaching-learning process is done through interaction between teacher and the taught, curriculum development includes the following objectives (Saxena, 2011):

Provides the means for all round development of the child, also acting as the means to develop moral character, discipline, honesty, cooperation, friendship and other values of importance in daily living and national life of the pupil

Helps in development of mental abilities such as reasoning, wisdom, judgment, deep thinking in the pupil

Provides an understanding of the physical and social environment of the learner

Teaching is made child centered by basing it on various stages and levels of child growth, with the help of curriculum

It helps to determine the mode of interaction between the teacher and students, the teaching materials to be used

Principles of Curriculum Development (as stated in Saxena, 2011; Saxena, 2009**)**

Principle of child centered education: it should be child centered and consider the needs, interests, abilities, capacities, age, intelligence level of the child

Principle of utility and relation with life: only those subjects should be included which are related to daily living and thus should be of utility in the daily life of the pupils

Principle of utilizing creative and constructive powers: creative and thought provoking subjects should hold a prime place in the curriculum, in order to promote creative and constructive abilities in the child.

Principle of interrelation of work and play activities: curriculum should be so planned that it makes teaching and learning process fun, like usage of play way methods,

Principle of knowledge of culture and civilization: the curriculum should contain those subjects and activities which promote knowledge of culture, values to the child thus acting as a vehicle to transmit and preserve culture.

Principle of totality of experience: the curriculum should integrate the whole of human experiences, mixing play and academics. Just as the Secondary Education Commission report emphasizes: "curriculum does not only mean academics rather it is the sum total of all experiences received by the child, both within and outside the school."

Principle of achievement of wholesome behavior pattern: the curricular subjects should aim for the inculcation of social and moral qualities in the child which will help them to attain wholesome and desirable behavior patterns.

Principle of future orientation: curriculum should be forward looking and meet all the future needs of the child and help to solve the various problems the child may encounter in the near future. It should also help the child to attain harmonious adjustment with the changing social situations in a progressive way.

Principle of variety and flexibility: different children have different and unique needs in accordance with their varying abilities, interests, tendencies and capacities.

Principle of education for leisure: the curriculum should be able to solve the problem of meaningful utilization of the child's leisure time. A good curriculum should be able to develop appropriate capacities in the child.

Principle of inclusion for all: Inclusion is the prime aim of the educational process. Hence the curriculum should include all those subjects which promote physical, men-tal, moral and social development of the child. It should include subjects of special interest to children with special needs also such as learning Braille, orientation and mobility, sign language so that full and total inclusion in the truest sense can be promoted.

Principle of relationship with community life: the curriculum should take into consideration the local and social needs of the child, so that it becomes an effective tool to promote needed experiences. The Secondary Education Commission states that "the curriculum should be vitally and organically related to the community life"

Principle of development of democratic spirit: the curriculum should promote all those experiences and activities which are conducive to national growth and help in the development of democratic and patriotic spirit in the child.

Principle of correlation: integrated approach of curriculum development which integrates various subjects helps in effective and successful teaching learning process

Stages in Curriculum Development
According to Sharma (2016), the process of curriculum development has five major stages:

1. Assessing learners' needs and characteristics
2. **Determination of aims and formulation of general and specific objectives**
3. **Selection of instructional methodologies, teaching-learning experiences and development of resources**
4. **Learner evaluation**
5. **Implementing the curriculum**
6. **Linking curriculum development and professional education**

To properly understand the process of curriculum development, it is imperative to understand the above mentioned points in detail, as follows:

Nature of Learners: Needs and Characteristics
Any process of curriculum development is incomplete without learner analysis which refers to the process of assessment of the learners' needs by making an attempt to understand his/her unique needs. Heterogeneity in student population arises due to various factors such as age, gender, interests, maturity level, cultural background, socio-economic status, mode of learning such as distance or regular and nature of disability (if any), different aspirations and interests. All instructional designs should be based on task analysis, learner analysis, and environmental analysis (Sharma, 2016). As is clear from the above discussion, the nature of learners is affected by many factors such as interests- students may have, age- older learners may have maturity of outlook and greater experience yet they may not remember many things taught at school, leading to the need for refresher materials. The program of entry such as distance learning or formal educational programs also affect the learners' needs. A knowledge of their background and characteristics is a pre-requisite for course planning.

Appropriate Goals and Objectives
This is the second major step in the process of curriculum development and comprises of identification of broad, general aims and specific learning objectives. In a curriculum development process, goal identification is important as goals are the broad generalized statements of what has to be leant. These can be thought of as the 'target' or 'hit' to be reached and achieved. Whereas objectives

are like the 'arrows' one shoots towards the target or goal, as these are the tools by which one can reach the goal (Dwyer, 1991). Hence, identification of appropriate and precise, learning objectives which provide a clear direction to the teacher and the taught leads to a better evaluation of progress, and also helps in the removal of ambiguities. The learning objectives should be able to measure the concepts to be learned, skills to be mastered, habits to be learned, techniques to be acquired and attitudes to be developed (Sharma, 2016).
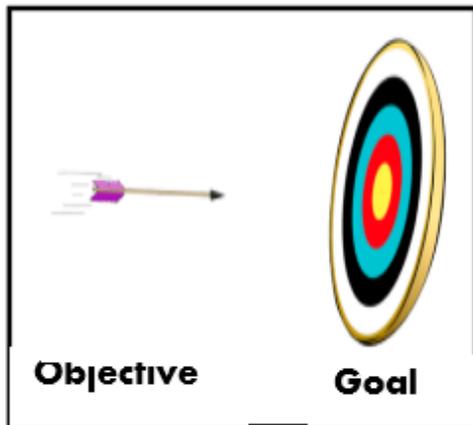
Fig. 2- Goal is 'target' and objective is 'arrow' for hitting the target.
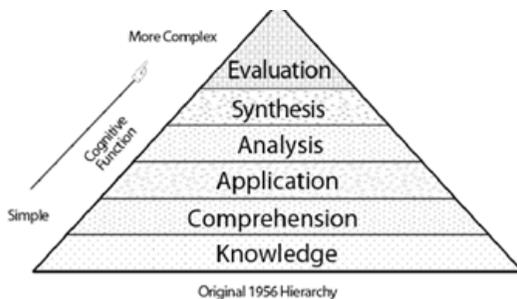(Source: article on instructional goals and objectives, downloaded from www.personal.psu.edu)

Nature of Objectives
There are three main types of Objectives:

- Cognitive
- Affective
- Psychomotor

Cognitive Objectives are designed to increase an individual's knowledge. It relates to understandings, awareness and insights. Affective Objectives are designed to change the individuals' attitude. Psychomotor Objectives are designed to build physical skill, such as fine motor and gross motor skills. Bloom further describes seven categories of cognitive objective based learning.

Fig 3-Bloom's description of Cognitive Objectives
(Source: article on instructional goals and objectives, downloaded from www.personal.psu.edu)

Instructional Methodologies, Teaching-Learning Experiences and Teaching Resources
These vary from one subject to another; depend on the learners' needs and abilities to acquire needed knowledge and skills. The content and material of a conventional educational system will differ from that of a distance learning course.

Need for Learner Evaluation
It is the process of determining the extent to which the educational objectives are being realized. Evaluation is done to find out whether the learning experiences are progressing as planned, helping to bring the desired results. It must appraise the behavior of the learner, involves getting evidence about learners behavior and such valid measures should thus, be built into the curriculum development process. These exist in the form of test, attitude scales, interviews and observation schedules (Sharma, 2016).

Implementation of Developed Curriculum
It is the tryout and revision stage. Once implemented the developed curriculum should pass through stages of formative and summative evaluation which help the professionals to identify the appropriateness of the developed curriculum, make modifications according to the needs of the learners.

Role of Curriculum Development in Professional Development (Sharma, 2016)
The process of curriculum development enables the development of new knowledge, attitudes and skills among professionals. The process of curriculum development induces the ability to:

Recognize ethical problems

Identify ethical principles at issue

Work out appropriate courses of action in terms of ethical principles thus leading to their overall development.

Conclusion
Just as Horne, pointed out "Curriculum is that which is taught to students. It is more than reading and writing. It includes practice, activities, industry and vocation acquiring knowledge thus facilitating the overall development of the learner. Education is a system having various sub systems and proper management of the educational process involves planning, organizing, leading and controlling teaching (Saxena, 2009). Educational management can be effectively done with a good curriculum. Hence understanding about curriculum development is of immense importance. Stress should be laid on development of child centered and need based curriculum model which focus on harmonious development of the child. This can be achieved only if teachers and policy makers have a clear understanding of the process of curriculum development. The study reveals that curriculum development should take into consideration factors such as variety and flexibility, broad areas of knowledge and skills, be vitally and organically linked to the community of the learner and at the same time be creative and dynamic (Saxena, 2011). The curriculum should enable the learners to develop into good, productive citizens and must foster in them an understanding of the cultural and value based background.

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