PROCESS OF CURRICULUM DESIGNING

 DEFINING CURRICULUM PLANNING
AND DESIGNING
Curriculum planning and designing is a process in which participants at different levels take decisions about the goals of learning, decide about the teaching learning situations by which these may be achieved and whether the methods and means adopted are effective. The relationship between the terms curriculum planning and development and often instruction has been expressed
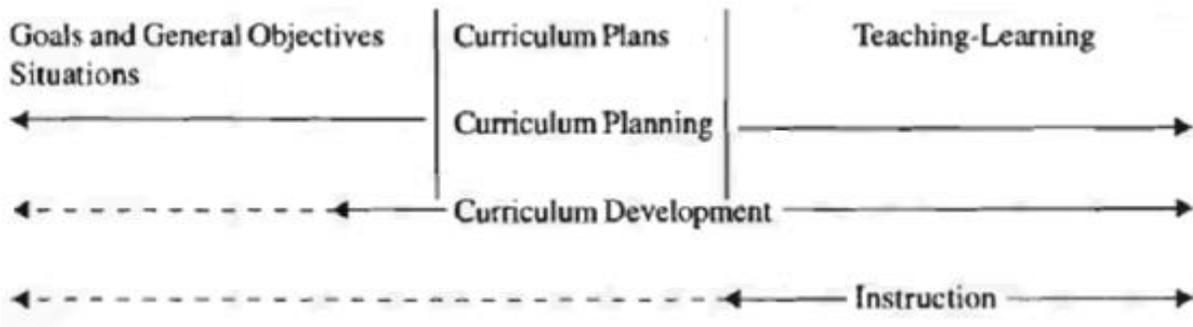

Fig.: The Relationships among curriculum planning, curriculum development and instruction

The above figure explained curriculum planning as a generic concept that may describe activities ranging from the identification of broad goals to the description of possibilities for specific teaching-learning situations. The broad goals translated are into a coordinated and coherent program of learning experiences.

Alexander (1954), defined curriculum design as "the pattern or framework or structural organization used in selecting, planning and carrying forward educational experiences in the school. Design is thus the plan that teachers follow in providing learning activities. Thus, curriculum design becomes the part of curriculum planning.

Levels of Curriculum Planning

Beane, et. al. (1986) has given seven levels of curriculum planning i.e. at seven levels, the national level, the state level, school-system wide level, building level, teacher team level, the individual teacher level and the classroom level with cooperative planning between learners and teachers.

i) National Level

Planning at this level involves experts of various disciplines from across the country to discuss and develop a curriculum that meets the demands. The stages involved in the planning process at the national level are:
   ❖ Identifying important subject matter, facts, principles concepts, etc.
   ❖ Deciding on a sequence in which the subject matter may be taught from

specific to general or from easy to difficult, etc.
    ❖ Recommending activities through which learners might best learn the
         subject matter, including experiments, discussions etc.
    ❖ Listing supplementary materials for further studies in the particular
         subject area, and
    ❖ Suggesting tests that learners might take to check their progress.
After curriculum is developed, it is given in the hands of teachers for implementation. The National Council of Educational Research and Training (NCERT), New Delhi, an autonomous organization under the Department of School Education and Literacy of MHRD, is the national level agency involved in selection, and organization of knowledge in schools and bring out as National Curriculum Framework.

ii) State Level
A committee comprising a group of educators (teachers, principals, Curriculum coordinators, etc.) under the State Education Department undertakes the task to recommend what ought to constitute the overall curriculum across the State, Keeping in mind, the state requirements. While developing a state level curriculum, guidelines are adapted from National Curriculum Framework.

iii) System Wide Level
It is a district level curriculum planning which is done by the team consists of elementary, middle and high school level teachers and district curriculum coordinator. It reflects on curriculum issues affecting the whole district. The committee considers following questions while finalizing the curriculum:

    ❖ What are some present problems or ideas in the district that could be referred to the curriculum planning committee?
    ❖ What methods can be used to have a fair representation of various groups such as teachers, administrators and citizens?
    ❖ Which issues the curriculum committee could classify as not appropriate for consideration?

iv) Building or Institution Level
A group of parents, teachers, administrators, counsellors and learners work together on the personal and social experiences that a student's encounter while undertaking any academic activities. It is also termed as hidden curriculum, since these features do result in learning, they need to be considered in conscious efforts to plan the curriculum.

v) Teacher-team Level
Here, a group of teachers representing different subject areas come together to develop a unit. It is also called inter-disciplinary curriculum planning.

vi) Individual Teacher Level
In this case, a teacher tries to make a decision about learning objectives - what the teacher would like a group of learners to learn. She develops a set of plans for use on a daily or weekly basis. While designing a plan, following points must be considered, such as the characteristics of the

learners, the sequencing of activities, the appropriateness of various learning materials, and the availability of resources.

vii) Cooperative Curriculum Planning Level
Here the teacher guides a group of learners to formulate plans as to how they might study a particular topic. The teacher and learners work together to decide any combination of the 'what, how, who, where and when' questions regarding the unit they are working at.

APPROACHES OF CURRICULUM DESIGNING

A curricular approach is defined as a pattern of organization used in making decisions about the various aspects of a teaching-learning situation. The choice of a particular approach for curriculum development reflects the following:
i) The selection of objectives
ii) The use of subject matter or content
iii) The type of learning experiences to be provided
iv) The role of teachers, learners and the organizing center for the teaching learning situation
v) The choice of method for providing the learning experiences
These approaches are categorized into four major groups. Let us now discuss the curricular approaches in the order given above:

a) Subject Area Approach
One of the most widely used curricular approaches is the subject-centered approach. In this design the curriculum is planned around separate subject areas or disciplines.
This orientation to subject matter reflected a mental discipline approach to learning thus mastery of subject and skills forms the basis for learning objectives.

b) Broad Fields Approach
This approach organizes curricular components by combining two or more subjects from related fields into a broader field. The popularity of this approach in recent times is due to the following reasons:
i) Curriculum is not compartmentalized into rigid subject boundaries. Hence the information becomes more meaningful to the learners.
ii) Teachers have greater flexibility to choose content.
iii) Learners can see the interrelatedness of various subject areas in the curriculum. They can generalize knowledge across broad areas.
The criticism to this approach is that learners gain only a superficial understanding of the various concepts in the broad field areas.

c) Problem Centered Approach
The primary objective of using this approach is to create in the learners an awareness of crucial social issues and develop skills to help solve such problems. Some problem centered approaches focus on persistent life situations, others deal with contemporary social problems, some address areas of living and some with the reconstruction of society.
Problem centered curriculum designs are designed to address societal needs that are unmet and also for preservation of culture.

d) Learner Centered Approach

It emphasize that all school learning should be geared around the needs, interests and abilities of the learners. The major purpose behind this approach is to help learners come to grips with issues in their lives and be prepared for the present.

Much of this philosophy has its origins in Rousseau's book "Emile" published in 1762. He wrote that when a child is nearing adolescence, "much skill and discretion are required to lead him towards theoretical studies." He believed that teachers should provide learners the opportunity to explore nature and learn on their own. "Put the problems before him and let him solve them himself. Let him not be taught science, let him discover it." (Rousseau, 1911). This approach also draws from thoughts of philosophers like Froebel, Pestalozzi, they are proponents of the philosophy of learning by doing Dewey like Parker believed that education was a social process by which an individual could achieve social aims.

PROCESS OF CURRICULUM DESIGNING

Curriculum development is a specialized task which requires systematic thinking about the objectives to be achieved, learning experiences to be provided, and evaluation of changes brought out by the curricular activities and so on. We need to follow the order in which decisions related to curriculum development are made and we have to make sure that all the relevant considerations are taken into account before taking any decision. To arrive at a thoughtfully planned and dynamically conceived curriculum we should follow the steps as follows:

- ➢ Assessment of educational needs
- ➢ Formulation of objectives
- ➢ Selection and organisation of content
- ➢ Selection and organisation of learning experience.
- ➢ Evaluation

a) Assessment of Educational Needs

While selecting any knowledge to become a part of Curriculum, need assessment is to be done. The need assessment helps curriculum developers in following ways:

Learners	to address the gap that exists between the present status of the learner and the intended one. Helps them to remain motivated
Society	In understanding and identifying social function of educational program.
Subject Matter	Helps in outlining the structure of a subject, including topics to be covered, their order of presentation, and the appropriate grade level for each topic.

b) Formulating Educational Objectives

According to Tyler stating a list of important objectives help in selecting learning experiences and in guiding teaching. Further, regarding a form of objectives, as follows:

❖ Any statement of the objectives of the school should be a statement of changes to take place in students;

❖ Objectives should be stated in listing topics, concepts, generalizations, or other elements of content that are to be dealt with in the course or courses;

❖ Since the purpose of a statement of objectives is to indicate the kinds of changes in the student to brought, then the instructional activities can be planned and developed in a way likely to attain these objectives;

❖ Statements of objectives should be expressed interns of which it identify the kind of behavior to be developed in the student and the content or area of life in which this behavior is to operate.

❖ It is often useful to employ a graphic two-dimensional chart (the behavioral aspect and the content aspect) to express objectives concisely and clearly.
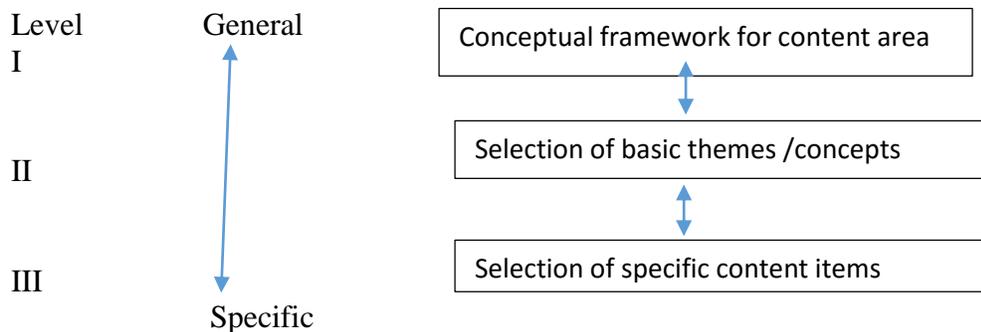
c) **Criteria for Content Selection**

Ornstein and Hunkins (2004) explained that content is the "Stuff" of the curriculum. It is the "What" that is to be taught, the "What" that students are to learn. Content refers to facts, concepts, principles theories, and generalizations.

Criteria for content selection which include:

· the availability of the subject matter;

· the significance of the subject matters;

· appropriate balance of scope and depth;

· appropriateness to pupils needs and interests;

· the durability of the subject matter;

· logical relationship of the subject matter content to main ideas and basic concepts;

· learn ability of the subject matter;

· possibility of the subject matter to interact with or attract data from other subjects;

· contents that contribute to the development of the society.

Selection Of Content

Level   General

| Conceptual framework for content area |

I

| Selection of basic themes /concepts |

II

| Selection of specific content items |

III

           Specific

d) Organising the Content

According to Tyler (1949), Curriculum Organization is a systematic arrangement of objectives, learning experiences and materials in a unified and consolidated manner. It is a process of putting contents and learning experiences together to form some kind of coherent program. Similarly, in organizing the curriculum especially in sequencing the contents and learning experiences, it is also essential to identify the organizing principles by which these threads shall be woven together .

SEQUENCING

CONTINUITY

INTEGRATION
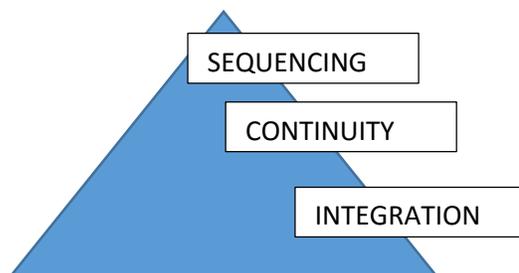
i) Sequencing: Establishing a sequence in curriculum means putting the content and materials into some sort of order of succession. For this, certain teaching principles such as moving from known to unknown, from simple to complex, from concrete to abstract, etc have to be kept in mind. Besides these principles, the resources that facilitate students' learning have to be arranged.
ii) Continuity: The curriculum should provide for a progressively more demanding performance, more complex materials to deal with, a greater depth and breadth of ideas to understand, to relate, to apply and so on. Such cumulative learning can apply to thinking, attitudes and skills.
The learners should be provided with experiences step by step, leading to the examination of more complex forms of criticism and analysis of ideas. For example, a student of grade IImay learn the concept of interdependence among family members. She may encounter the same concept in a higher grade but with reference to interdependence of nations, political decisions, etc. The content of curriculum should provide for continuity in learning and prevent loss through forgetting. The disjointed content does not lead the student to the destination i.e. the attainment of the objectives.

iii) Integration: It is recognized that learning is more effective when facts and principles from one field can be related to another, especially when applying knowledge. Curriculum planners should attempt to integrate the curriculum by simultaneously establishing relationships between various subjects taught to the target learners. One method can combine related areas into one broad field; for example, combining geography and history into social studies. Correlating two subjects such as Math's and Science is another attempt to integrate content. It should be clear from the preceding discussion that curriculum organization should protect and preserve both the logic of the subject matter and the psychological sequence of the learning experiences. In the logical organization, the planners organize content according to certain rules, to make it more manageable.

The psychological organization of the content helps one understand how an individual might actually learn it (i.e. content). Content should be organized in such a way so that the concrete content is experienced before the abstract content.

e) Selecting Learning Experiences

Learning experiences refers to the teaching-learning process, the methods followed and the activities planned to facilitate the teaching-learning process.

There are a few questions which should be addressed before we select learning experiences, which are listed below:

· Do the learning experiences function the way we wish them to in the light of the overall aims and the specific objectives of the curriculum?

· Will the student be able to apply the knowledge gained to practical situations?

· Is, it feasible in terms of time, staff expertise, resources, etc., to learn the content of the curriculum in the specified time.

· Do the learning experiences enable learners to develop thinking skills and rational powers?

· Do the learning experiences stimulate in learners a greater understanding of their own existence as individuals and as members of a group/society?

· Do the learning experiences foster in learners an openness to new experiences and a tolerance for diversity?

· Do the learning experiences allow learners to address their needs and interests?

· Do the learning experiences cater to total development of learners in cognitive, affective and psychomotor domains?

Besides, answering these questions, we should be able to create proper environment: physical and psychological, for optimal learning. The educational environment should address social needs as well as development of awareness, appreciation and empathy for others. It should stimulate purposeful student activity and allow for a range of activities that facilitate learning.

f) Evaluating the Curriculum

The effectiveness of any educational programed is judged by its potential to realize its goals and objectives. The extent to which the objectives are achieved can be assessed through appropriate evaluation procedures. The evaluation of any purposeful activity should have certain characteristics. The important characteristics are as follows:

· Consistency with the objectives of the curriculum

· Sufficient diagnostic value

· Comprehensiveness

· Validity

· Continuity

Evaluation is both qualitative and quantitative, i.e. it may be 'formative' (with the objective improving the process of development) and 'summative' (at the end of the total programed or each phase thereof to judge the effectiveness of the instructional design). Educational evaluation serves the dual function of guidance and assessment. We need to employ a variety of appropriate techniques and tools to collect all kinds of evidence required at different stages of curriculum development and implementation. The techniques and tools to be used should be selected in relation to the nature of the objectives or the learning outcomes and the kinds of performance to be assessed or evidence to be collected. The evidence to ascertain the success or the failure of an educational programmer can be collected through systematic feedback from the makers and users of curriculum.

We can infer that there are two types of evaluation; viz;

Student evaluation

Curriculum evaluation

i) Student evaluation: Student evaluation aims at assessing the changes in the student's behavior. These changes in behavior can be assessed through:
  ➢ Oral, written or practical tests.
  ➢ Responses during interactive teaching-learning sessions, discussions in different kinds of situations, etc.
  ➢ Written products of different kinds, e.g. assignment responses, term papers, project report, etc.

Evaluation of the learners requires sufficient experience and expertise to frame good questions for higher level objectives.

ii) Curriculum evaluation: Student performance is a part of curriculum evaluation. This, however, does not imply that evaluation in education should cover only evaluation of learning, development or achievement of students. In fact evaluation comprises assessment of different aspects of the curriculum as planned, developed and implemented.

Curriculum evaluation refers to the evaluation of different components of curriculum: objectives, content, methods and evaluation procedures for student assessment to determine whether the curriculum caters to the needs and the educational purposes of the target group. Curriculum components cannot be scrutinized in isolation, since each component affects and influences the rest. Since these components are interdependent, each has to be evaluated in conjunction with the others. The overall curriculum evaluation is shown in Figure
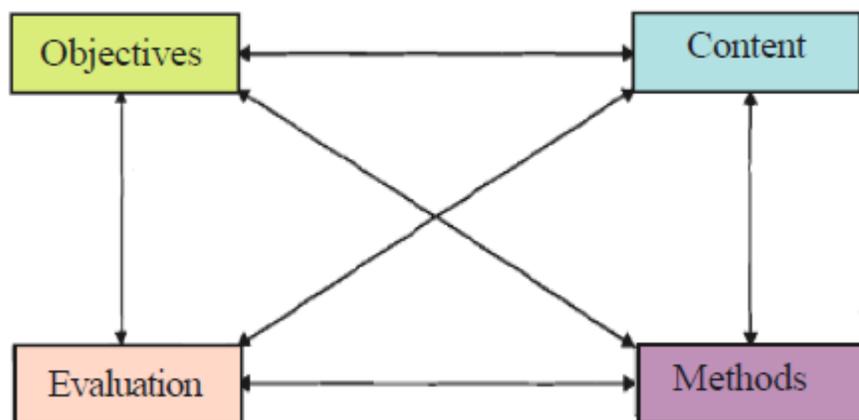
Fig. Interdependent of Curriculum Components

The purpose of curriculum evaluation is to collect and use feedback for improving the curriculum. **g) Development Try-out** the evaluation can be carried out during the process of curriculum development. This kind of evaluation is called 'formative' evaluation. Curriculum evaluation can be done at the end of development and implementation; this is called 'summative' evaluation. **Development try-out is a formative evaluation which is carried out at every stage of curriculum development**. It aims at improving every component of the curriculum during its planning and development. Empirical data are collected so that decisions can be made to revise the curriculum while it is being developed. During the developmental stages of the curriculum, evaluation effort provides frequent, specific and detailed information to guide the persons who are working at the curriculum to take decisions at every stage. It can take place at a number of specified points during the curriculum development process. For example, during a curriculum's creation, the curriculum planners can check whether a particular content is appropriate for the learners to learn. Depending on the results, the content can either be modified, replaced or even dropped. Formative evaluation uses the process of feedback and adjustments and thus keeps the curriculum development process on-going.

ROLE OF TEACHERS IN CURRICULUM DESIGN AND DEVELOPMENT

The teacher is such a part of the curriculum that s/he cannot be denied participation in the process of changing or developing curriculum. A teacher should be directly involved with the curriculum planning and development because it is the teacher who implements it and translates instructional plans into action. Teaching is an act of implementing or transacting the curriculum. Teachers should be part of the overall development activity. This implies that

❖ Teachers should ideally be involved at every stage of curriculum planning and development i.e. from the formation of aims to the evaluation and maintenance of the curriculum.
❖ their help should be sought for developing curriculum packages and

Conceptualizing re-source designs.
- ❖ They can assist in designing supportive educational environment.
- ❖ they can communicate with the general public on new auricular projects
  And thereby make them more receptive to curriculum change.