

Unit-4

**CONCEPTUAL FRAMEWORK OF
CURRICULUM DEVELOPMENT**

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CONTENTS

Introduction	80
Objectives	80
1. Need for conceptual framework of curriculum development	81
2. Models of Development curriculum.....	82
2.1 Conceptual Model Proposed by Ralph Tylor	82
2.2 Curriculum Model of the General College at the University of Minnesota	82
2.3 Conceptual Model Developed by Neagley and Evans	82
3. Relationship among the elements	85
4. A Proposed conceptual framework.....	86
4.1 Self-assessment Questions	86
5. Process of Curriculum Development	87
5.1 Formulation of Objectives.....	87
5.2 Selection of Content	87
5.3 Approaches to Content Organization.....	88
(i) Organization Focused on Discipline/subjects.....	88
(ii) Organization Focused on Specific Competencies.....	88
(iii) Organization Focused on Special Activities and Problems	90
(iv) Organization Focused on Process Skills.....	91
(v) Organization Focused on Individual Needs and Interests.....	93
5.4 Self-assessment Questions	94
6. Selection and organization of Methods.....	95
6.1 Lecture and Verbal Presentation Methods ..	95
6.2 Discussion-questioning Methods	95
6.3 Practice and Drill Methods.....	95
6.4 Viewing,, Listening, Answering Methods	96
6.5 Heuristic Problem-solving, and Discovery Methods.....	96
6.6 Laboratory and Inquiry	97
6.7 Role Playing, Simulation and Games.....	97
6.8 Instructional Methods for Unstructured Situation.....	97
(a) Playing, Manipulating, Acting ..	98
(b) School Activities Programme....	98
(c) Independent Learning and Self-instruction.....	98
(d) Community Activities	98
7. Bases for Selecting Instructional.....	99
7.1 Achievements of Objectives.....	99
7.2 Principles of Learning	99
7.3 Individual Learning style.....	99
7.4 Self-fulfilling prophecies and Educational Stratification	99
7.5 Facilities, Equipment and Resources.....	100
7.6 Accountability	100

8.	Curriculum Evaluation.....	101
8.1	Meaning and Significance.....	101
8.2	Design for curriculum evaluation	101
8.3	Formative Evaluation.....	101
8.4	Summative Evaluation.....	102
8.5	Self-Assessment Questions (Exercise No.3).....	103
8.6	Self-Assessment Questions (Exercise No.4).....	103
9.	Bibliography	104

INTRODUCTION

Education is a purposeful activity which schools organize and arrange to achieve some pre-determined objectives specifically assigned to them. Such activities which take place inside or outside the school under the direction and control of the teachers are known as "the curriculum". How to develop a curriculum is a question of great importance and concern. Conceptual frameworks help determine relationships among various elements of the curriculum. The conceptual frameworks also help in evaluating the outcomes of curriculum, and make it possible to modify or change the curriculum in a systematic way. In this unit we shall discuss the various conceptual frameworks of curriculum development and then develop a model of our own.

OBJECTIVES

When you have gone through this unit, you should be able to:

1. Discuss the need of conceptual framework curriculum development.
2. State the various models of conceptual framework for curriculum development
3. Explain the elements of curriculum development and relationship among them.
4. Describe the following stages in the process of curriculum development.
 - a. Formulation of objectives
 - b. Selection an organization of content.
 - c. Selection and organization of methods
 - d. Curriculum evaluation
5. Discuss the criteria of content selection
6. Reason out the merits and limitations of the various approaches to content organization
7. Discuss the major characteristics, usefulness and applicability of the various instructional methods to achieve different specific as well as general objectives in structured and unstructured situations.
8. State the bases for selecting instructional methods.
9. Explain the concepts of accountability
10. Discuss the necessity of evaluation for the improvement of curriculum
11. Describe the function of (a) formative evaluation, and (b) summative evaluation.

1. NEED FOR CONCEPTUAL FRAMEWORK OF CURRICULUM DEVELOPMENT

Curriculum development is a complex undertaking that involves many kind of decisions. Decisions need to be made about the general aims of education and the specific objectives of instruction: The major areas of the curriculum along with the specific content of each must be selected. Choices must be made about the learning experiences which would ensure the achievement of content, understandings and other objectives. Decisions are needed regarding how to evaluate student learning and the effectiveness of the curriculum in achieving the desired goals and objectives. And, finally, a choice must be made regarding the over-all pattern of the curriculum. These decisions are made on different levels.

Generally speaking, curriculum is socially and historically located, and culturally determined. The curriculum does not develop in a vacuum but it is based on the belief such as, about how people learn, what they should be like, what society is. The curriculum is, therefore, interwoven with the social fabric that sustains it.

The decisions regarding curriculum development are based on consideration of many issues. If curriculum development is to be adequate, all these decisions must be made competently, on a recognized and valid basis, and with some degree of consistency. The complexity and multitude of decisions and the fact that they are made on several different levels make it all the more important that there must be an effective conceptual frame of curriculum development. It needs to be ensured that while making decisions certain considerations are not underemphasized or others over-emphasized.

A conceptual framework is, therefore, like a light house at the sea. It does not tell where to go or restrict movement, but it is necessary to guide movements and warn of the danger spots. As described by Hilda Taba, "the conceptual framework is a way to organize thinking about all matters which are important for curriculum development". "A framework" she further elaborates, "is statement which identifies the elements of the curriculum, states their relationship to each other, and indicates the principles of organization and the administrative conditions under which it is to operate.

A conceptual model must be based on a rationale which establishes the sources to be considered and principles to be applied. Both are needed to make consistent decisions about the curriculum.

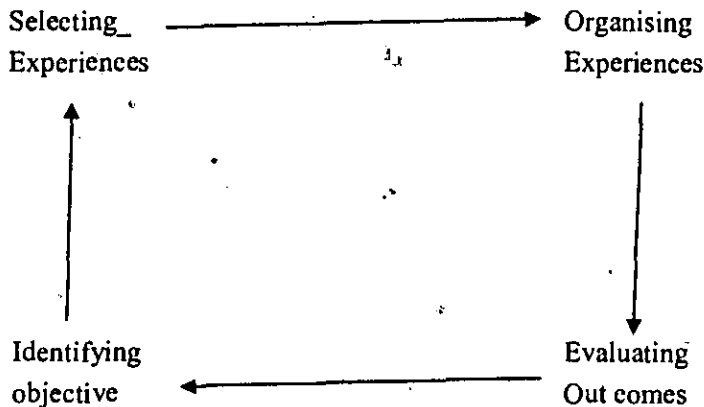
2. MODELS OF CURRICULUM DEVELOPMENT

2.1 Conceptual Model Proposed by Ralph Tyler

The conceptual model proposed by Ralph Tyler for analyzing and developing a curriculum answers the following four fundamental questions:

- (i) What educational purposes should the school seek to attain?
- (ii) What educational experiences can be provided that are likely to attain these purposes?
- (iii) How can these educational experiences be effectively organized?
- (iv) How can we determine whether these purposes are being attained?

Tyler's questions represent a four-step sequence of (1) identifying objectives, (2) (4) evaluating the outcomes. Starting from the purposes and assuming the cyclical nature of the process, we may present this model graphically as under:



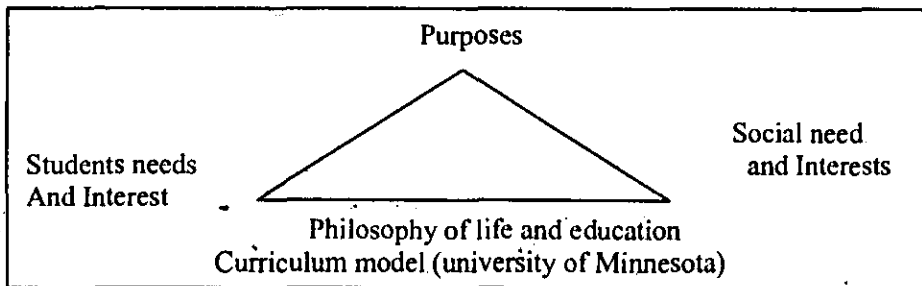
Ralph w. Tyler's model conceptual framework of curriculum

Tyler proposes that education objectives originate from three sources: (1) the studies of a society, (2) the studies of the learners, and (3) the subject-matter specialists. However, it might be asked from what sources do the society and those who study learners, and the specialists in subject matter receive their objectives? is there some underlying based that ties the three sources together? Tyler's linear sequence of questions appears to be faulty because it fails to show this underlying base.

2.2 The curriculum model of the General College at the University of Minnesota

The curriculum model of the General College at the University of Minnesota indicates a framework represented by a triangle. The apex of the triangle represents the

purposes. One the base is the philosophy of education and life. One side of the triangle are the needs and interests of the students while the other side of the triangle is based on the needs of society and resources of the school. This model points out that a curriculum is based on beliefs, the purposes which provide direction to the needs of students, and the individual a part of the society.



As we can see from the model, it does not seem to articulate the crucial significance of the meant/experience etc. that may be employed for attainment of the purposes.

Another model is proposed by the Thirty-School experiment. The model describes four inter-related elements: (1) objectives, (2) subject matter, (3) method and (4) organization and evaluation. It seeks answers to the questions: (1) what is to be done, (2) what sub matter is to be employed, (3) how are the results to be appraised? These questions suggest the steps which are not sequential but which are closely inter-related. However, the model does not indicate the bases from which decisions regarding them are made.

Hilda Taba suggested an orderly procedure for a more dynamically conceived curriculum. According to her, following steps are required to be taken to frame a curriculum:

- Step 1 Diagnosis of needs
- Step 2 Formulation of objectives
- Step 3 Selection of content
- Step 4 Organization of content
- Step 5 Selection of learning experiences
- Step 6 Organization of learning experiences
- Step 7 Determination of what to evaluate and of the ways and means of doing it.

The model developed by Taba offers statement of the basic principles involved an exposition of the relation of those principles to the practice of curriculum development. Much of the literature on curriculum development is concerned with this model.

2.3 The conceptual model development by Neagley and Evans encompasses the following procedure for a thoughtfully planned curriculum:

- (i) Organization of the curriculum committee(s)

- (ii) Selection of objectives , aims, and goals of instruction.
- (iii) Designation of appropriate content, learning experiences, and teaching aids,
- (iv) Choosing the best methods of instruction.
- (v) Selection of the evaluation procedures commensurate with the designated objectives, aims and goals
- (vi) Trial and evaluation of these materials, learning experiences and methods.
- (vii) Development of appropriate curriculum guides
- (viii) The provision of procedures for continuous study, evaluation, and improvement of the curriculum.

A careful study of the conceptual frameworks given above can be the help us in developing a model containing the basic elements of curriculum development. A curriculum model makes and clarifies the bases of selection and emphasis on the various elements, as well as the sources from which these criteria are derived. It should, furthermore, indicate as to what criterion applied to which element, because selection involves values and opinions this is where the disagreements and controversies being.

From an analysis of the various models of curriculum it could be inferred that the basic elements of curriculum development include

- (i) Objectives,
- (ii) Contents,
- (iii) Methods, and
- (iv) Evaluation

Objectives are dependent on such factors as values and needs of the society, the nature of knowledge and culture and the needs of the learners. One the other hand, decisions about content or subject matter derive from an analysis of the characteristics of the knowledge represented by school subjects and the learning process. Epistemology and psychology are brought into relationship to develop concepts.

The primary consideration in selecting and organizing the methods of achieving curriculum objectives is, "how the pupil learns". Here, theories of learning, principles of pedagogy and psychology help in the selection and organization of learning experiences.

The fourth element of curriculum evaluation in not possible, evaluation must encompass the objectives of the curriculum and provide continuing feedback for improvement of the curriculum.

The basic elements for the curriculum enable us to construct a model for developing a curriculum which aims to answer the following questions.

- (i) what is the 'purpose of curriculum?
- (ii) what subject matter is to be used?
- (iii) what learning experiences and school organization are to be provided?
- (iv) how are the results to be assessed?

The criteria used for answering the questions should be made explicit.

3. RELATIONSHIP AMONG THE ELEMENTS

As already discussed, the elements of curriculum are closely inter-related and interdependent. Taba observes that a decision made about any one element out of relations to others is bound to be faulty. Each element of curriculum acquires meaning and substance in reference to the other elements. For example, the specific objectives derive their meaning from the general aims of education. If the general aim is to develop intelligent citizenship, the development of ability to think critically becomes important. The fact that critical thinking is an important objective imposes certain requirements on the selection and organization of learning experiences, and this, in turn, makes it essential to include the evaluation of thinking in the evaluation programme.

The type of content organization adopted puts restrictions on the learning experiences which are possible. The consideration of the nature of students and their backgrounds help determine the appropriate content and effective learning experience. But, if these elements are seen as mere components or as organically interacting factors in curriculum development, their treatment, too often, becomes mechanical. Then the task of curriculum development tends to be regarded as merely technological.

A good conceptual model also describes the elements and the relationships among them and their supporting principles in such a way as to indicate priorities among the elements and principles to be considered. It should, however, be noted that not all criteria and principles have equal significance in developing the curriculum. Often criteria of least significance have priority over criteria of greatest significance.

4. A PROPOSED CONCEPTUAL FRAMEWORK OF CURRICULUM DEVELOPMENT FOR PAKISTAN

The study of different conceptual frameworks of curriculum development, elements of curriculum and their interdependence presents vivid picture of an effective curriculum model and enables us to propose one which will not only fulfill our societal needs but will also meet our ideological requirement. In the conceptual framework presented below, values are given the central role, whereas in the frameworks discussed so far, values are either ignored or only implied. This framework shows their essential importance for the determination of objectives, selection of content, methods, and evaluation. The influence of philosophy and beliefs has been recognized in the models of already discussed. But little specific consideration has been given to the concept of values although they reflect beliefs and philosophies and influence the selection of desirable behavior.

Values must be in harmony with the physical environment, the learner, educational objectives, the content, learning experiences and evaluative procedures in order to bind together the elements of curriculum. Throughout the model, values are transposed and appear in modified forms. As we all know, Pakistan being an ideological state, we have certain hard core values like virtue, truthfulness, honesty etc. which do not undergo any change over a given period.

These values provide the overall framework for determining objectives of education of course, taking into account other requirement of a society. Then form objective we go to determine content method of teaching and finally the evaluation. After evaluation, in cases of need, we refer back to methods, contents, objectives etc. and then finally to the values. But here referring back to the values means referring only to their periphery and interpretation side and not their core spirit.

Activity

Discuss the main points of different conceptual models amongst your fellows/colleagues and try to development a model of your own which you think is appropriate for Pakistan.

Values and

Needs of society objectives content methods evaluation

4.1 Self-assessment Questions

1. Why is curriculum development does a complex undertaking?
2. What kinds of decisions does a curriculum developer require to make?
3. What is Tyler's model of curriculum development?
4. What steps does Hilda suggest for developing a curriculum?
5. What is the difference between the conceptual frameworks developed by Hilda Taba and Neagley and Evans?
6. You have read about varibus model of curriculum development. Which one do you prefer to be adopted for developing curriculum is Pakistan? Give reasons.

5. PROCESS OF CURRICULUM DEVELOPMENT

The elements of curriculum constitute four stages in the process of development:

- (i) Selection of objectives,
- (ii) selection and organization of content,
- (iii) selection and organization of learning experiences (methods), and
- (iv) Evaluation.

Curriculum development is not an activity which is undertaken once and then it finished; it is rather a continuous process. Knowledge and insight gained from evaluation are used as a feedback for providing a fresh starting point for further development.

Let us briefly describe each one of these steps as under:

5.1 Formulating Objectives

Given the values, the first stage in curriculum development is formulation objectives. Objectives determine the structure for building the curriculum. The scope of entire education programme, and the nature of the learning activities provided, are embodied in them. If the objectives are expressed precisely and clearly, the selection and organization of learning activities become easy. But if they are general and vague it becomes difficult to select the content and learning experiences and to evaluate the outcome of instruction. Objectives may be classified as under:

(i) *Short and Long-term Objectives*

Objectives are short or long-term. The former are achieved in a fairly short period of time, while long-term objectives usually cover the entire period of education of an individual.

(ii) *Specific and General Objectives*

Specific objectives are related to a particular area of the curriculum, where as general objectives are not related to any subject area at all.

(iii) *Behavioural and General Objectives*

Objectives are either expressed in behavioral terms or in more general and non-explicit terms. The movement to state objectives in behavioural terms often credited to Tyler. He emphasized that: the purpose of a statement objectives is to indicate the kinds of changes in the student to be brought about so that instructional activities can be planned and developed in a way likely attain these objectives; that is, to bring about these changes in students, Behavioural objectives are expressed in the form of what the students a expected to be able to do at the end of a course.

5.2 Selection of Content

The hierarchy of aims, goals and objectives have been discussed under the unit "Aims, Goals, and Objectives of Education" by Dr. Mushta'q Ahmad Goraha. Selection of content and its organization involve moving from the general objectives to specific objectives that are considered to be achievable by a particular population (say students of class VIII). Specific objectives need not be narrowly stated; they may be open-ended statements of desired outcomes broadly defined. For example, if the general objective is to help students to attain skills of continued learning, the specific objectives, related to it, would be to develop skills of reading, listening, questioning and organizing information.

The next step is to identify the possible types of content in each subject area which will help in achieving the specific objectives. Then arises the question of how to organize the content. Taba suggests that content must be organized with a view to getting adequate scope, sequence and integration. Scope means identifying what is to be covered and learned in depth. A more extensive coverage of the subject is confused with depth of understanding and mental processes learnt. Sequence is concerned with the order in which content and processes are presented to the students. "Much of the confusion and difficulty in developing cumulative and continuous learning comes from the fact that in setting up sequence in curriculum design, only the sequence of content is considered, while the sequence of the powers and competencies is largely overlooked". Integration is associated with the relationship between the learning in various areas of the curriculum which takes place at the same time.

Selection of content must be made on the basis of certain criteria, some of which might be considered more important than others. Before a particular type of content is included in a course, it should satisfy the criterion of significance, criterion of interest, and criterion of learn-ability. These criteria have been discussed under the unit. "Principles and Criteria of Content Selection: by Dr. M. R. Siddiqui and also in unit "Curriculum Change" by Dr. A. R. Saghir.

5.3 Approaches to Content Organization

In order to serve educational objectives, content needs to be organized. The type of content organization followed is perhaps one of the most important factors in determining how learning proceeds. Often the curriculum is ineffective not because its content is inadequate but because it is organized in a way that makes learning difficult. As Taba observes, chaotic content is usually not effective in attaining any important educational objectives.

Content organization is both an difficult and complex. It requires an application of all we know about the nature of knowledge, about child growth and learning. Following are the approaches to content organization:

- (i) Organization focussed on disciplines/subjects.
- (ii) Organization focussed on specific competencies.
- (iii) Organization focussed on social activities and problems.
- (iv) Organization focussed on process skills.
- (v) Organization focussed on individual needs and interests.

(i) *Organization Focussed on Disciplines/Subjects*

The dominant concept of curriculum, historically and currently, is that of school subjects taught by teachers and learnt by students. The most characteristic and comprehensive feature of the subject organization is the relative orderliness of this pattern. The curriculum plan appears neatly divided into subjects which are further subdivided into divisions corresponding to school grades. This orderliness is the inherent principle structure of a discipline. The structure of a discipline, according to Saylor and Alexander as:-

"The set of fundamental generalization that binds a field of knowledge into a unit", organize this body or knowledge into a cohesive whole, fix the limits of investigation and inclusion of knowledge for the discipline itself and provide the basis for discovering what else exists within the field".

Thus, each of the traditional school subjects such as mathematics, chemistry, and physics, has its own distinct organization, and the curriculum planner has only to determine what of this organization to use, and when and how. But the structure of other subjects is very unclear not completely lacking. For example, in Pakistan, materials for Pakistan Studies are drawn from more than one basic discipline like History, Civics, Geography etc. Amalgamation of these materials necessitates special organization of some order of the content. Similarly in many cases the established disciplines do not offer students opportunities to learn to deal with problems of living. Therefore new organizations of content that are basically extra disciplinary or perhaps interdisciplinary have been created and classified as subjects. Business education, environmental education, health education, industrial arts education and physical education are just a few of the many invented subjects. Thus while the established discipline and the subjects clearly derived from them have an order or structure, many so called subjective have no inherent organization. This makes the total curriculum design appear as confused.

The literature on curriculum is full of arguments for and against a curriculum organization based on subjects. One of the most persistent argument given in favour disciplines/subjects organization is that of educational convenience; that is, since knowledge is organized into disciplines, the easiest way to set a school curriculum is to use these subject This agreement of convenience assumes that schools, teachers, parents and citizens general, are geared to the subject-centred curriculum and support wholeheartedly to this organizational plan.

In 1960 Jerome Bruner favoured disciplines/subjects approach by advancing case for teaching the structure of the subjects. He writes:

"The curriculum of a subject should be determined by the most fundamental understanding that can be achieved of the underlying principles that give structure to that subject. Organizing facts in terms of principles and ideas from which they may be inferred is the only known way of reducing the quick rate of loss of human memory."

Emphasis on structure, Bruner argued, would help each student to achieve his optimum intellectual development "and provide a general picture in terms of which the relations between things encounter earlier and later are made as clear as possible.

Limitations: the disciplines/subjects organization approach, however, has the following limitations:

- 1 The subjects tend to become fixed and the curriculum turns out to be inflexible.
- 2 There is lack of direct relation of the organized subject matter to the problems and interests of the student.

It may be of these limitations of the discipline/subject centered organization approach, over Bruner himself in 1971 reconsidered his emphasis on structure of knowledge expressing doubts on the usefulness of disciplines/subjects approach in the modern world of today, and called for a re-emphasis on structure of the subjects in favour of attention to more urgent problems.

(ii) *Organization Focused on Specific Competencies*

The competency-based content organization assumes a direct relation among objectives, learning activities, and performance. In it the desired performances are stipulated as behavioural objectives or competencies; learning activities are planned to achieve objectives, and the students performance is checked as a basis for his/her moving from one objective to another. Thus in Pakistan Studies the student learns how to read a map and demonstrates this competency before he learns about and demonstrates his knowledge of particular geographic location and relations. Therefore, an organization based on specific competencies is characterized by specific, sequential, and demonstrable learning of the tasks, activities, or skills which constitute the acts to be learned and performed by students.

The advocates of competency-based curriculum place objectives before subject matter and call for a curriculum plan which would be built around specific life activities of adults. They insist that the objectives should be focussed on what the student is to learn or to do, not what he study or to experience or even to know. Moreover, they view the objectives, though pointed to performance, as more general guidelines for instruction

A somewhat specialized aspect of the competency-based organization is the job analysis procedure which involves specification of the basic skills of a trade or occupation and development of specific training activities for skills in a sequential arrangement. To the extent that the school trains its students for particular jobs, job training is essential. This curriculum organization contributes efficiently to the development of job competency. Motivation on the basis of job aspirations is high in this phase of the curriculum, and it contributes to the development of talents and capabilities not fully provided for in other curriculum organizations. Furthermore, specific job training utilizes, to the fullest, the maximum that learning result, from experience, and the more meaningful and significant the experience, the more the learning.

Limitations: Following are the limitations to the competency-based approach to content organization:

1. The competency-based approach to curriculum development has much utility for some Objectives. It has maximum utility in the learning skills, but has failed to develop critical reading, listening and discussion.
2. Performance can be contrived and falsified, especially when it becomes a basis for marks, rewards and punishment. In the affective domain and even in many cognitive areas one soon encounters insurmountable difficulties in shaping one-to-one matches of specific competencies and learning experiences.

(iii) **Organization Focussed on Social Activities and Problems**

- (1) This approach includes three organizing patterns:
The social function or areas of social living or persistent life situation approaches that are based on the belief that the curriculum design should follow the persistent functions, areas, or life situations in man's existence as social being;
- (2) The theory that the curriculum should be organized hold the improvement of society through direct involvement of the schools and their students to be a major goal of the curriculum. The common denominator of these theories is a curriculum design that features social activities and or problems rather than subject or objectives or other organizing based on social activities or functions exhibits an organizational pattern derived from studies of group life. Some of the major functions of social living are listed below:
- (a) Protection and conservation of life, property, and natural resources.
 - (b) Production of goods and services and distribution of the returns of production.
 - (c) Consumption of goods and services.
 - (d) Communication and transportation of goods and people.
 - (e) Expression of aesthetic impulses.
 - (f) Expression of religious impulses.

A design based on community activities or problems might employ a similar list but uses only those functions that are important in the community concerned, as for example, food, clothing, shelter, health, religion and work.

The social reconstruction theory has been less developed as a curriculum design than as an educational philosophy. However, recently some educational reformers insist on building social action into the curriculum. The organizing element under this approach is a cluster of social activities and/or problems. In the broader design of social functions these elements are universal and timeless; in the community school the selection criterion is local significance; in the social action programme the criterion becomes problems areas or realities in which students become participate effectively.

In summary, the socially central curriculum approach has its central element as focus on social activities and/or problems. These activities and problems may be the canters around which instruction is organized or they may serve primarily as criteria for the selection of content within the subject or other organizational unit.

There are two primary arguments for socially centred content organization approach:

1. It can directly contribute to the needs of society for continuing improvement; and
2. It is relevant to students needs and concerns and is, therefore, of great significance and interest to the students.

Limitations: The limitations of the social-centred approach are indicated by its use generally for only a portion of the curriculum.

(iv) **Organization Focussed on Process Skills**

The "process skills approach" is more characteristic of instructional methodology

than of content organization. It is difficult to separate instructional process and curriculum organizing centers' of process type. Thus problem-solving procedures may be methods used within an instructional programme organized around the learning process of problem solving. The procedures can also be used in a programme organized around the traditional subjects or around social problems. Hence the process skills approach is one where the process skills are clearly defined as organizing centers for. The approach may be considered a process, only when the process of the selection of content in say, social studies and other subjects in areas such as music, physical education and vocational course are clearly the competencies of the type discussed under the competencies approach. The process focus is most frequently advocated in terms of learning processes.

The emphasis on process as content is the most significant aspect of the search for relevance. Content then becomes a vehicle for developing process skills such as students' ability to engage in rational decision-making. The stress on process does not derogate assimilation of knowledge as stated by some, but greater importance is attached to the methods of its acquisition and to its subsequent utilization. Therefore, a distinction must be made between knowing something and knowing what is good for. Knowledge becomes the vehicle rather than the destination.

The process approach of content organization consists of three interacting operation:

1. The student must take in data
2. He must manipulate it; and
3. He must apply it.

Some curriculum theorists focus on valuing processes. The purpose of value judgment is to develop increased commitment to a set of values, and to offer opportunities to examine the conflicts among the many sets of values and viewpoints held by the members of the society. If the citizens are not able to understand and apply the values they accept, there is every possibility that the social structure will disintegrate.

Some theorists stress that the aim of education is to produce "process-oriented" persons who are able to handle themselves and the situation of which they are a part with adequacy and ease. They describe eight process skills:

1. perceiving,
2. communicating,
3. loving,
4. decision-making,
5. knowing,
6. organizing,
7. creating, and
8. valuing.

In summary, there is no single approach and set of characteristic features that include all of the theories identified as focusing on process skills. One group of theories places major emphasis on learning processes. Some give problem-solving activities a separate and significant role. Others focus on valuing processes as a major component of

the curriculum organization. Still others view process skills more generally and so significant as to permeate the subject organization or even to replace it. The common element in them is their emphasis on process as more dynamic curriculum elements than in structure of knowledge.

Their focus on process skills is based on the following arguments.

- (a) Since the most significant is the development of life-long learning skills and interests, curriculum plan should make these skills and interests central.
- (b) Curriculum should be planned and organized so as to have maximum carryover into life processes and skills. Greater carry-over is likely when the curriculum organization directly reflects these processes and skills.
- (c) The process of valuing, other processes having a high effective elements as well as essential cognitive skills can be taught. Both should be included in the curriculum.

(v) Organization Focussed on Individual Needs and Interests

This approach was used in the eighteenth century by Rousseau in the education of Emile and later on by Pestalozzi and Dewey. It is variously called as child-centred, experience centred, and progressive education and, more recently, open, alternative, and humanistic education. This approach more strongly reflecting the influence of Dewey, uses student needs and interests as a base for content organization. There is, however, a tendency on the part of curriculum planners to interpret these needs and interests as common needs and interests of the particular population to be served. Reflected in curriculum plans, this interpretation has become the rationale for teaching what has been taught before without studying the genuine needs and interests of students. This approach has following characteristics features:

- (a) The curriculum plan is based on knowledge of students' needs and interests in general and involves diagnosis of the, specific needs and interests of the population to be served by the plan.
- (b) The curriculum plan is highly flexible, with built-in provisions for development and modification to conform to the needs and interests of particular students with many options available to them.
- (c) The student is consulted and instructed individually at appropriate points in the curriculum and instructional process.

The key to learning, in this approach, is what Kilpatrick termed as the "project method". The idea behind this was that students would learn to think, if they-worked on problems of genuine interest to them. Thinking, Dewey stressed, is problem solving. To Dewey, thinking was the key to intelligent action as opposed to routine action.

The most common approach to meet grouping are to match the needs and their grouping for special programme believed interests of students concerned. Ability an provided for curriculum individualization.

Predominant use of needs and interests in curriculum planning necessitates the Provision of options for individual students. The options concept has the following three features:

- 1 the options are based on knowledge of students characteristics;
- 2 scheduling and other arrangements facilitate ready selection and choice of options, and
- 3 students are actively involved in planning and evaluating the options in general aid for themselves in particular.

Three arguments can be given in favor of this approach:

1. learning opportunities based on needs and interests are more relevant to the students
2. the needs and interests organization involves a high degree of motivation and, therefore, success of the students; and
3. achievement of the individual's potential is facilitated by this organization.

The validity of the first argument is obvious if the learning opportunity is truly based needs and interests, it surely must relate to them. As to the second arguments ; it must be noted that motivation is a highly internalized matter and that students are not necessarily motivated fir a learning opportunity planned externally. As to the third argument, the diagnosis of student needs and interests and provision for them are essential in good education.

Limitations: This approach also has its own limitations, which are as follows:

- (a). The chief limitation of this approach is its possible neglect of social objectives. If the learning opportunities are not based on students' felt needs, there is no assurance that students would participate effectively in social activities, particularly those of adulthood involved in work and citizenship. This approach is, therefore, not appropriate for the human relations domain.
- (b). It is suspected that the establishment of so-called free and other alternative forms of schooling will continue to meet the needs and interests of the students.

5.4 Self-assessment Questions

1. What are the various elements of curriculum development? How are they inter-related? Give examples for explanation.
2. Why is content of curriculum mostly organized according to disciplines/subjects approach?
3. What are the limitations of disciplines/subjects approach of content organization?
4. What is competencies-based organization of content? What are its merits and demerits?
5. What are the major functions of content organization based on social activities and problems.
6. What is the difference between content organizations based on competencies and practice skills?
7. What are the characteristics of curriculum Organization focussed on individual needs and interests?
8. As a curriculum developer which approach of content organization would you adopt for organizing the selected content?

6. SELECTION AND ORGANIZATION OF METHODS

Teaching methods constitute a significant part of the instructional process. Not all students learn equally by the same method, by the same type of activity, or by using the same media. While students are stimulated to the thought by books, others need group discussion to accomplish the same purpose. Different students also need different types learning activities of for their self-development. A shy person needs experience in group participation. A person given to over generalization needs experience in analyzing data and drawing accurate inferences from them. This suggests that different modes of learning are required to provide equal opportunities of learning to all the students. Following are various modes of learning that can be used in structured class situations.

6.1 Lecture and Verbal Presentation Method

These are the traditional modes to transmit knowledge. Talk, address, or other type of verbal presentation to students by a teacher are major characteristics. Students' activities are restricted to listening, note taking and answering a test. They make students highly passive. Teacher activity is limited to speaking, reading and illustrating visually. Teaching resources are confined to teacher, chalk board and some visual and auditory aids. They are used to present new information or explain events or things to students. These modes are used to implement all five types of curriculum design discussed above, but they are heavily used in the disciplines/subjects organization.

6.2 Discussion-questioning Method

Discussions intermingled with the lecture method are widely used in schools. The major characteristics of these modes are questions or answers over assigned material or related topics and discourse among members of the class and the teacher, largely on the topics under study. Sometimes they also include consideration of other matters introduced by the teacher or students. Students activities vary greatly among members of the class and from time to time, depending on the topic or subject. Some members of the class are quite passive most of the time. Teacher-student interaction is structured except for occasional diversions to other matters. Teacher very much dominates the classroom situation; he talks most of the time. These modes are used;

1. to help students in organizing knowledge, developing concepts and generalization
2. to clarify understanding and improve students' ability to speak on a subject, and
3. to organize thoughts and to communicate effectively.

These instructional methods may be used in any of the five types of designs. But they predominate in the disciplines/subjects organization.

6.3 Practice and Drill Method

When the purpose is to enable students to acquire a skill or a proficiency in doing some overt act the modes of practice and drill are used extensively. Often it is intermingled with recitation and discussion methods, such as courses in foreign languages. The major characteristic of these modes is repeated performance of a learning act until a desired level of skill to perform an act correctly is attained. The performance may be verbal, as in speaking a foreign language, written as in spelling, or manual as in physical education, and typing. Students activities include complete student involvement with performance of overt acts; some witnessing of demonstrating of the act or listening to explanation of what to do. Sometimes students are required to use a machine, such as computer or a programmed teaching machine. Teacher activity involves explanation of the nature of the act verbally, visually or both, demonstrating proper ways of doing the act; explaining to

students usually individually, errors in performance and showing how to correct them; supervising students during practice period; observing them during their performance and noting success as basis for further teaching and practice, evaluating performance, skill and competencies. The teaching resources include models, equipment video-tapes, recordings, machines, and tools, material needed for the performance, computers and teaching machines. These modes are used to develop desirable skills to perform an act or to acquire proficiency and to develop an understanding of the principles underlying the operation of a machine, a tool or object used in the performance of the skill.

6.4 Viewing, Listening, Answering Method

Use of instructional or "educational technology" in teaching is common in the schools of the developed countries of the world. The major characteristics of the modes connected with educational technology reading, viewing, listening and observing are used by students individual or in small groups. Machines are used to present questions and elicit answers. Students' activities range from very passive, as in viewing television or films or listening to tapes or recording to very active, as in using teaching machines or equipment for practice, making a tape for recording, or making field trips to observe and study actual things or situation. Passivity versus activity varies exceedingly according to kind of resource. Used and the purpose in using it. Teachers' activity also varies considerably. He usually arranges for use of equipment and materials; often explains or demonstrates what students should see, or listen to; helps individual students who have difficulty in using equipment properly or in selecting or preparing correct answer; evaluates student's competencies especially in programmed learning activities.

This method of teaching utilizes the following five teaching resources:

1. printed books, newspapers, encyclopedias, atlas;
2. visual often with listening-motion pictures, video-tape, television, charts, graphs, maps, globes, models;
3. auditory recordings, tapes, radio, field trips of all sorts;
4. manipulative-object for handling, sorting and using; and
5. Instructional machines teaching machines, computers; electronically equipped teaching laboratories, such as for instruction in languages.
6. These modes are used to provide individual instruction and remedial or catch up work. They are used in the implementation of all types of curriculum design, but they are specially useful in development of concepts among disadvantaged children.

6.5 Heuristic, Problem-solving and Discovery Method

Heuristic, problem-solving and discovery methods all denote the same method of teaching in the literature of education. Heuristic teaching refers to styles of teaching which emphasize the development of self-initiated and self-directed pupil learning, which stress the pupil's discovering rather than absorbing knowledge; which place the student in the role of the inquirer; which aim at heightening the relevance of school to the pupils' life. They are concerned with the emotional and social development of the pupil as well as with his cognitive growth.

The major characteristics of Heuristic/problem-solving/discovery method are that students are engaged in the processes of problem-solving and rational thinking under various degrees of teacher supervision. They investigate problems, issues and conditions; prepare research reports based on empirical data or analysis of the literature and survey actual situations with conclusions and recommendations. This method requires extensive

activities on the part of the students - reading, discussions, data collection, survey and interviews, reporting and experiments. Often students themselves determine the problems for a study, the activities in which they would engage themselves. Teacher's role is to guide the activities of the class room discussion, device, or instruction. The teacher assumes a second role in planning the work, and the activities of group. He advises and guides the students in there. Participation in independent study programmes and evaluates the activities of each members of the group. In this method library resources are especially useful. The method is used to acquire and refine system of values develop cognitive knowledge and ability of self direction in continued learning. It is also used to develop awareness of important social, political and economic problems and issues in a society, and to develop methods of rational thinking and problem-solving. The method is best suited for implementing designs organized on the basis of social activities and problems, process skills and individual needs and interests.

6.6 Laboratory and inquiry methods

Laboratory work is a traditional and extensively used method of instruction in the sciences, but in recent years the nature of such activities has changed considerably with greater attention being given to the use of scientific method of inquiry as a mode of learning. Laboratory and inquiry methods are distinct from problem-solving and discovery method as the former involve direct work in a laboratory on a regular basis or utilization of an actual situation. The major characteristics of laboratory and inquiry methods are that students are engaged in experimentation in a laboratory using scientific method of inquiry. However, students follow a manual or guide in carrying out investigations, which involve the formulation of a hypothesis or hypotheses, collection of data and drawing conclusions. Inquiry in the social sciences follows much the same methodology as discovery, but emphasis is on investigation, data collection and drawing conclusions. Students are directly involved in investigations and preparation of reports. The teacher assigns laboratory activities or investigations and guides and supervises the student activities. He evaluates and grades reports. Fully equipped laboratory, manuals, charts, official records and instruments needed to collect data outside the school are the resources of learning through these methods. These methods are used to develop cognitive knowledge; attitudes; values; skills in rational thinking and interest in scientific or social researches.

6.7 Role Playing, Simulation and Games

Some teachers use role playing, simulation exercises and games as methods of instruction. These methods introduce an element of reality in teaching and are often effective in achieving the instructional objectives, in these methods students assume roles of persons engaged in real life situation, and depict behaviour that they believe should have taken place in an identical situation. The teacher's role is confined to choosing or guiding the choice of the contrived situation. He also supervises the action and leads discussion afterwards. Usually few teaching resources are needed except the materials for the same. These modes are used to develop values, attitudes, feelings, emotions, insight, and understanding of basic principles and concepts. These methods are useful to develop skills of speaking and doing something before others. They may be used in any design but they are especially useful in the process-skills type of curriculum organization.

6.8 Instructional methods for Unstructured Situations

The methods of teaching and learning discussed in the foregoing pages can only be used in a formal class room or other structured situation. But, now let us discuss the

methods which could successfully be used in the unstructured situations also.

Activity

Visit some local school and discuss with senior teachers the different modes of learning:

- a) as given in the unit
- b) some other modes identified by them
- (c) **Playing, Handlings, Manipulating, Acting**
This method is used in the early childhood years nursery school, kindergarten, and early grades. The method involves:
 1. playing with toys, blocks, devices, equipments,
 2. manipulating articles or discriminating among them on the basis of colour, size, weight and shape,
 3. solving puzzles or making articles.

Normally the whole group is engaged in some sort of activity. Those who are not doing anything at least watch others who are engaged in some activity. The teacher chooses and supervises the activity.

(b) School-activities Programme

Co-curricular activities form an important part of the school's efforts to implement the curriculum. The school activities programme serves to enrich class teaching. It facilitates physical and mental growth and development of the student, and provides opportunities for personal and social adjustment through an interaction with others. A wide range of these activities are available in secondary schools. They should be planned, directed and carried out by the students themselves. The teacher represents the administration in setting and enforcing rules and limits of the activity. He also serves as a source of ideas and plans for the activities of the group. Any equipment, materials and supplies needed to carry on the activity serve as teaching resources. The school-activities programmes also contribute within the affective domain.

(c) Independent Learning and Self-instruction

Learning of something is an individual matter. A student has his own unique method of learning. This principle has led to the system of individualized instruction in the schools also. In recent years independent study has become a very important dimension of schooling and a readily identified process of instruction. Under this method, a student proposes to a regular staff member a study project, or production of something which he or she would like to carry on independent of other class work or in lieu of class work in a course. If approved by the teacher, the student carries out the activity under supervision of a staff member. The teacher's job is limited to approving, supervising, and evaluating the project. Libraries, laboratories or shops are the main resources which a student uses. It is used for high level of cognitive and affective development of competencies in specific fields of studies at a high level, self-defectiveness, self-learning. It may be used in the implementation of any type of curriculum organization.

(d) Community Activities

Community activities provide some of the most important opportunities to attain objectives of education. Student participation in the work and activities of agencies and organizations functioning in a community is the major characteristic of this programme. Students engage themselves in community activities on personal basis. Teacher activity is limited to sponsor and plan the programme and supervise the student work. Community activities are used to assist students in making career choices, to develop understanding of community problems and to develop in them the ability to solve them.

7. BASES FOR SELECTING INSTRUCTIONAL METHODS

Within this wide array of teaching methods, teachers are faced with the problem of selecting the method or methods which are most suited to a curriculum plan. As it is desirable to use a number of content organizing designs according to the objectives, so it is in the selection of instructional methods. Some important guidelines for the selection of instructional methods are given below:

7.1 Achievement of Objectives

Achievement of the instructional objectives is the first consideration in planning for teaching. The objectives postulated for a course, activity, or unit of work should therefore be the primary factor in planning instruction. A general objective may be attained by a wide range of teaching methods, but specific objectives for instruction once determined narrow the choices considerably.

7.2 Principles of Learning

While selecting a method of instruction the teacher should know the theories and principles of learning which underlie a certain method of instruction. This would help him adapt the method to the individual needs and methods of learning of a larger number of students.

7.3 Individual Learning Styles

Lee Cronbach and Richard Snow believe that most effective teaching takes place when the interactive process (teaching) is one that is best suited to the individual student in terms of his learning style. A learning environment that is "optimal for one person is not optimal for another". The Rand Corporation study (1971) supports these findings by asserting that "teacher, student, instructional method, and perhaps, other aspects of the educational process interact with each other. Thus a teacher who works well (is effective) with one type of student using one method might be ineffective when working with another student having different characteristics, or when using another method. The effectiveness of a teacher, or method, or whatever varies from one situation to another".

7.4 Self-fulfilling Prophecies and Educational Stratification

Opinion of the teacher about a student's abilities or capabilities based on performance in the classroom, influence the ways in which the teacher will work with the student, both with regard to interactive process (teaching) and the content of instruction. Psychologists believe that children differ in their learning abilities and processes. On the basis of these differences, educational processes should also be differentiated. But Cronbach and Snow are against this differentiation which is on the basis of contrived tests, observation or past achievement of school programme and that which results in educational stratification. As B.F. Skinner stated "we need to find practices which permit all teachers to teach well and under which all students learn as efficiently as their talents permit".

The only acceptable prophecy that should be self-fulfilling among teachers today is that every child has precious talents and potentialities that should be developed to the utmost. The school's responsibility lies in providing the child the opportunities for such development.

7.5 Facilities, Equipment and Resources

Instructional planning is often influenced by the available facilities that maybe used, and the administrative organization and structure of the school. Whatever restrictive influence the facilities, equipment and resources may, have on the instructional planning a teacher should be as imaginative and resourceful as possible in using methods that involve student in a highly active role.

7.6 Accountability

Teacher , administrators and others employed to provide education have always been held responsible for quality of their work in as much as curriculum plans related to accountability

The term accountability means that someone has to report, explain or justify to someone else. Thus accountability is a master-servant, employee-employer relationship, that is, some party answering to another party. It involves assessment, appraisal and evaluation whichever is appropriate. It is part and parcel of the whole systems approach to educational planning with great emphasis on results, costs of producing these results, and alternative possibilities weighed on the basis of costs. Lessinger observes that we judge a school; or ought to judge it, by whether its students gain certain skills and knowledge that can be measured against some set of standards or judgment, and by the cost of producing these gains.

8. CURRICULUM EVALUATION

Evaluation essentially is the provision of information for the sake of facilitating decision-making at various stages of curriculum development. This information may pertain to the programme as a complete entity or only to some of its components. Evaluation also implies the selection of criteria, the collection of data, and data analysis. It includes obtaining information for use in judging the worth of a programme, product, procedure. It is a comprehensive term and transcends standardized tests covering all means of ascertaining the results of construction.

8.1 Meaning and Significance

Evaluation is an integral and essential part of the whole process of curriculum development. It is a continuous activity and not a "tail-end-process". Evaluation and planning are complementary processes which occur almost simultaneously and continuously. Planning is made on the basis of evaluation and vice versa. However, as a separate state, evaluation has its own entity.

The significant function of evaluation is determining the value of the curriculum itself. Is the curriculum appropriate for the particular group of students with whom it is being used? Are the instructional methods selected the best choices in the light of the objectives sought? Is the content the best that could be selected? Are the materials recommended for instructional purpose appropriate and the best available for the purpose envisaged?

8.2 Design for Curriculum Evaluation

According to Scriven there are two forms of curriculum evaluation, viz, formative and summative.

8.3 Formative evaluation

It occurs during the course of curriculum development. Its purpose is to contribute to the improvement of the educational programme. The merits of a programme are evaluated during the process of its development. The evaluation results provide information to the programme developers and enable them to correct flaws detected in the programme. These evaluation results, remarks, serve as feedback and guide, influencing the shaping of a curriculum through the successive revisions of developmental phase.

Three types of evidence are used at this stage of the process of curriculum development:

1. judgmental,
2. observational, and
3. Student learning.

(i) *Judgmental Data:* First type of evidence involves judgmental data. In that experts, teachers, supervisors, as well as students (who have made use of the curriculum materials and methods) provide opinions, judgement and reactions to the curriculum materials. This type of evidence is gathered by ratings, questionnaires, interviews.

(ii) *Observational Data:* The second type of evidence involves observational data, which trained or untrained observers systematically gather during teaching-learning situations in the classroom or elsewhere. This type of evidence is obtained by direct observations in a free manner.

Observational data are relatively costly to obtain because they require one or more observers to secure reliable and relatively consistent observations over some period. Observational data when added to the judgemental data gives a different dimension to finding solution to some of the problems that emerge from both types of data.

(iii) *Student Learning:* This type of evidence approaches the curriculum development. What kind of student learning takes place when the curriculum materials and methods are used properly. Here the main evidence has to do with student learning that takes place in relation to curriculum. While this may determined by observations of students, by interviews of students, and by student reports, in most cases it involves the use of structured or semi-structured tests, oral examinations, or other procedures of determining what students can do or feel in relation to particularly kinds of learning

(iv) The best source of evidences for formative evaluation of curriculum seems to be a sort of combined use of all of them to arrive at valid conclusions. It is better to use one source for corresponding the findings of the other two than depending upon just one source of evidences.

8.4 Summative Evaluation

In summative, the final effects of a curriculum are evaluated on the basis of its stated objectives. It takes place after the curriculum has been fully developed and put into operation. Through summative evaluation, the overall effectiveness and quality of a new curriculum improvement and adjustments are devised and introduced in the schools. Since evaluation results are obtained only at the stage in which programme development has been completed, they do not have any formative functions.

Summative evaluation is based on tests' results, student reactions to the instruction, teachers' views concerning the effectiveness of instruction, follow-up studies of students who have participated in a programme of instruction, parents' reactions and such other types of evidence of varying degrees of validity.

The role Of the evaluator in summative evaluation is very different from that of the formative evaluator. In the latter case the necessity for close-cooperation and interplay between the evaluator and the curriculum developer has been emphasized. In summative evaluation the evaluator must be independent, uninvolved, disinterested, committed only to, the production of a dispassionate analysis of success and failure. His task, too, is wider, in that he must not, only evaluate the success of the programme in achieving its own stated objectives, but must also consider other objectives which teachers in general might reasonably expect to achieve through such a programme whose objectives are confined to concept-mastery and understanding must also be evaluated in terms of achievement of skill in simple computation in the four rules (addition, subtraction, multiplication, and division), and in knowledge of units of measurement such as length, capacity, weight, etc.

8.5 Self-assessment Questions (*Exercise -No. 3*)

1. What is the function of curriculum evaluation?
2. What are the two forms of curriculum evaluation?
3. What is formative evaluation?
4. What types of evidence are used for formative evaluation?
5. What is summative evaluation?
6. What types of evaluation techniques are used for summative evaluation?
7. What type of evaluation do you, as a teacher/administrator, use for curriculum development? Do you think your method of evaluation needs changes in the light of the information provided to you in this unit? Discuss.
8. Encircle the most appropriate answer in the following:
By conceptual framework of curriculum we mean
 - i) The actual curriculum
 - ii) Relationship between various elements of curriculum
 - iii) Conceptual foundations of curriculum
 - iv) None of the above.
9. Which of the evidences are used in formative evaluation of curriculum?
 - i) judgemental
 - ii) observational
 - iii) student learning
 - iv) all of the above

Answers to Self-assessment Questions

Q. 1-7 please see the relevant portion of the unit.

Q.8. ii

Q.9. iv

8.6 Self-assessment Questions (*Exercise No. 4*)

1. Why is a conceptual framework essential for curriculum development? Explain.
2. What should be the rationale of curriculum development?
3. Identify elements of curriculum, how are these elements inter-related?
4. What, in your opinion, is the most important stage in curriculum development? Explain.
5. Discuss the sources through which we derive our educational objectives.
6. What are the various approaches to content organization? Which one, do you think, is best suited for content organization and why?
7. Compare disciplines /subjects based organization based organization with competencies based organization.
8. Suppose you are asked to plan a curriculum for social studies for classes IX and X. Which design of content organization will you prefer for developing creative and critical thinking among the students?
9. Which instructional method will you use for teaching the curriculum mentioned in question 8? Discuss its strong as well as weak points.
10. What do you understand by heuristic method? What are its characteristics and

- usefulness for instruction?
11. What are the major characteristics of the following teaching methods?
 - (a) Discussion-questioning approach
 - (b) Problem-solving approach
 - (c) Discovery method
 - (d) Inquiry approach.
 12. What are the various bases for selecting an appropriate teaching method?
 13. Why is evaluation necessary? How does it help in improvement of curriculum?
 14. How is formative evaluation different from summative evaluation?
 15. What are the functions of formative evaluation? What types of evidence are Needed in formative evaluation?
 16. Suppose you are required to evaluate a curriculum in vogue for the last two years. What form of evaluation you will apply?
 - (1) For answers to essay type S.A.Q's see relevant sections of the unit.
 - (2) Answers to objective type questions of exercise No. 3 areas 8. (ii) 9. (iv)

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